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CONTENTS

COMPARING THE FORECASTING ACCURACY OF ECM AND ARIMA MODELS FOR THE MONEY DEMAND IN MEXICO

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Abstract: *This paper compare the forecasting performance of co-integration based technique (VECM) with another forecasting technique which do not impose co-integration restrictions (ARIMA) for real balance of money demand (M2) in Mexico with GDP and interest rate (as the conventional determinants of money demand) along with the number of automated teller machines, ATMs (as proxy for financial innovation) during 1995 - 2016. Since the purpose of this paper is purely to forecast future movements of the money demand, we examine and compare the forecasting technique that rely on a structural relationship between money and other real variables (ECM) with that of a model that does not (ARIMA). The results indicate that ECM results in superior forecasting performance compared to ARIMA. Also, ECM based static forecasting proved to be superior and more accurate than dynamic forecast. This is in line with the previous findings that co-integrated system (such as VECM) is superior to the non co-integrated system (such as ARIMA) at longer forecast horizon (more than 1 year).*

Keywords: *Mexico, Co-integration, Vector error correction models, ARIMA, Money demand, ATM.*

Introduction

Governments, central banks, planning and development agencies and portfolio investors and other relevant stakeholders need reliable forecasts of macroeconomic variables such as demand for money to implement macroeconomic growth policies. Money aggregate M2 has a potential role in the conduct of monetary policy as an intermediate target (Amato and Swanson, 2001). However, dealing with non-stationary time series is a serious issue in econometrics. Cointegration (also referred to as a long-run equilibrium relationship) provides a solution to this problem by transforming the linear combination of non-stationary time series into a stationary one.

Regarding the fact that any disequilibrium will be eliminated in a system of non-stationary time series with a long-run equilibrium relationship, these series cannot drift too far apart from the equilibrium resulting in improved forecasting performance in long horizon. Engle and Granger (1987) state that "co-integration implies the existence of an error correction model (ECM) that links the long-run equilibrium relationship implied by co-integration with the short run dynamic adjustment mechanism that describes how the variables react when they move out of long-run equilibrium." In other words, ECM has the advantage of containing both long-run levels and short-run first differences of non-stationary variables.

However, since the purpose of this paper is purely to forecast future movements of the money demand, we examine non co-integration based technique (ARIMA model) that do not rely on a structural relationship between money and other variables. Finally, we compare the forecasting accuracy of these two models.

The rest of the paper is structured as follow: After a brief review of previous works on this subject in section 2, we provide the mathematical background of ARIMA and ECM models and our empirical model with data presentation in section 3. It is followed by presenting the estimation results and their interpretations in section 4. Finally, section 5 is reserved for the summary and conclusion.

Literature Review

Researchers have to use various proxies to measure financial innovation as it is difficult to measure it directly. Lippi and Secchi (2009), Fischer (2007), Sichei and Kamau (2012) and Attanansio et al. (2002) are among those who used ATM concentration as proxy. In order to take shifts in money demand into account, dummy variable was used by Hafer and Kutan (2003). Bank concentration was considered by Nagayasu (2012) while growth in private sector credit as a percent of GDP was used by Michalopoulos et al. (2009). Arrau et al. (1995) used a time trend and a stochastic trend that follows a random walk and Hye (2009) and Mannah-Blankson and Belyne (2004) used M2/M1 for capturing financial innovation. Most of these studies indicate the importance of inclusion of this factor in the money demand specification.

This brief literature review indicates that cointegration based ECM has advantage over other estimation techniques in the long horizon. However, some researchers (e.g. Narayan and Narayan, 2005) argue that ARDL is superior to the Engle-Granger and Johansen approaches as it can be applied regardless of whether underlying variables are I(0) or I(1) and that ARDL based co-integration tests have better small sample properties than the EG and Johansen co-integration tests. Also, appropriate modification of the orders of the ARDL model is sufficient to simultaneously correct for residual serial correlation and the problem of endogenous variables.

Methodology

Technical Background of ARIMA

An autoregressive integrated moving average (ARIMA) model is a generalization of an autoregressive moving average (ARMA) model fitted to time series data to improve forecasting ability. This model is used when series are non-stationarity so it can be eliminated by applying the "integrated" part of the model that is differencing step.

In order to make the model fit the data as well as possible, three features of this kind of model is used: The AR part (regressing the dependent variable on its own lagged values) denoted by p (the order of the autoregressive model), The MA part (a linear combination of error terms whose values occurred contemporaneously and at various times in the past) denoted by q (the order of the moving-average model) and the "integrated" part (replacing data values with the difference between their values and the previous values) denoted by d (the degree of differencing), (Hyndman and Athanasopoulos, 2015).

When two out of the three terms are zeros, the model is reduced to a based one. For example, ARIMA (1,0,0) which refers to a general form (ARIMA(p,d,q)) is actually AR(1), ARIMA(0,1,0) is I(1), and ARIMA(0,0,1) is MA(1). Box–Jenkins suggested an approach to estimate ARIMA models.

Suppose a time series of data is denoted by X_t (X_t are real numbers) where t is an integer index then an ARMA(p',q)) model is expressed as:

X_t - $\alpha_1 X_{t-1}$ - … - $\alpha_{p'} X_{t-p'}$ = ε_t + $\theta_1 \varepsilon_{t-1}$ + … + $\theta_q \varepsilon_{t-q}$

or

$(1 - \sum_{i=1}^{p'} \alpha_i L^i)\, X_t = (1 + \sum_{i=1}^{q} \theta_i L^i)\, \varepsilon_t$

where the parameters of the autoregressive part of the model is denoted by α_i, the lag operator is denoted by L, the parameters of the moving average part is denoted by θ_i and the ε_t are error terms which are assumed to be independent, identically distributed variables sampled from a normal distribution with zero mean.

Then we rewrite the polynomial $(1 - \sum_{i=1}^{p'} \alpha_i L^i)$ which has a unit root (a factor $(1 - L)$) of multiplicity d as:

$(1 - \sum_{i=1}^{p'} \alpha_i L^i) = (1 - \sum_{i=1}^{p'-d} \varphi_i L^i)\,(1 - L)^i$

This polynomial can be expressed by an ARIMA(p,d,q) process with $p=p'-d$:

$(1 - \sum_{i=1}^{p} \varphi_i L^i)\,(1 - L)^d X_t = (1 + \sum_{i=1}^{q} \theta_i L^i)\, \varepsilon_t$

That is a particular case of an ARMA($p+d$,q) process having the autoregressive polynomial with d unit roots. The general form of the above equation is:

$(1 - \sum_{i=1}^{p} \varphi_i L^i)\,(1 - L)^d X_t = \delta + (1 + \sum_{i=1}^{q} \theta_i L^i)\, \varepsilon_t$

This is an ARIMA(p,d,q) process with drift $\delta/(1 - \Sigma\varphi_i)$.

Technical Background of Restricted VAR

A vector error correction model (VECM) is a restricted VAR that has cointegration restrictions built into the specification, so that it is designed for use with non-stationary series that are known to be cointegrated. The VEC specification restricts the long-run behavior of the endogenous variables to converge to their cointegrating relationships while allowing a wide range of short-run dynamics. The cointegration term is known as the error correction term since the deviation from long-run equilibrium is corrected gradually through a series of partial short-run adjustments.

The cointegrating equation is:
$y_{2,t} = \beta y_{1,t}$

The corresponding VEC model is:
$\Delta y_{1,t} = \alpha_1 (y_{2,t-1} - \beta y_{1,t-1}) + \epsilon_{1,t}$
$\Delta y_{2,t} = \alpha_2 (y_{2,t-1} - \beta y_{1,t-1}) + \epsilon_{2,t}$

In this simple model, the only right-hand side variable is the error correction term. In long run equilibrium, this term is zero. However, if y_1 and y_2 deviate from the long run equilibrium, the error correction term will be nonzero and each variable adjusts to partially restore the equilibrium relation. The coefficient α_i measures the speed of adjustment of the i^{th} endogenous variable towards the equilibrium.

Economic variables, such as demand, gross domestic product, etc, usually move together over time. In these cases, using standard statistical techniques such as OLS may lead to a spurious relationship between the variables. We need to find an estimation method that can counteract it, and VECM is such a model. VECM identifies a long-run relationship (based on economic theory) between the variables, while allowing for short-run deviations from this relationship. VECM just like ARDL can be simply manipulated to incorporate panel data. In the equation below, there is a long-run relationship between the variables y and w, which both contain a unit root (by assumption), but the short-run relationship is affected by w and another variable, x, which does not contain a unit root.

$$\Delta y_t = \sum_{k=1}^{p} \rho_k \Delta y_{t-k} + \sum_{j=0}^{q} \beta_j x_{t-j} + \sum_{i=0}^{r} \gamma_r \Delta w_{t-1} + \gamma(y_{t-1} - \theta w_{t-1}) + \varepsilon_t$$

ρ, β, γ, and λ are the parameters we want to and ε_t is a random error term.

Advantages of this model is that we can derive both short- and long-run elasticities from this flexible model that can also handle variables that contain a unit root and the disadvantages is that because of the two-stage conceptual framework of the model, long-run relationship has to be identified first and then we may proceed to determining the short-run dynamics which makes the specification of the model rather complex. Data requirements for this type of model are the same as those in the standard requirements for model estimation, however, in order to identify the lag structure a longer time series are required. However, we loss one degree of freedom per flow (cross-sectional unit) as a result of using VECM (which involves in modelling in differences).

Empirical Model

Most of the previous empirical work on money aggregates have been dedicated to their potential use in monetary policy, testing the stability of money aggregate demand functions, and to identify structural relationships based on economic theory. The purpose of this study however is to forecast future movements of the money demand, we apply a forecasting technique that do not rely on a structural relationship between money and its determinants (namely GDP, interest rate and proxies for technology innovation). However, we describe the general form of the conventional money demand function to introduce the determinants of the money demand to be included in ARIMA model and a linear function for the case of ECM model. The general form of the theory of money demand can be represented as below (Serletis, 2007):

$$\frac{M_t}{P_t} = \Phi(R_t, Y_t, ATM_t)$$

where M_t is the demand of nominal money balances, P_t is the price index that is used to convert nominal balances to real balances, Y_t is the scale variable relating to activity in the real sector of the economy (here, GDP as the best proxy for such a variable), and R_t is the opportunity cost of holding money (here, the interest rate or IR as the best proxy). To avoid misspecification, this function is enriched with a proxy (ATM) to capture the effect of financial innovation on the real demand for money.

According to the World Bank, the definitions of data used in the model are as follow.

"GDP, PPP (constant 2011 international $) is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars.

Real interest rate (expressed as percent) is the lending interest rate adjusted for inflation as measured by the GDP deflator.

Broad money (constant 2011 international $) is the sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveler's checks; and other securities such as certificates of deposit and commercial paper.

Automated teller machines (ATMs) (per 100,000 adults) are computerized telecommunications devices that provide clients of a financial institution with access to financial transactions in a public place".

Data are all retrieved from the official website of the World Bank. However, data for ATM was available only for the period 2014 – 2015 so we had to interpolate the data for the period 1995 – 2003.

Estimation

Now, we forecast the demand for money (MD) for 4 years ahead using ARIMA model. The data contains series from 1995 to 2016. Out of this data, we take a sample from 1990 to 2010 for estimation and use the estimated parameters to forecast MD for the period 2013-2016 which is 4 years and then, we compare the actual values with the forecasted values to determine the predictive power of the model. First, the conventional determinants of money demand, (gross domestic product and interest rate) will be included in the ARIMA model and the forecast will be done.

Table 1: AIC Value for the ARIMA Model

Automatic ARIMA Forecasting
Selected dependent variable: D(MD)
Date: 01/17/18 Time: 16:52
Sample: 1995 2012
Included observations: 17
Forecast length: 4

Number of estimated ARMA models: 25
Number of non-converged estimations: 0
Selected ARMA model: (3,4)(0,0)
AIC value: 49.0391377063

It is obvious from table 1 that the software has converted the variable to the first differenced. It means that the money demand has become stationary by taking one difference. 25 ARIMA models have been estimated. A model with the lowest AIC value has been selected as the best one, that is, ARIMA(3,4)(0,0).

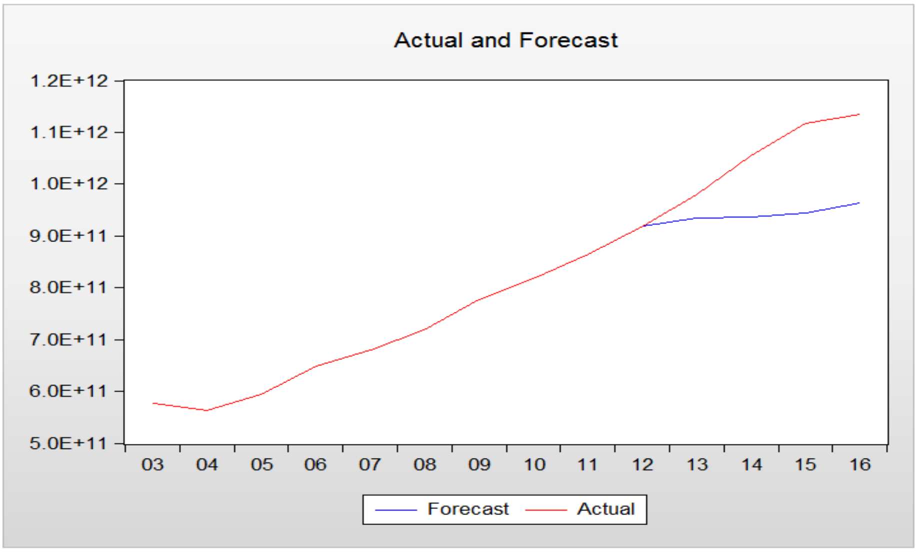

Figure 1: Comparison of the Actual Values with the Forecasted Values in an ARIMA Model

Figure 1 Compares the actual values and the forecasted values in an ARIMA model for the selected model, that is, ARIMA(3,4)(0,0). It indicates the amount of deviation of the forecasted value from the actual value during the 4-years forecast period. The lower the gap, the better the model is.

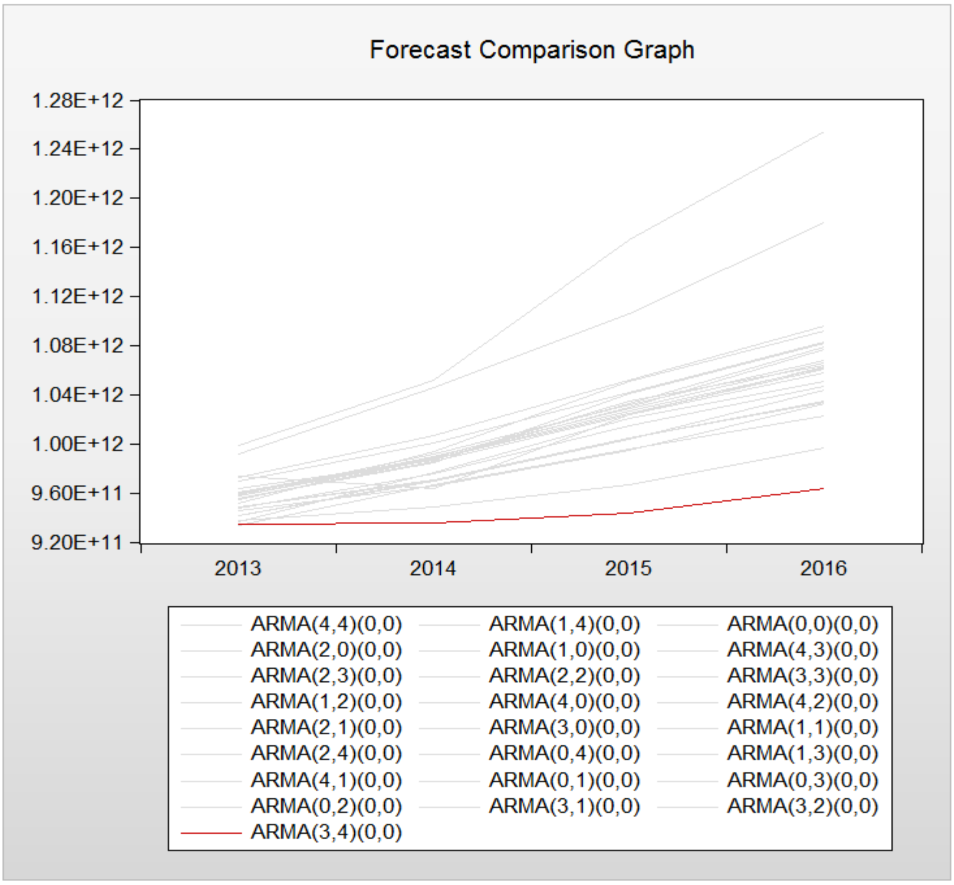

Figure 2: Forecasts Based on ARIMA Model with Different Order of p, d, q

Figure 2 shows different estimated ARIMA models and the red line indicates the one that suits the data best with the lowest AIC value.

Table 2: Choosing the Best ARIMA Model Based on AIC Values

Model Selection Criteria Table
Dependent Variable: D(MD)
Date: 01/17/18 Time: 16:52
Sample: 1995 2012
Included observations: 17

Model	LogL	AIC*	BIC	HQ
(3,4)(0,0)	-429.352239	49.039138	49.632719	49.120985
(3,2)(0,0)	-431.532630	49.059181	49.553832	49.127387
(3,1)(0,0)	-433.232117	49.136902	49.582088	49.198287
(0,2)(0,0)	-435.298335	49.144259	49.490515	49.192003
(0,3)(0,0)	-434.450520	49.161169	49.556890	49.215734
(0,1)(0,0)	-437.096131	49.232903	49.529694	49.273827
(4,1)(0,0)	-433.117801	49.235311	49.729962	49.303517
(1,3)(0,0)	-434.449392	49.272155	49.717341	49.333540
(0,4)(0,0)	-434.466072	49.274008	49.719194	49.335393
(2,4)(0,0)	-432.886023	49.320669	49.864785	49.395696
(1,1)(0,0)	-437.006301	49.334033	49.680289	49.381777
(3,0)(0,0)	-436.171875	49.352431	49.748151	49.406995
(2,1)(0,0)	-436.189946	49.354438	49.750159	49.409003
(4,2)(0,0)	-433.219311	49.357701	49.901817	49.432728
(4,0)(0,0)	-435.515660	49.390629	49.835815	49.452014
(1,2)(0,0)	-437.001662	49.444629	49.840350	49.499194
(3,3)(0,0)	-434.843203	49.538134	50.082250	49.613160
(2,2)(0,0)	-436.928034	49.547559	49.992745	49.608945
(2,3)(0,0)	-436.282242	49.586916	50.081567	49.655121
(4,3)(0,0)	-434.344390	49.593821	50.187402	49.675668
(1,0)(0,0)	-440.907323	49.656369	49.953160	49.697293
(2,0)(0,0)	-440.422595	49.713622	50.059877	49.761366
(0,0)(0,0)	-442.667342	49.740816	49.988141	49.774919
(1,4)(0,0)	-440.177837	50.019760	50.514411	50.087965
(4,4)(0,0)	-447.556604	51.172956	51.816002	51.261623

Table 2 shows AIC, BIC and HQ values for different ARIMA models. It is clear that all of these value are minimum for ARIMA(3,4)(0,0). This can be seen graphically from figure 3 below:

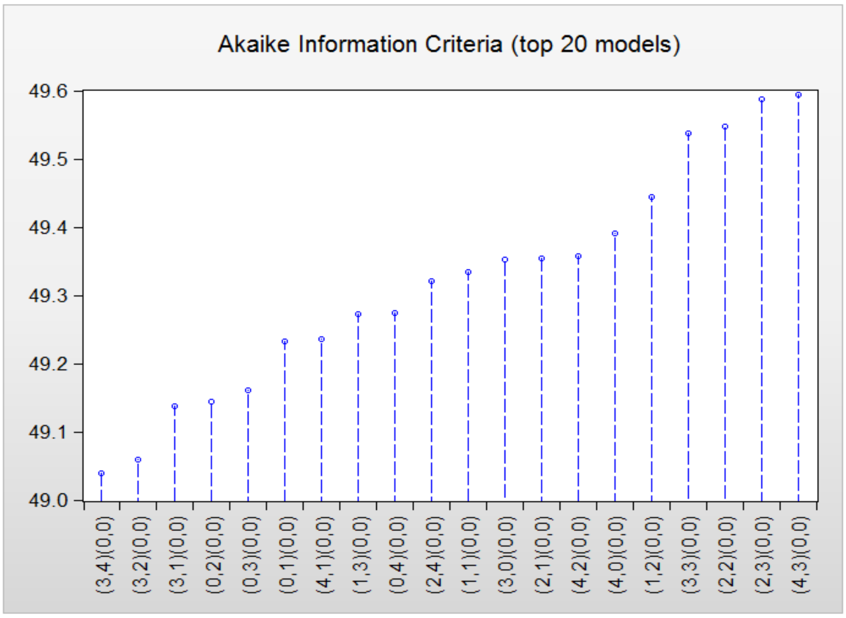

Figure 3: The Best ARIMA Model out of Top 20 Models Based on AIC Values

Now, we turn our attention to ECM model estimation. Unit root tests show that these series are non-stationary in levels, but become stationary after first differencing. Then, we need to find out if these series are cointegrated. The analysis of long-run cointegrating relationships has received considerable attention in modern analysis.

Table 3: Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.929823	78.29050	47.85613	0.0000
At most 1	0.669386	27.81259	29.79707	0.0833
At most 2	0.294618	6.783310	15.49471	0.6030
At most 3	0.007969	0.152013	3.841466	0.6966

Table 4: Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.929823	50.47791	27.58434	0.0000
At most 1	0.669386	21.02928	21.13162	0.0517
At most 2	0.294618	6.631297	14.26460	0.5336
At most 3	0.007969	0.152013	3.841466	0.6966

According to the cointegration test result, there are 1 cointegrating equations or 1 cointegrating vectors. Both of the two tests (Trace Test and Maximum Eigenvalue Test) validate this result. In other words, the variables are cointegrated or they have long run association. Then we obtain the long run coefficients:

Table 5: Normalized Cointegrating Coefficients or Long-run Model

1 Cointegrating Equation(s): Log likelihood -1008.184

Normalized cointegrating coefficients (standard error in parentheses)

MD	GDP	IR	ATM
1.000000	-1.179849	-4.15E+09	3.16E+09
	(0.10007)	(2.5E+09)	(2.1E+09)

The sigh of GDP coefficient is negative unlike we expected. Also, one unit increase in ATM will causes MD to go up by 3.16E+09. One unit increase in interest rate would decrease MD by 4.15E+09. It is also negative according to the expectation of theory. Estimated coefficients are not statistically significant for IR and ATM with p-values of -1.6600 and 1.5047, respectively.. Now that the cointegration has been detected, there exists long-term equilibrium relationships between variables, therefore, we can apply VECM to evaluate short-run properties of the cointegrated series. Based on the result of the previous section (showing that the variables are cointegrated), we can run VECM as below:

Table 6: Long-run Estimates of Co-integrating Equations

Cointegrating Eq:	CointEq1
MD(-1)	1.000000
GDP(-1)	0.826720 (0.09490) [8.71153]
IR(-1)	1.44E+10 (1.8E+09) [7.99116]
ATM(-1)	-3.00E+10 (1.8E+09) [-16.7035]
C	-1.05E+12

Table 7: Short-run Estimates of Co-integrating Equations

Error Correction:	D(MD)	D(GDP)	D(IR)	D(ATM)
CointEq1	-0.422139 (0.48214) [-0.87555]	-0.082854 (0.44004) [-0.18829]	-3.52E-11 (2.2E-11) [-1.60853]	1.97E-11 (1.0E-11) [1.95510]
D(MD(-1))	-0.126170 (0.38121) [-0.33097]	0.060735 (0.34792) [0.17457]	1.81E-11 (1.7E-11) [1.04432]	-8.02E-12 (8.0E-12) [-1.00901]
D(GDP(-1))	0.284967 (0.38482) [0.74051]	0.062312 (0.35122) [0.17742]	4.34E-11 (1.7E-11) [2.48727]	-2.20E-12 (8.0E-12) [-0.27410]
D(IR(-1))	2.57E+09 (4.5E+09) [0.57484]	-1.80E+09 (4.1E+09) [-0.43979]	0.180248 (0.20315) [0.88726]	-0.095277 (0.09344) [-1.01963]
D(ATM(-1))	-1.22E+09 (1.4E+10) [-0.08636]	-8.14E+09 (1.3E+10) [-0.63246]	-1.107702 (0.63939) [-1.73242]	-0.045795 (0.29410) [-0.15571]
C	3.63E+10 (3.5E+10) [1.02423]	5.24E+10 (3.2E+10) [1.61763]	-0.480683 (1.60950) [-0.29865]	2.320802 (0.74031) [3.13489]
R-squared	0.218866	0.107444	0.481611	0.320043
Adj. R-squared	-0.171701	-0.338834	0.222416	-0.019936
Sum sq. resids	3.39E+22	2.82E+22	69.74877	14.75652
S.E. equation	5.82E+10	5.31E+10	2.640999	1.214764
F-statistic	0.560380	0.240755	1.858104	0.941361
Log likelihood	-415.5462	-414.0841	-34.48150	-22.05579
Akaike AIC	52.69327	52.51052	5.060188	3.506974
Schwarz SC	52.98299	52.80024	5.349909	3.796694
Mean dependent	3.87E+10	4.44E+10	-0.255610	1.985883
S.D. dependent	5.38E+10	4.59E+10	2.994985	1.202834
Determinant resid covariance (dof adj.)		1.16E+43		
Determinant resid covariance		1.77E+42		
Log likelihood		-869.0657		
Akaike information criterion		112.1332		
Schwarz criterion		113.4852		

To know the p-value, we use the system equation:

D(MD) = C(1)*(MD(-1) + 0.826720330259*GDP(-1) + 14443226324.6*IR(-1) - 30005040419.3*ATM(-1) - 1.0479525959e+12) + C(2)*D(MD(-1)) + C(3)*D(GDP(-1)) + C(4)*D(IR(-1)) + C(5)*D(ATM(-1)) + C(6)

D(GDP) = C(7)*(MD(-1) + 0.826720330259*GDP(-1) + 14443226324.6*IR(-1) - 30005040419.3*ATM(-1) - 1.0479525959e+12) + C(8)*D(MD(-1)) + C(9)*D(GDP(-1)) + C(10)*D(IR(-1)) + C(11)*D(ATM(-1)) + C(12)

D(IR) = C(13)*(MD(-1) + 0.826720330259*GDP(-1) + 14443226324.6*IR(-1) - 30005040419.3*ATM(-1) - 1.0479525959e+12) + C(14)*D(MD(-1)) + C(15)*D(GDP(-1)) + C(16)*D(IR(-1)) + C(17)*D(ATM(-1)) + C(18)

D(ATM) = C(19)*(MD(-1) + 0.826720330259*GDP(-1) + 14443226324.6*IR(-1) - 30005040419.3*ATM(-1) - 1.0479525959e+12) + C(20)*D(MD(-1)) + C(21)*D(GDP(-1)) + C(22)*D(IR(-1)) + C(23)*D(ATM(-1)) + C(24)The first one is our target equation.

The cointegration equation is as below:
MD(-1) + 0.826720330259*GDP(-1) + 14443226324.6*IR(-1) - 30005040419.3*ATM(-1) - 1.0479525959e+12

However, our target model is:

D(MD) = C(1)*(MD(-1) + 0.826720330259*GDP(-1) + 14443226324.6*IR(-1) - 30005040419.3*ATM(-1) - 1.0479525959e+12) + C(2)*D(MD(-1)) + C(3)*D(GDP(-1)) + C(4)*D(IR(-1)) + C(5)*D(ATM(-1)) + C(6)

Therefore, we estimate the target model or the system equation as follow:

Table 8: The Estimated Coefficients of the System Equation

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.028420	0.156628	0.181448	0.8586
C(2)	-0.306163	0.296192	-1.033665	0.3188
C(3)	0.145184	0.325428	0.446131	0.6623
C(4)	-2.53E+08	3.11E+09	-0.081269	0.9364
C(5)	-1.30E+09	1.10E+10	-0.118254	0.9075
C(6)	4.86E+10	2.90E+10	1.679255	0.1153

C(1) is the speed of adjustment toward long run equilibrium. Long-run estimates of GDP, IR and ATM are coefficients of GDP(-1), IR(-1) and ATM(-1) and those of D(GDP(-1)), D(IRE(-1)), D(ATM(-1)) are short-run coefficients. However, we aim to do forecast based on these estimates so after diagnosing tests, we will attempt to forecast money demand for the period 2013-2016.

Here, we check whether or not our model is free from statistical problems. First, we begin with Serial Correlation Test and will be followed by Heteroskedasticity test, Normality test and Stability test.

Table 9: Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.986084	Prob. F(2,12)	0.1798
Obs*R-squared	4.973861	Prob. Chi-Square(2)	0.0832

According to Breusch-Godfrey Serial Correlation LM Test (Obs*R-squared of 0.0832), we cannot reject null hypothesis and rather, we accept the alternative hypothesis meaning that the model has no serial correlation.

Table 10: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.703525	Prob. F(8,11)	0.2030
Obs*R-squared	11.06715	Prob. Chi-Square(8)	0.1979
Scaled explained SS	9.404032	Prob. Chi-Square(8)	0.3094

Also, Obs*R-squared of the test above is 0.1979 which clearly indicates that there is no heteroskedasticity.

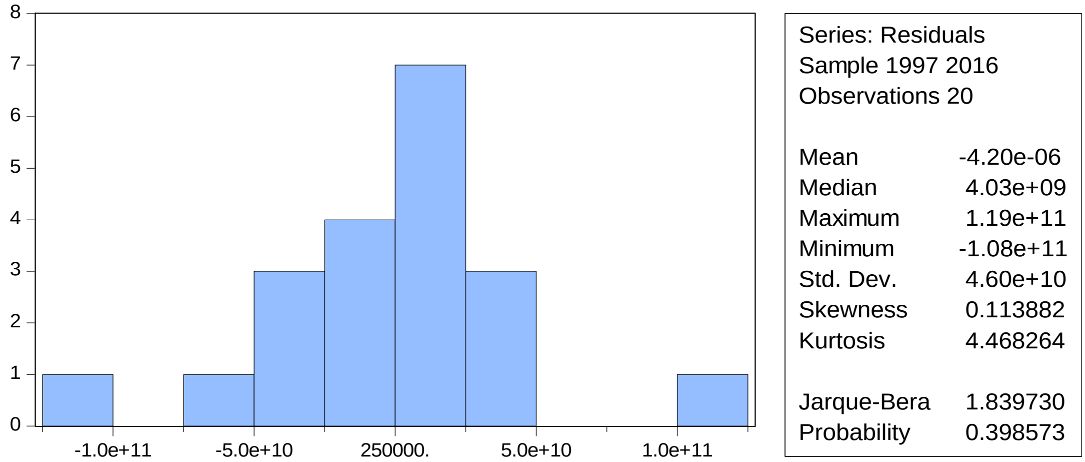

Figure 4: Normality Test

Also, we note that the residuals are normally distributed. Now, it is time to compare the forecasting power of the two models, that is, ARIMA and ECM.

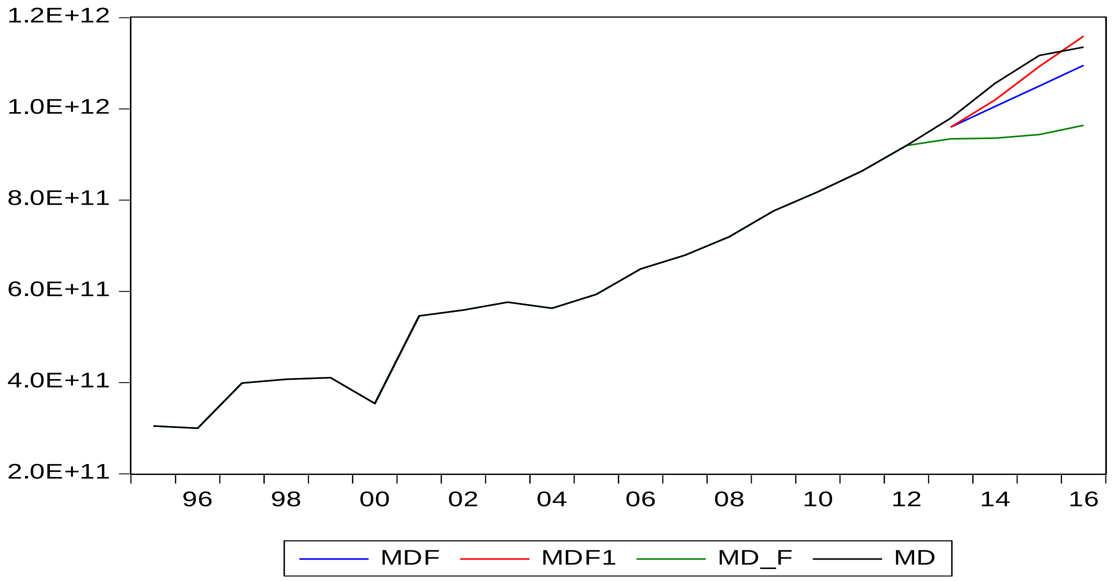

Figure 5: Comparing the Forecasts of Money Demand Based on ARIMA and ECM Models

Figure 5 compares the actual values and the forecasted values in the selected ARIMA model for the two cases. MD_F is the forecasted MD in an ARIMA model. MDF is the dynamic forecasted MD in the error correction model while MDF1 is the static forecasted MD in the error correction model. All of these estimates are based on a model with GDP and IR (as the conventional determinants of money demand) and ATM (as proxies for financial innovation). It indicates the amount of deviation of the forecasted value from the actual value during the 4-years forecast period is relatively smaller for static forecast based on error correction model.

Summary and Conclusion

Non-stationary time series data may provide spurious regression analysis. That is why co-integration based techniques such as VECM is so popular. However, the models of this kind need a convenient framework (structural function based on economic theory) for estimation, testing and forecasting while non cointegration based techniques such ARIMA do not rely on a structural relationship between money (as in or case) and other real variables (here, GDP, IR and ATM).

Forecasting the demand for money has become increasingly difficult due to introducing innovation in the financial sector. As a result, it is necessary to develop a model for predicting the demand for money. In this paper, we have compared the forecasting performances of ARIMA model with ECM model as an alternative technique. Technology innovations may have a strong impact on the demand for money in recent years. However, finding suitable variables to represent these developments satisfactorily is proves to be difficult. The problem is that the data on ATM (automatic teller machine) is only available for recent periods. That is why ARIMA model that does not rely on a structural relationship between money and other variables is particularly useful.

This paper compare the forecasting performance of co-integration based technique (VECM) with another forecasting technique which do not impose co-integration restrictions (ARIMA) for real balance of money demand (M2) in Mexico with GDP and interest rate (as the conventional determinants of money demand) along with the number of automated teller machines, ATMs (as proxy for financial innovation) during 1995 - 2016. The results indicate that ECM results in superior forecasting performance compared to ARIMA. Also, ECM based static forecasting proved to be superior and more accurate than dynamic forecast.

We did not investigate the forecasting performance of the cointegration based ARDL method as an alternative approach to ECM model. Further researches need to be conducted to reach at a conclusive result.

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EFFECTIVENESS OF DISTANCE EDUCATION TOWARDS SUSTAINABILITY FROM LEARNERS' PERSPECTIVES

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Abstract: *Education for Sustainable Development has become an important issue in transforming society towards sustainability in the Malaysian higher education scenario. In contending with the challenges posed by the 4th Industrial Revolution, distance education has been acknowledged as a mechanism through which sustainable development can be achieved via digital technology. However, not much importance has been given to investigating the ways in which distance education can be effective in instilling sustainability among learners and the barriers which hinder it. Therefore, a study has been carried out to explore the perceived effectiveness of distance education and the barriers towards sustainability among Malaysian distance learners. A total of 72 participants were interviewed by the researcher and the data obtained was transcribed into meaningful themes for analysis. A wide spectrum of factors was found to have contributed positively towards the effectiveness of distance education in nurturing sustainability despite the barriers encountered by learners. The researchers are confident that some of the findings may contribute towards the building blocks of knowledge in the respective areas of study. This study may provide the much needed motivation to policy-makers and university administrators in empowering distance education programmes so that a larger student population may be reached beyond national and international borders. This study will surely benefit other stakeholders of distance education programmes and higher education institutions which are concerned about sustainability of higher education for future development.*

Keywords: *Barriers, digital technology, distance education, effectiveness, sustainable development*

Introduction

Sustainable development has been an integral in Malaysian education system as emphasized in the Malaysia Education Blueprint (2015 - 2025)(Ministry of Education Malaysia, 2013). Universities have played various roles in transforming the nation by educating decision-makers, policy-makers, leaders, entrepreneurs and academics on various aspects of sustainability. Studies have looked into various aspects of sustainability in the higher educational context namely implementation of sustainable development (Larran Jorge, et al., 2015), stakeholder participation and engagement (Dentoni & Bitzer, 2015), campus operations (Li, Tan, & Rackes, 2015), sustainability reporting (Lozano et al., 2015), and curriculum design, development and delivery (Lozano et al., 2015). Given the fact that sustainability was found not to be well integrated into mainstream university operations and curricula (Larran Jorge et al., 2015; Waas, Hugé, Verbruggen, & Wright, 2011), the need to incorporate sustainability into university's courses and programmes is intense and immediate.

Distance education has been acknowledged to be a mechanism through which sustainable development can be achieved (Aleixo et al., 2018; Azeiteiro et al., 2015; Ramos et al., 2015). Distance education has been important in achieving Sustainable Development Goal

4 (SDG4) by ensuring the presence of inclusive and equitable quality education and promoting lifelong learning opportunities for all since it accommodates the needs of working adults in the pursuit of tertiary education. Together with the rising public participation in lifelong learning (Ministry of Education Malaysia, 2013), the contribution of developing communication technologies and the increasing demand due to changing lifestyles have created an educational niche opportunity for distance education to be elevated from the status of being a supplementary tool to a distinctive and proper solution. Since distance education needs to serve this digital generation, its essence in nurturing sustainability has become extremely significant and urgent.

The effectiveness of e-learning, upon which distance education is grounded in delivering lessons is an issue which requires further analysis (Azeiteiro, Bacelar-Nicolau, Caetano, & Caeiro, 2015). The evaluation of the effectiveness of distance education in nurturing sustainability indicated that distance learning experience has been linked to a very high level of student motivation and satisfaction (Martinho et al., 2010; Ana Pinto de Moura, Luís Miguel Cunha, Ulisses Miranda Azeiteiro, Luísa Aires, Pedro Graça, 2010). Students' motivation, satisfaction, and quality issues were found to be positively related to the effectiveness of distance education in delivering the sustainability message (Goulimaris, 2015; Harris & Martin, 2012; Markova, Glazkova, & Zaborova, 2017). Even though new virtual technologies are important in distance education, they are believed to be less sufficient because they do not encourage the development of key learning skills, attitudes and values towards environmental conservation and sustainable development to the same level as face-to-face fieldwork (Oliveira, 2012; Oliveira, Giannetti, Agostinho, & Almeida, 2017) Therefore, further analysis is warranted in order to examine the effectiveness of distance education in nurturing awareness towards sustainability among learners with the existence of these new technologies.

In addition, the study was also motivated by future research suggestions by Aleixo, Leal, & Azeiteiro (2016) by identifying barriers towards sustainability in higher educational institutions. Barriers towards sustainability remained as an issue in higher educational settings (Aleixo et al., 2016; Velazquez, Munguia, Platt, & Taddei, 2006) which may affect the effectiveness of distance education in nurturing sustainability among learners. Several barriers which are believed to hinder sustainability in higher education comprises of ambiguity and complexity of the actual sustainability concept, lack of financial resources and funding, and lack of commitments (Aleixo et al., 2016; Tavukcu, Arap, & Özcan, 2011; Thürer, Tomašević, Stevenson, Qu, & Huisingh, 2018). Nonetheless, studies have yet to investigate specific barriers to sustainability among learners in distance education settings. Therefore, the objectives of the study are to: 1. to investigate the effectiveness of distance education in nurturing sustainability among learners and 2. to examine the barriers to sustainability in distance education as perceived by learners.

Literature Review

Sustainability in Distance Education

Sustainability is commonly used as a synonym for sustainable development; "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987). Historically, the concept of sustainability has been based on triple-bottom-line model (Elkington, 1994) which focuses on three interconnected pillars; environment, economy, and social/society (Giddings, Hopwood, & O'Brien, 2002; Lozano, 2008) Although distance education is deemed important in achieving SDG4, studies which investigated the significant essence of distance education in sustainability have been limited. Distance education can be associated with environmentally-friendly learning options due to lesser travelling required to attend face-to-face lectures, the usage of fewer resources through the minimisation of the duration of student stay on campus, and the utilisation of a paperless environment as a result of online and electronic-based lessons (Campbell & Campbell, 2011; Din, Haron, & Ahmad, 2013; May, Cox, Kroder, & Franklin, 2010; Md Harizan, Hilmi, & Atan, 2015; 2016; 2017); other aspects pertaining to sustainability such as economic and societal factors have been rarely investigated. Without sufficient understanding as regards the concept of sustainability among learners, it will be much harder for institutions to incorporate the sustainable development goals into their distance education programmes in a successful manner. Furthermore, the significant growth of total student enrolments in distance education programmes in Malaysia (see Figure 1.) offers a flourish platform from which the sustainability agenda can be cultivated particularly in social science, business studies, and law besides education field of studies.

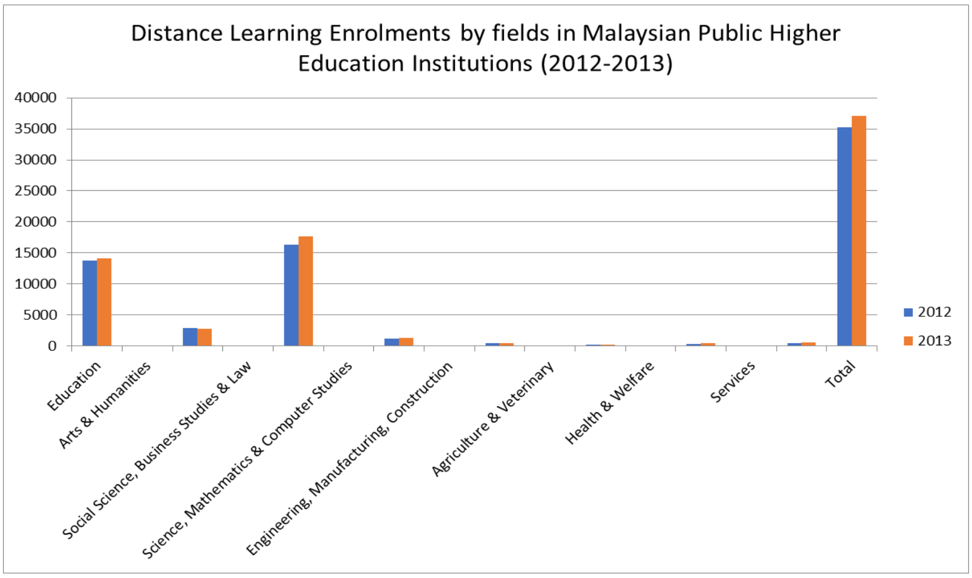

Figure 1: Distance Learning Enrolments by Fields in Malaysian Public Higher Education Institutions (2012-2013)

Source: Ministry of Education Malaysia (2014)

Effectiveness of distance education towards sustainability

The effectiveness of distance education in nurturing sustainability can be assessed based on several aspects, including distance learning experience. Studies have shown that students, who have enrolled in the distance education programmes, have demonstrated a very high level of motivation and satisfaction (Martinho et al., 2010; Ana Pinto de Moura et al., 2010). Other aspects which may contribute toward the effectiveness of sustainability in education are pedagogical challenges, teaching techniques and curriculum orientation (Figueiró & Raufflet, 2015). Students' motivation, satisfaction, and quality issues were also found to be linked with the effectiveness of distance education in delivering the sustainability message (Goulimaris, 2015; Harris & Martin, 2012; Markova et al., 2017). In other study, Azeiteiro et al. (2015) explored six dimensions of student discourse in determining the effectiveness of e-learning which comprises of general expectations; learning quality; teaching resources; pedagogical tools and evaluation; sustainability acquired competencies; satisfaction and interactions; and reasons to pursue distance learning programmes. Thus, in order to gauge the extent of sustainability outcome internalised within learners as a result of their enrolments in distance education programmes, it is important to investigate the effectiveness of distance education in nurturing awareness of sustainability among learners.

Barriers to sustainability in distance education

Most institutions of higher education have yet to implement full sustainability practices (Lozano et al., 2015; Velazquez et al., 2006; Velazquez, Munguia, & Sanchez, 2005). Velazquez et al. (2006) argued that the progress towards the goals established in Rio de Janeiro has been slower than it was hoped and that the implementation in higher education institutions has had its ups and downs. A review done by Aleixo et al. (2016) has identified several barriers to the implementation of sustainability in higher education that are also believed to hinder sustainability in distance education namely ambiguity and complexity of the actual sustainability concept, lack of financial resources or funding and lack of commitments for sustainability activities. Thus, it is important to investigate further barriers which may specifically present challenges for distance education settings.

Methodology

Semi-structured interview sessions were done on seventy-two final year students who were enrolled in a Bachelor's degree programme in business studies delivered via distance education mode in a public university. Based on the initial dimensions by (Aleixo et al., 2016; Azeiteiro et al., 2015), participants were asked about the concepts of sustainability, sustainable university and sustainability in distance education along with participants' perceptions regarding general expectations, learning quality, satisfaction, and reasons or motivation for pursuing distance education programmes and the perceived barriers to sustainability in distance education. General expectations commonly associated with the acquisition of knowledge, research skills, competences development, professional improvement and validation, and also completion of the currently enrolled programmes and potential applicability of knowledge and skills acquired in current/future jobs were gauged. Learning quality was assessed through teaching materials and resources, learning activities, teaching strategies, skills acquired, collaborative work, instructors and e-learning portals (Azeiteiro et al., 2015). Data collected from the semi-structured interview sessions were transcribed and analysed using content analysis procedures. Initial codes were developed from previous literature and adapted while analysing the interview transcripts with necessary changes. The codes were organised into categories which were later formed into meaningful themes. The reliability of the procedure was guaranteed by getting a second researcher to perform the interview coding independently before the data underwent an uninterrupted comparison method until consensus was obtained.

Results and Findings

The majority of participants interviewed were between the ages of 30 and 39 years (56.3%), female (75.4%), married (58.8%), and earned between RM3,000.00 to RM3,999.99 monthly (31.4%). The participants came from various states in Malaysia and all enrolled in the same Bachelor's degree programme. The results are organised as follows:

Effectiveness of distance education towards sustainability

The effectiveness of distance education in nurturing awareness regarding sustainability can be described in several dimensions of student discourse; sustainability acquired competencies; general expectations; learning quality; satisfaction towards teaching resources; pedagogical tools and evaluation; and reasons/motivations for pursuing distance learning programmes.

Sustainability acquired competencies

As regards sustainability acquired competencies from distance education programme, the majority of participants were having either moderate or partial or zero understanding of the concept of sustainability. 12.5% of them could describe the sustainability concept satisfactorily, while only 6.6% and 5.9% of them could provide a good explanation regarding the concept of a sustainable university and sustainability in distance education respectively. This shows that the majority of participants are still unable to acquire sustainability competencies successfully in spite of the focus of the course contents and the prevalence of other electronic and online activities that they have gotten into while undertaking distance education programmes. However, when participants were prompted with contributions of distance education to the environment, society and economy, most of them were able to provide significant and meaningful feedback. For instance, learning through the distance education mode were found to assist in improving environmental quality in general (30.4%), going paperless (26.8%), lowering the rates of emission (19.6%), reducing resource consumption (3.6%), and decreasing waste on campus (5.4%) because participants do not need to travel to physical lectures that much and neither do they need accommodation on campus to a very great extent. As regards society, distance education is perceived to contribute towards knowledge enhancement (55.1%), character building (33.3%), creating a harmony society among diverse ethnicities (8.7%) and building an innovative nation (2.8%). For economics, distance education programmes are perceived to enhance economic development (61.0%), generate more knowledge workers for country's needs (35.6%), and enhancing efficiency and competitiveness of organisational and business in which the participants are serving (3.4%).

General expectations

In terms of general expectations, the majority of participants (26.3%) expected sustained improvements of the prevailing programmes that they are enrolled in which include the interactions between instructor and learners, course contents, course structure, facilities and assessment. Expanding the programme beyond current national borders and enhancing co-curricular activities were also suggested. Despite of continuous improvement of the programme, participants were also expecting knowledge that they will gain at the end of the programme completion (16.8%), the continuity of the programme (16.8%), shorter time and successful completion (15.8%), and higher achievement which comprises better job promotion opportunities and enrichment (5.4%), personal life achievement (13.7%), and looking for postgraduate opportunities after the completion of the programme (5.3%).

Learning quality

Overall, it can be reported that participants have been very positive towards learning quality in distance education as seen in the scores which range from 78.1% to 95%. The highest scores recorded for learning quality were in the areas of skills acquired whereby participants reported that they gained much experiences and knowledge that are useful in their jobs and daily life from distance education programmes. This is an addition to the ICT literacy skills that they acquired because of the need to learn from live-streaming lectures, e-books and e-modules, online assignment submission and quiz participation and other Internet-based resources that are provided by the instructors. Besides, having better time management, being more confident, showing greater competence in doing tasks and being more independent than ever before, were also reported as part of the skills acquired as a result of enrolling in distance education programmes. Nevertheless, a few participants expressed unfavourable opinions regarding course materials (23.1%) and collaborative work (20.3%).

Satisfaction towards teaching resources; pedagogical tools and evaluation

Overall, participants who were taking distance education programme expressed positive satisfaction regarding those programmes. Positive scores were recorded for the satisfaction with learning materials or resources (75.8%), pedagogical tools (90.6%), and assessment (75%) in distance education programme for which they have enrolled. Various reasons indicating satisfaction among participants were obtained namely the availability of sufficient and helpful online supporting learning materials, comprehensive and up-to-date learning materials which can be accessed directly from the learning management system or portals without having to refer to it physically. This reduces the use of paper required in printing the hardcopy versions of the materials, and makes for presentable learning videos and electronic lectures which are effective in the grading of students' assignments. However, participants also mentioned that the technical aspects of lessons delivered online need to be monitored constantly since the transmission is susceptible to the quality of Internet infrastructure. This situation may have affected the audio and visual quality of materials and causing a certain level of distraction while students were attempting online quizzes.

Reasons/motivation to pursue distance education programmes

The analysis shows that participants were driven to pursue distance learning programme by several factors; knowledge improvement and recognition (23.1%), job requirements (17.1%), self-development including achieving personal ambition and higher living status (27.3%), desire to experience campus life (15.4%), family and peer pressure (12%) and other external factors such as university reputation and its surroundings (5.1%).

Barriers to sustainability in distance education

The study found several barriers which may impact the effectiveness of distance education in nurturing sustainability among learners. The highest reported factor was the lack of time to manage the studies well (25.7%), followed by work commitments (14.9%), family commitments (12.2%), a lack of knowledge regarding sustainability (10.8%), learners' adverse attitude towards sustainability in distance education (10.8%), interaction between peers and instructors (6.8%), financial problems in sustaining studies (6.8%), programme structure (5.5%), the calibre of the instructors and the quality of learning materials (2.8%), and accessibility to the Internet (1.4%).

Discussion and Conclusion

Distance education has been found to be effective in nurturing awareness towards sustainability despite of barriers encountered by learners. Even though the study done by Azeiteiro et al., (2015) focused on environmental scenario, this study has further expanded the view in measuring sustainability acquired competencies by exploring the remaining scopes of sustainability among learners namely the social and economic spheres. From a technical point of view, the learners gave very unsatisfactory responses in expressing sustainability and its related concepts when they were asked about general understanding of sustainability and the way it can be understood within higher educational contexts. It is strongly suggested that the course content should emphasise concepts of sustainability by having more dedicated and focused sustainability courses in the programmes despite current practices which embed sustainability into the syllabus in the taught courses.

The findings of the study suggest that learners were expecting sustainability to be achieved not only in their personal lives and careers in the future on their part as the learners but also in the institutions from which they will acquire their current degrees. Despite the continuity in the current programmes, the students were also expected to observe the growth in the current course contents which may accommodate more technology-based and sustainability-related studies, expansion of current programs beyond national border, and offering new postgraduate degree courses. They were also expected to spot more flexible course structures with a shorter completion period, upgrading of current facilities during their short stays on campus, and improved interactions quality between instructors and learners.

The quality of learning process can be perceived as high by learners due to significant positive responses received regarding in the structure and organisation of the courses. The quality of teaching materials and resources such as videos and electronic lectures was also perceived as high due to attributes such as ease of comprehension, sufficient in meeting students' needs, ease in memorisation, updated contents, and convenience in accessing the materials anytime and anywhere besides broad applicability of knowledge gained in students' daily lives. Besides the materials, the quality of online activities was also perceived to be very high. The participation in online activities has assisted them in better understanding lessons, providing instant feedback in assessing their competency levels, saving time thereby making it convenient for assignment submission. It is flexible, and provides better interaction between students and instructors in various topics of studies.

Distance education is perceived as positive in its quality of nurturing appropriate learning strategies among its learners. The current generation of learners are competent enough in ICT in order to pursue their studies via distance education successfully. Skills acquired were rated the highest in learning quality dimension of distance education. Among the significant skills acquired by distance learners were ICT skills, research methodology skills and soft skills such as self-learning capability, time management skills, and other general management skills.

Although the majority of the participants reported a high quality of collaborative work, mixed responses were received when they were asked more in-depth questions. The majority of students reported that they took the collaborative work positively as a way of formal course assessment besides encouraging cooperation, tolerance, and good relationships between group members. The involvement in collaborative work also reduces the burden of assignments by assigning tasks to every member of the group whereby each member will have lighter burden to work out irrespective of profile backgrounds and location of study. Nevertheless, a few participants reported that the 'free-riding' phenomenon was present and this has caused uneasiness and irritation among the members who gave their full commitment in the given assignments. Thus, a mechanism which curbs the 'free-riding' phenomenon may need to be worked out and one strategy is having peer-review assessment as part of the overall evaluation for collaborative work.

The calibre of instructors was reported to be very high because most of them were perceived to be very helpful in assisting learning process, very knowledgeable about the topic of interests, and had vast experience in their respective areas of expertise. In addition, they were innovative, creative, dynamic, and were able to explain complex topics in the easiest possible way to the learners.

Learners commented that the quality of online learning through a portal or a learning management system used in the programmes was high. The utilisation of the learning management system was found to be appropriate and aligned with the needs of the prevailing generation. However, having an alternative channel for students to acquire the mentioned benefits can be considered as a good idea as the access to the portal requires good Internet connection which has yet to be fully achieved in certain areas of Malaysia.

Learners reported a high to a very high satisfaction level as regards the distance education programmes that they are pursuing. Pedagogical tools used in teaching gained the highest level of satisfaction followed by learning materials or resources and assessment. The use of leading-edge resources such as videos, online tutorials, electronic lectures, e-books, e-modules, online quizzes, and comprehensive online lecture notes has contributed to a high satisfaction level among learners. The utilisation of ICT-based pedagogical tools has highlighted the essence of distance education in meeting the needs of current and future generations.

Knowledge advancement and certification remain the most important motivating factors for learners in pursuing distance education programmes including gaining competencies related to sustainability. Besides, distance education also acts as a stepping stone for learners in pursuing professional advancement in their jobs and future undertakings. The priority of mentioned motivation factors was the same as encountered by previous studies (Azeiteiro et al., 2015; Goulimaris, 2015; Harris & Martin, 2012; Markova et al., 2017; Martinho, Nicolau, Caeiro, Amador, & Oliveira, 2010). The findings also provided additional factors which motivate learners to pursue distance education; to desire a rich experience of campus life, pressures from family and peers, and also the university sustainability reputation.

Despite the factors which contribute towards the effectiveness of distance education as regards sustainability, poor balance between studies, work and family commitments were reported to be amongst the major barriers, followed by the lack of knowledge and positive attitudes pertaining to sustainability, and financial problems which hinder studies and sustainability activities. Financial constraints remained the major barrier to sustainability in higher educational institutions apart from time availability, commitment and misguided concept of sustainability as found by Aleixo et al. (2016). Additional barriers encountered by the study include fewer satisfying interactions, programmes structure, and limited Internet coverage in certain areas which affect the accessibility to online materials, resources and tools. Efforts such as the initiation of change management or institutional transformation by top management and its counterparts are required in overcoming the mentioned barriers so as to enhance the effectiveness of distance education towards sustainability.

The study provides further understanding in the area of education for sustainable development by examining the effectiveness and barriers to sustainability in distance education. Sustainability can be nurtured effectively among learners if they are able to relate between sustainability concepts and practices when they are involved in various learning activities during their enrolment in distance education programmes provided that sustainability studies are well integrated into the curriculum. Besides, the perceived barriers which hinder sustainability need to be tackled wisely by higher institutions in order to increase the effectiveness of distance education in instilling a deep seated desire for sustainability among learners.

In order for sustainability to be nurtured among learners in an effective manner, it must be holistically integrated into the curriculum as well as in the current learning process and activities within distance education programmes. Among the limitations of this study were budget and time constraints. Future research may embark on a quantitative study by developing instruments which measure the effectiveness of the programme in shaping attitudes towards sustainability. Besides, future research may also engage views from programme administrators and other stakeholders in broadening the scope of study.

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MANAGING MALAYSIAN BORDER: THE CHALLENGES AND PROSPECTS IN MAINTAINING SECURITY

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Abstract: *This paper aims to examine the challenges encountered by Malaysia enforcement border agencies to protect the sovereignty of Malaysia and its prospects of integration among various agencies at the border. With a wide boundary, the Malaysian security is porous to various threats which not only mean a traditional military threat but also include a multiple threats. Current threats have been broaden to include transnational criminals such as illegal immigrants, smuggling people or prohibited goods or even of non-traditional threats such as terrorism. In order to control such threats, there are several government agencies and legal enforcement which are responsible to protect Malaysian sovereignty such as The Royal Malaysian Police, Royal Malaysian Customs Department, Malaysian Department of Immigration, and Malaysian Border Control Agency and Malaysian Armed Forces as well. These agencies are responsible to manage the Malaysian border at various legal checkpoints such as air, sea and land checkpoints. The Malaysian Armed Forces on the other hand, has been responsible to manage illegal route along the Malaysian border especially in the jungle. In order to manage a broad scope and complexities of the border, some scholars develop a concept of* ***Coordinated Border Management*** *(CBM) or* ***Integrated Border Management*** *or* ***Collaborative Border Management****, or* ***Comprehensive Border Management*** *in order to integrate all different border agencies. There is an urgent need for border agencies to coordinate their actions in order to improve the effectiveness and efficiency of border procedures. All the challenges will discuss further in this article.*

Keywords: *border, transnational criminals, non-traditional threats*

Introduction

Geographically, Malaysian border comprise of two territories; West Malaysia (Peninsular Malaysia) and East Malaysia (Sabah and Sarawak). Both territories are separated by the South China Sea. Peninsular Malaysia encompasses 131,585 sq kilometers (km) while East Malaysia encompasses 9,210,080 sq km lies across 650 km of the South China Sea in the Island of Borneo. Malaysia shares land boundaries with three countries and sea boundaries with five other countries; the Philippines, Singapore, Indonesia, Thailand and Brunei (Ruhanas, 2009).

With a wide boundary, the Malaysian security is porous to various threats which are not limited to traditional military threats but also other threats. However, the threats have been broaden to transnational criminals such as illegal immigrants, human trafficking and smuggling of prohibited goods or even of non-traditional threats such as terrorism. There are several agencies are responsible to manage the Malaysian border at various authorized checkpoints such as air, sea and land checkpoints such as the Royal Malaysian Police, Royal Malaysian Customs Department, Malaysian Department of Immigration, Malaysian Border Control Agency, Malaysia Maritime Enforcement Agency and the Malaysian Armed Forces as well.

The border of the country has to be protected and secured in order to guarantee the peace, stability and sovereignty. States border are a national asset which assists the country's economic assets, strategic values and political stability. National borders also allow trading, social and cultural activities and apply rules of law within its society. All countries must protect their survivability and sovereignty by eradicating crime within their boundaries (Morrison, 2014). There are two types of national borders:

a. **Legal Crossing Points**. Legal crossing points along the border line of Malaysia can be divided as land crossing points, maritime crossing point (ports) or airspace crossing points (airports).

b. **Illegal Crossing Points**. Besides the legal crossing points along the border, there are several established illegal crossing points. The established illegal crossing points by the transnational organize crime have been used for human trafficking, illegal immigrant and smuggling activities.

There are numbers of illegal cross points along the Malaysian border indicate the border were porous and vulnerable to threats. Inefficient dealings with vulnerabilities will exacerbate the threats. The vulnerabilities of Malaysian border had become the most important and questionable issues of border enforcement agencies efficiency. The border enforcement agencies at every entry point must be strengthen and play their role in order to protect Malaysia's stability from any threats.

The Challenges

Porous Border

Malaysian borders are porous to threats due to the geographical factor of Malaysia which is located in the center of South East Asia. The threats encountered by Malaysia are worsening due to the 'spill-over' effect and 'push and pull' factors of neighboring countries. The issues of Thailand and the Philippines government at the southern part of their regions with Muslim communities have a long and unresolved conflict until now. It can be proven through the serious kidnapping activities by Abu Sayyaf group of Southern Mindanao in the area of Sabah since year 2000. The activities of kidnapping and demanding for ransom have threatened Malaysian security and affected Malaysian tourism. The repeated kidnapping incidents in Sabah lately has converged a negative impact on Malaysia tourism industry (Norizawati, 2014).

Malaysian and Indonesian border is more vulnerable and it exposes more threats. Malaysia and Indonesia share a huge land and maritime border. With a population of 230 million people with similar language, religion and tradition, illegal immigrants of Indonesia undisputedly is a threat to Malaysian's security. Malaysia as a newly industrialized country with a huge development, economic and political stability has 'pull' a mass migration of other ASEAN nations especially from Indonesian, Myanmar, Thailand and the Philippines to Malaysia. This is unfortunately, will cause another issue of threat namely 'trans-national crime' (Ruhanas, 2009). The border of Malaysia is porous in two types of entry/exit point which is through legal cross point or illegal cross point. It can be scrutinized as follows:

a. **Legal Cross Point**. The legal cross point along the border can be considered porous due to lack of integrity and technology at the border enforcement agency. The integrity of the border enforcement agencies is the ultimate important which leads to the problem of border security. Apart from question of integrity by the enforcement agency at the border, the technical issue and lack of advanced technology equipment also contribute to this problem.

b. **Illegal Cross Point**. Most of the Malaysian land border are intentionally underdeveloped and covered with jungle fringe. Criminals make full use of this vulnerability for their advantage. Furthermore, maritime border along Malaysian border also considered as the most vulnerable to piracy because it covers a vast area of Malaysia. As example of undeveloped area which is along Malaysia-Thailand border is Sg Golok, Kelantan. It covers 29.9 km from Rantau Panjang to Pangkalan Kubor, Kelantan. Besides the legal crossing points in Pangkalan Kubor and Rantau Panjang border, the communities along the border remain preferred illegal routes along the border to conduct their day to day activities (Fauzi, 2013).

Virtual Border

International borders are so porous that they are no longer played their important role as a barrier of ideas, a movement of people and goods or to an extent of no longer important to the power of the state (Laitinen, 2004). Virtual border is the impact of globalization of the world. Globalization will increase the activities of transnational crimes, money laundering, cyber-crime, smuggling, piracy, human trafficking and migration. Some scholars relate the globalization with systemic boundaries. Navniit (2010) in his book indicates that the current boundaries can be characterized as systemic boundaries because it is less territorial or ideological rather than before. As a result, failure to address domestic priorities will affect the political agenda of the government and jeopardize economic development of the nation and create uneasiness to community which in the end will create threats internally. National security has come to mean the security of a whole socio political entity.

Aniszewki (2009) suggests that in the 21st century, the concept of physical border has emerged from the traditional concept although it is still intact. The definition of national border should be observed beyond the delineation of the national frontier and should be changed. The risk having threats can be anywhere not only at the frontier of national border. The protection of the border should be well managed before any travellers or goods enter the national border. Therefore the border control must be maintained 'well forward' in another country and 'well backward' into our country itself.

Basically, border security's aim is to facilitate a lawful traveller and trader; and to prevent any person who has a 'communication disease' to enter a country (Rosenblum, 2013). The current procedures of checking and inspection by various enforcement agencies at the border area are ineffective. As for Malaysia situation, Mr. Ahmad Rasdi Hussain (2016), a Customs officer at Bukit Kayu Hitam, Kedah mentioned during his briefing that the border security enforcement at Bukit Kayu Hitam ICQS is inefficient because it is not well equipped. The numerous checking by various enforcement agencies are redundant at times. The checking procedures of goods and individuals are time consuming and slow down the flows of travel and trade when time is very crucial in certain situation. Therefore, it needs a new advanced technology like a scanner that can scan thoroughly a container or body and less time consumption needed.

Ethnic Communities along the Border

Historically, before the delineation of the modern border, every nation or ethnic shared a common identity and culture. They were recognized through their ethnicity or religion. The establishment of the borders has changed the significance of ethnicity. The ethnicity has been separated from their community by the modern border and recognized through their citizenship of the state and nationality. Though divided by the border, the continuity of the culture and economy are still maintained because of the relationship. Therefore, the non-physical element along the border has to be considered in discussing the border management security. The border area where the same community lived before the establishment of a country's boundaries will pose a certain issue such as movement across the national border and the requirement of certain immigration document. The biggest challenge is that the community believes that they have a right to move beyond the borders despite being separated by the borders. This is the situation at Sarawak-Kalimantan border communities at Serikin (Suhana, 2014).

The same case also can be observed among the border community in North and East region of Peninsular Malaysia especially along Kedah, Perak and Kelantan border. Along the southern border of Thailand, Malay-muslim community shares the same language, customs and religion with the Northern part of Malaysia. Historically, the region of Southern Thailand was part of the ancient Malay Kingdom, Langkasuka. The region claims independence and pay a tribute to Siamese Empire of Ayutthaya as its vassal kingdom. Finally, it is under the Siamese controlled state under the Anglo Siamese Treaty of 1909 with British (Rupprecht, 2014). Not to forget the Javanese Community on the West Coast of Peninsular Malaysia with Indonesia and Bajau Laut community with the Philippines (Ramli, 2015).

Transfusion of Threat

Criminal network transfusion pervades in its own ring and is more complex in the globalization world. It may be elaborated in a situation where a trafficking organization (either human trafficking or contraband trafficking) may transfuse their activities with an unauthorized migrant or terrorism. They may integrate and cooperate with an organized crime and may use same techniques or the same routes.

Most unauthorized migrants enter into any country through a legal cross point either by land, seaport or airport and overstay in that country. Smugglers can successfully snake in goods through cargoes and check points due to lack of new scanning technology. It is worth to states that, it is impossible for border security enforcement at legal cross points to contain criminal activities at the border (Rosenblum, 2013).

Lack of Authority to the Armed Forces

Besides the challenges faced by the Legal Cross points at the Malaysia national border, there are several illegal cross points at the Malaysia – Thailand and Malaysia – Indonesia border. These borders have been maintained and protected by the Malaysian Army. According to Acting Chief of Staff of 30th Brigade and Chief of Staff of 6th Infantry Brigade (2016) during a briefing at 5th Border Regiment mentioned that the challenge faced by the Malaysian Armed Forces during the operation at Malaysia – Thailand border is lack of legal authority. The operation Malaysian Armed Forces had been deployed to the border area of Malaysia – Thailand in the northern region especially Kedah and Perak without any authority of law with regard to power of arrest, search and seizure. The Armed Forces had a sufficient legal power before the abolishment of the Internal Security Act 1960 by the government in order to conduct their operations. Section 64, Section 65 and Section 73 of the Internal Security Act 1960 had provided a power to the Armed Forces with regard to arrest, search and seizure.

Failure to Assess Threat

According to Navniit (2010), the concept of security is previously focused on the military dimension, especially the perceptions of threats by an elites, doctrinal response, security resources and capabilities to encounter the external threats. The assessment of threat and security was more focused on two clusters of variables which is security environment and the availability of hardware. However, he stressed out that the proper assessment of overall security need to be paid more to software security management which involve political context and policy capacity through the definition of national values, perceived of threat and vulnerabilities, the allocation of resources and the implementation of policies. The concept of security acquires an operational meaning when threat is identified. There is an implicit and explicit determination of threat security against recession, illegal search and seizure and inflation or erosion. Therefore, failure by the government or enforcement agencies to assess threats accurately is a threat by itself.

National security can no longer be preserved by defending the border. National interest of a country must be protected beyond the delineation of border. There are three categories of National interest, which are:

a. **Vital Interest**. Vital interest is broad and very important for the country's survival. It includes physical security of a country (its territory), the safety of its citizens and economic well-being of the people. This must be protected at all cost. The threat could be neutralized through the use of military force.

b. **Important Interest**. The threat to a country's security may not be direct. The volatile neighboring countries would affect the instability and threaten the country indirectly.

c. **Humanitarian Interest**. This category of interest will not affect the country's boundaries directly but the threat could affect national values such as natural/ man-made disaster or violation of human rights. The threat could be neutralized through diplomacy or cooperation with Non-Governmental Organization (NGO) or other government.

The Prospect

Malaysia have experienced in dealing with internal threat during the First and Second Emergency by neutralizing communist ideology in Malaya fully utilize all the government agency and assets including the Armed Forces and other government agencies. This strategy adopted by General Sir Harold Briggs known as the 'Briggs Plan'. The Armed Forces conducted a search and destroy operation while other government agencies assisted the multiracial communities to improve their qualities of life through various government programs (Hishamuddin, 2015). Therefore, in order to win the battle with multi facet and multi-dimensional threat, all national components must perform their part. The combination of government policy and its agency, the security forces plan and its personnel, the population strive and its efforts will formulate a quality of strategy against one common enemy.

Malaysia's Plan

Malaysia had produced 7th Strategy Paper (EPU, 2016) which is 10th Malaysia Plan (2011-2015) and 11th Malaysia Plan (2016 – 2020). This strategic plan was aim to create a safer living space and secure environment for Malaysian. The Malaysia's plan is as follows:

a. **<u>Collaboration of Border Security Agencies</u>**. According to the plan, the government of Malaysia will enhance the capabilities and effectiveness of all border enforcement agencies through collaboration. The collaboration will include sharing of information and data among law enforcement agencies. The government was determined to provide border security either entry or exit point with current monitoring system and border detection and surveillance equipment.

b. **<u>Increase Community Participation</u>**. The government also decided to increase volunteerism and participation of Malaysian communities to enhance public security. This action will serve a better relationship among the Malaysian. For that purpose, government will promote RELA or *Jabatan Sukarelawan Malaysia* and APM or *Angkatan Pertahanan Awam Malaysia* (Malaysian Civil Defense Force).

c **Intensified Crime Prevention**. The crime prevention by the security force will be intensified with redeployment of special task force. The public confidence will be reinstalled through cordial engagement by the security force and the public.

By engaging the holistic strategy of winning 'hearts and minds of the people', it is expected that the crime rate will be reduce and the confidence will be intensified among the Malaysian citizens.

Action by Ministry of Home Affairs

The Ministry of Home Affairs had come out with their strategic plan. The Strategic Plan of 2015-2020 has been formulated to establish and improve many essential areas, but three main cores will be highlighted as it relevant with the border security such as:

a. **Strict Immigration Law**. The Ministry of Home Affairs will embrace a strict immigration law in order to control the influx of illegal immigrant and human trafficking activities in Malaysia. The Immigration department will further heighten cooperation with other government agencies through 'open door' policy. The less formality policy will help reduce time consuming and boost efficiency of the department.

b. **Enhance Border Security**. The Ministry of Home Affairs will enhance border security of Malaysia through the coordinating and cooperation of enforcement agencies by sharing of intelligence information.

c. **Neutralized Transnational Crime**. Transnational crime will be the main focus of Ministry of Home Affairs to be neutralized. Failure to address this issue may affect the whole Malaysia to be the base for the transnational organized crime.

National Defence Policy

Historically, Malaysian Armed Forces (MAF) had successfully protecting Malaysian citizen from internal or external threat. The (MAF) had played a vital part during the emergency which led the communist to surrender. Accordingly, the Malaysia's National Defence Policy has been revisited in order to develop and modernize MAF by taken into consideration of non-conventional threat that may jeopardize and affect Malaysia's sovereignty, independence and integrity (Ministry of Defence, 2009). The primary objective of MAF Defence Policy is to protect and defend Malaysia's national interest through 'Total Defence strategy' and 'Self-Reliance'. Malaysia's national interest is divided into three areas which is:

a. **Core Areas**. The core areas encompass Peninsular Malaysia, Sabah and Sarawak including its territorial waters and airspace.

b. **The Offshore Economic Areas**. The offshore economic areas are Malaysia's Economic Zone of Exclusive (EEZ) and its continental shelf.

c. **Strategic Waterways and Airspace**. The strategic waterways and airspace are (1) Maritime and airspace lines of communication connecting Peninsular Malaysia and Sabah and Sarawak; (2) Straits of Malacca and its approaches; and (3) Straits of Singapore and its approaches.

The establishment of the Border Brigade on 29 January 2008 marks a new chapter of border security in Malaysia. This brigade specially known as 30th Brigade is meant to protect Malaysian land border from external threat. The primary role of Malaysian Army in Land Border Operations has been specified in the Manual of Land Border Operation as "to defend

Malaysia sovereignty from any threat." (MP 3.2.2 TD, 2012). Malaysian government has boost up the border security by establishing another Border Brigade which is 31st Brigade located at Bintulu, Sarawak in order to tighten Sarawak border security. Therefore, it is clear evidence that national defence plan and the 11th Malaysia Plan are accomplishing each other to achieve stability and protect Malaysia sovereignty from internal or external threat. Their primary tasks are (1) conduct operations as forward elements to avoid any military external threat; and (2) deny any form of encroachment at border area/line. Whereas their secondary task are (1) Maintaining/enforcing law and order at national land borders; (2) apprehend the activities of illegal immigrants; (3) denying illegal crossing activities along national land borders; (4) denying smuggling activities along national land borders; (5) to conduct hearts and minds activities; and (6) to coordinate with other agencies on operational matters.

Coordinated Border Town Development

The prospect of securing national security can also be procured through the development of national border by Trans-border cooperation. It is obvious that the populations along the border are interconnected with each other for a long time. The relationship among border community should be entertained. Therefore, a brilliant idea of the then Deputy Prime Minister of Malaysia Dato' Musa Hitam is the vibrant to control the illegal transaction and cross boundaries between Malaysia and Indonesia (Kalimantan). Trans-border Cooperation between Malaysia and Indonesia has been mooted during the tenure of Dato' Musa Hitam on 14th November 1983 when he was a chairman of General Border Committee of the 12th Session held in Kuala Lumpur. It got a positive response by General LB Moerdani as Commander of Indonesia Armed Forces (Chairman of the GBC Indonesia).

Based on the decision of the Chairman of the Joint GBC Malindo and the Chairman of GBC Indonesia, Socio-Economic Cooperation-Malindo or Sosek-Malindo of West Kalimantan Indonesia was established by a Decree of the Governor of West Kalimantan No. 408 of 1985 on 21 Dec 1985 (Ariffin, 2012). The vision of Sosek-Malindo is, "achieving harmony and sustainable socio-economic development for the mutual benefit, especially in the border between two countries." The cooperation between two countries is still continued their research which focusing on border crossing, traffic control procedures, customs, immigrations and quarantine. The research also been conducted to integrate postal inspection in Entikong – Tebedu for traditional border crossing which will be set up as cross-border checkpoint in the near future. The discussion for Badau – Lubuk Antu Integrated Postal Inspection as cross border check points also is in mind (Suhana et al., 2013).

Establishment of Malaysia Border Control Agency (AKSEM)

The establishment of Malaysia Border Control Agency (AKSEM) was among the bright prospect of border security management by the Malaysian government. AKSEM consist of various enforcement of government agencies such as Royal Malaysian Customs, Malaysian Department of Immigration, Royal Malaysian Police, Malaysia Civil Defense, National Anti-Drug Agency, Kenaf and Tobacco State Institution was established on 2nd November 2015. The AKSEM was the upgrading of Anti-Smuggling Unit or *Unit Pencegah Penyeludupan (UPP)* to Border Control Agency or *Agensi Kawalan Sempadan Malaysia* (AKSEM) (Utusan Malaysia, 2015).

The main aim that led to the establishment of AKSEM is to minimized crime rate of smuggling activities at Malaysia – Thailand border such as illegal immigrant, human trafficking and drug smuggling. It is also meant to be a lead agency for collaboration of various border enforcement agencies. AKSEM currently revising Standard Operating Procedure (SOP) in order to integrate various enforcement procedures under the same policies. The establishment of AKSEM is one of the government determinant to protect Malaysia sovereignty particularly along the border from any external threat either traditional or non-traditional threat.

Collaboration with Interpol

According to Interpol, people and goods are easier to cross international borders in globalized world. Criminal are exploiting the globalization for their strength. They used globalization to cross other country's border and commit crimes. After the completion of crimes, they escape to other country and at the same time they escape justice because of state boundaries. Serious crime such as trans-organize crime, human trafficking, smuggling of illegal and contraband goods are all take advantage of weak security screening at international border crossings (Interpol, 2014).

With regard to the border management, Interpol had established an "Integrated Border Management Task Force" (IBMTF) to assist the member state to enhance their border security procedures. This task force has vast experience to integrate border security efforts within neighboring state. The function of IBMTF is to coordinate operational activities, training opportunities and offers partnership with international organizations in ensuring border security. In this regard, Interpol will share their database with enforcement agencies at sea port, airport or land border crossing of the member state via Edison TD (INTERPOL Travel and ID Document Reference Centre). Interpol also leads and coordinates border security enforcement operation to disrupt trans-border crime that using fraudulent documents to conceal their true identity (Interpol, 2014).

Application of "Coordinated Border Management (CBM)"

Coordinated Border Management or CBM can be define as a "national or international coordination and cooperation among agencies and authorities in the border which involved security and trade to facilitate and integrate border management systems obtaining their common objective which is a controlled and secure borders." CBM has been implemented in several countries especially European countries. The implementation of CBM can increase an effective and efficiency of the border service and reduce the redundant of policies and procedures among the different agencies (Anizewski, 2009).

CBM also can save government economies by using integrated ICT systems, integrated training, development and managing human resources. Therefore, CBM can strengthen an ability to address other strategic challenges in the country. The efficient management of borders will benefit travellers and traders. The CBM can mitigate the country's burden by targeting the real suspect and the high risks shipment and travellers through sharing of information and intelligent by both countries (Anizewski, 2009). The CBM approach only requires a strong political will with a full cooperation and involvement of private sector. The CBM propagate two types of Border Management which is Domestic Management and International Border management. According to Customs World Organization, Domestic Border Management is related with two stages:

a. **Intra-service Cooperation**. Intra-service cooperation is cooperation among various departments in the government either through cooperation at the administrative level or working group level at the national border.
b. **Inter-agency Cooperation**. Inter-agency cooperation is cooperation among various border agencies either at state or federal level. The cooperation can be in the sort of integrated procedures, integrated risk management system, integrated policy, training, development and etc.

c. **International Cooperation**. It is the cooperation among two neighboring countries either through bilateral agreement, MOU or any declaration. This may be operated by the concept of "one stop border post" which two countries operate and collaborate together in just one post (Anizewski, 2009). This cooperation would beneficial to boost economy, mitigate the burden of traders and traveller and reduce time consumption when dealing with the border agencies. The challenges for the international cooperation would be in term of different work cultures and organization system. A research by Boriboonrat (2013) had to collected a data in the border check point of Aranyaprathet and Sadao, Thailand. Boriboonrat (2013) recommended a conceptual framework of "Border Crossing Management" to find an appropriate approach to manage the border. Accordingly, he suggested that Thailand should implement Collaborative Border Management System (CBM) within the customs entry point because it is best situated to develop integrated procedures for goods processing. Immigration and police would continue to process the people at point of entry. The researcher also emphasize that CBM need a political support from the highest level (Boriboonrat, 2013).

Conclusion

Despite all the efforts taken by Malaysia, it must be conceded that there is still a lot of work to do toward greater security. Indeed a number of challenges have continued to embrace Malaysian along with its efforts. Definition of border issue always focused on physical elements either natural or man-made elements such as rivers, mountain, walls, towers, fence or even barbed wires to identify the boundaries or border. A balance approach between security policy, economic policy, a clear policy on economic management and developing management resources by the border enforcement unit will make national border issue which relate to security will be effectively manage.

For developing country like Malaysia, protect a national border is a problematic issue. The country which fails to protect border will consider a failed country. To solve the problems of border, it requires the involvement and association of many sectors and department. All the government agencies must work together and share information to help diagnose the problems. With related to this, border crossing management and security needs to shy away from traditional management which emphasis on the regulations, patterns, command and control. The CBM offers a different structure with a strict of strict regulations towards the management of inter–agency cooperation with flexibility and adaptability.

Sir Gerald Templer, the High Commissioner of Malaya rightly stated that "…the answer lies not in pouring more troops in to the jungle, but in the hearts and minds of the people"(Hishamuddin, 2015). This quotation was rightly understood and implemented by Malaya government at that time. Thus, the quotation is still relevant in the current situations. In order to neutralized the multi facet threat faced by Malaysia, all sort of elements must be combined and working together to eliminate the threat. It is not lies on security forces, government agencies or political parties but also the Malaysian population as whole.

Therefore, securitization is important to eliminate threats. The dynamics of all security categories are determined by securitizing actors and referents object. According to Collins (2013), the **securitizing actors** are *'actors who securitized issues by declaring something existentially threatens'* such as governments, political leaders, bureaucrats, lobbyists and pressure groups. **Referent objects**, on the other hands are, *'things that are seen to be existentially threatened and that have a legitimate claim to survival.'* Referent objects can be the state (military security), national sovereignty or ideology (political security), national economies (economic security), collective identities (societal security) and species or habitats (environmental security).

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ROLE OF CONFLICTS IN INFORMATION TECHNOLOGY PROJECTS

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Abstract: *The main purpose of this research paper was to bridge the existing knowledge gap in the empirical identification and understanding of how the role of conflict can determine the success of a project within private sector IT projects. Conflict has become an increasingly endemic feature within the last few years, and this research project provides a contribution in knowledge terms which will help to overcome the obstacles and challenges impeding growth and development in the field. This was achieved by conducting an investigation to provide the most important criteria, sub criteria and alternatives in IT project conflict management. The scope will focus on selected private sector while the target population is the IT Project Managers from private sector who has experience in the IT field for more than 5 years. Analytical Hierarchy Process (AHP) was chosen as it possible to include intangibles in decision making. The Super Decisions (decision support software) is used to calculate the data using AHP method. The data collected thru questionnaire was firstly tabulated in Microsoft Excel and the geometric mean for each pair wise comparison was calculated. Then the compiled data was entered in Super Decision software to do further analysis. Through this research, we researched to what extent each of criteria, sub criteria and alternatives of conflict can influence the IT Project Performance.*

Keyword*: IT project success, task conflict, relationship conflict, process conflict*

Background of Study

In many established countries, Information Technology (IT) is depicted as one of the quickest rising industries. IT projects can be actualized in a quickly growing scope of hardware, applications, administrations, and technology advances that give data to help the task, administration, examination and basic leadership works inside an association (Gunton, 1993; Keen, 1994; Wang, 2001). Conflicts has been recognised as inevitable results of project work; where there is constant pressure to achieve targets within the given timeline and resource constraints. This remains true, no matter how well planned a project may be, it will always be subjected to unpredictable demands by clients, and the direction as well as the flow of the project may need to change as it develops. Thus, managing conflicts is indeed a challenging task with the possibility of projects that fail to achieve their intended target. Conflict plays a major role in IT projects and it has a tendency to determine whether the project performance is a success or otherwise. (Jeroen J.L. Schepers a, Edwin J. Nijssena, Gielis A.H. van der Heijdenb a, 2016)

Conflict can be triggered from three types of conflict which are task conflict, relationship conflict, and process conflict in any IT projects. According to Jehn (1995), task conflict is referred as conflict in acceptance – this happens when discrepancies among group members about the subject matter of their decisions and includes contrasts in perspectives, thoughts, and assessments. Meanwhile, relationship conflict is defined as a perception of social inconsistency which comprises of hatred and dislike among team members, irritation, and pressure (Simons, T. L., & Peterson, R. S. (2000)). On the other hand, process conflict is usually triggered when there's disagreement within team on how to undertake the task (Fitzgerald, Mohammed, & Kremer, 2017).

Problem Statement / Research Gap

In a highly competitive environment, the project management is considered as a critical competency. Even though the nature of projects might be different from one to another, they need to have at least one mutual acceptance of task segregation. Researchers have found that in order to achieve its goal and to be able to make effective decisions, it is also important that a team is able to supervise conflict. In some instances, conflict empowers groups to have a more profound comprehension and commitment to the decisions reached as well as generating higher quality decisions that would benefit the project as a whole. In other occasion, it also has been shown to degrade decision making and hinder the attainment of project goals. This study examines conflict management in IT project and provide guidance on how project teams can manage conflict to enhance IT project performance.

Research Questions

The purpose of this project is to give further insight into how the role of conflict can determine the success of IT projects. In order to assist and to provide guidance on the importance of conflict and its effect on the decision-making process, the factors are dependent on several of variables, which consider as task conflict and relationship conflict. The particular research questions are listed below:

a. What is the role of task conflict in IT project success?
b. How is the relationship conflict influencing the IT project success?
c. How effective is the process conflict in enhancing IT project success?

Scope of the Study

The scope of this research is limited to IT projects in Malaysia. The targeted respondents for this research are the IT Project Managers from private sector who have experience in the IT field for more than 5 years.

Literature Review

Understanding Conflict

Conflict is usually associated with the notion of negativity; in which it is commonly described as difference in opinions between individuals or groups of people. Due to the negative connotation it has, conflict is considered as something that has to be overcome or strategically confronted in order to achieve positive outcome. Research has proven that conflict, despite being perceived as an antagonistic event or occurrence, it does have constructive and positive effects. Conflict is regarded as one of the notable mechanism in problem solving, whilst being a catalyst that can increase the synergy and performance of a team.

Prominently, conflict arises from disagreement of or more parties when the have similar agreed goal. Research has shown that a conflict may escalate to dispute, which results in the parties harbouring resentment against each other. While dispute may be prevented, conflict is inevitable. This is because dispute can be overpowered by emotions and irrational decisions, when conflict calls for a level-headed discussion as well as objective thinking.

Task Conflict

Task conflict has been labelled as diversity in perspectives, feelings and concepts (Jehn, 1995; Jehn et al., 2008; Jehn and Mannix, 2001). It incorporate objectives, choices of decision and the reasonable decision of activity incite (Pelled, Eisenhardt, and Xin, 1999). Task conflict can also be explained as "disagreements among group members about the content and outcomes of the task being performed" (De Wit et al., 2012, p. 360). Furthermore, task conflict is considered as substantive (Jehn and Bendersky, 2003) because it is unavoidable and usually happen at workplace. Among instances of task conflict are work conflict, disagreement with co-worker, and hardship in completing task (Jehn, 1997). Therefore, to sum up, task conflict can be determined as conflicts because of dissimilar personality and idea which regards to task solving.

Task conflict has negative impact on team practicality (Jehn et al. 2008, Rispens et al. 2007). Shaw et al. (2011) discovered task conflict to expand the level of pressure and strain, which, once more, meddled with team performance. Vodosek (2007) described the findings that task conflict is contrarily related to team performance, in which "the more task conflict groups experienced, the lower their perception of the performance of the group". In accordance with such discoveries, De Dreu et al (2008) indicates that any constructive outcomes of task conflict must be accomplished under quite certain conditions and thusly are the exclusion rather than the rule.

Large Team Size

Team are crucial to an extensive variety of creation and critical thinking errands, a large number of which are mind boggling as in they include reliant sub-assignments. According to Hackman and Morris (1975), the process of continuous connection within the team itself is the key in understanding the team's performance and as team size increases, it would be more difficult to manage interaction among them (Valacich et al., 1994; Leenders et al., 2003; Bradner et al., 2005; Lowry et al., 2006; Espinosa et al., 2007; Stahl et al., 2009; Alnuaimi et al., 2010; Koh and Lim, 2012

Team Member Turn Over

Turnover rates in intentional for instance incorporate renunciations for higher wages, vacation openings, further training, and employment disappointment for instance (Campion, 1991) and keep out releases, retirements, exchanges, and advancements (Batt, 2002). Conversely, involuntary turnover rates incorporate acquiescence caused, for instance, by inability to meet desires and terminated business contracts (Campion, 1991; McElroy et al., 2001). Reduction-in-force (RIF) turnover (scaling down) is a different category that no substitution representatives are arranged and the leaving workers are attempted to have been at any rate insignificantly skilled (McElroy et al., 2001). In whole, it can sensibly expect that team member turnover rates will be contrarily identified with organizational performance.

Goal Uncertainty

Clear goals can coordinate the consideration, exertion, and steadiness of team members. In an IT project, goal uncertainty can appear between individuals or parties involved in the same mission and having similar purposes within a project in several aspects.

Cross-Functional Diversity

Early research to be found in conflict literature tends to emphasize that diversity in personalities can be a liability for cross-functional teams. According to Webber (2002), duration of time tied to a particular project has indirect effect on task performance of a cross functional team, as those working more hours on a project tend to spend more time on the project depending on the significance of it to their career progression. The team member who contributes a less time and effort as compared to others working for the project may be interrogated during post-mortem. The significance of the project towards individuals varies from one another, given that the rewards for every contribution made for each individual may vary.

Project Based Reward

Research shows that when the rewards of a project is linked to the performance, team members are more likely to engage in conflict known as "constructive conflict", in which it is more critical in making decisions (Holahan and Mooney (2004)). That is, team members were more disposed to assess team decisions by fundamentally team members' points of view and offering elective strategies to the current choices.

Relationship Conflict

Conflict will occur wherever there is relationship involved, regardless of good or bad. As a matter of fact, relationships that involved open discussions over their contradiction of opinions are more probable to avoid destructive conflicts that could lead to separation, detachment or a huge fight. (Guerrero et al., 2001). Interpersonal conflict has yet to be fully researched on, which makes it difficult for people to navigate through conflict. (Walker, 2000). Guerrero et al. (2001) states, "there it is more important to explore the negative aspects of close relationships as opposed to the positive aspects of interpersonal relationships." However, Walker argues that conflict, although known for its negative impact, is an essential a part of relationships just as important as other positive aspects thus creating the need for better understanding of conflict, taking into account other negative relational dynamics to be weighed in." (Walker, 2000).

Behavioural Integration

Behavioural integration is positively linked to employee's overall career fulfilment and retention rate, which impacts the organization's productivity and effectiveness. When employees are motivated by the good behaviour of fellow team mates as well as the top management, there is a high possibility of higher retention rates as this promotes sense of belonging and affiliation towards the company.

Level of Infra Team Trust

Team leader plays a pivotal role in developing a practical conflict management plan by utilizing various approach that can help in mitigation of conflict. Some popular examples include collaboration instead of competition and a good tolerance policy.

Communication Norms

The use of technology assisted communication like Skype or even WhatsApp has brought upon huge difference in the working ambience and in staying connected. (Batt, 2002; Hambley et al., 2007). Therefore, there is a need to evaluate the role of medium used in communication that might evoke conflicts and affect team performance. Studies has shown that teams relying on virtual communication tend to have more conflicts due to problems caused by coordination or misattribution of information. (Mortensen and Hinds, 2001). These problems might be caused by connection problem, absence from virtual meetings, privacy and security concerns as well as difficulty in understanding with the other team member on the other end. (De Dreu and Weingart, 2003).

Process Conflict

Process conflict is conflict about isolating and appointing duty and determine how to complete function (Jehn, 1997). Every one of these conflicts has been speculated to bring about various group progression, yet almost no is thought about particular methodologies teams utilize to deal with the distinctive kinds of conflict or the viability of these techniques. A much later study by de Wit, Greer, & Jehn (2012) aimed to identify the elements that add to process conflict since differences concerning the designation of tasks has been found to have dependable negative impacts on group results, for example, execution.

Delegation of Task

Delegation of task has been defined as one of input which triggers to process conflict. (Paletz, Schunn and Kim, 2012). According to Jehn (1997) process conflict are thought to hurt team performance on account of the high emotionality related with issues, for example, task appointment and its related individual meanings (Greer & Jehn, 2007).

Competition Context

Rivalry between powerful individuals from the higher up groups chasing for the position of power within their circle (Bendersky and Hayes; Chattopadhyay, Finn, and Ashkanasy, 2010; Greer and Van Kleef, 2010) can activate the process conflict.

Time Pressure

These days, individuals are relied upon to settle on choices under time constraint to meet the due dates. Time limitation has withdrawn people from their main duties (Van Den Hooff, 2012) and a large body of literature has demonstrated that it directly affects performance (Bowman and Wittenbaum 2012) and the nature of finalizing decision (Edland, 1994; Hahn, Lawson, and Lee(1992); Scholten et al. (2007)) etc. Plus, time pressure is a reason for the insufficient sharing of data (Ko, Kirsch, and King (2005); Li (2010)) when there is a limited time set to it.

Delegation of Responsibilities

Conflict in delegation of responsibilities is when team members reach out regarding finishing their errands. This may also take place over administrative and regulatory issue of how the program will be sorted out and monitored.

Project Performance

As the years progressed, project supervisors have battled their minds to come out with various approaches to improve IS project execution through conflict management (Barki and Hartwick, 2001). Moreover, individual intervention among group causes a decline in focus, and an irrelevant dispute has given a bad effect to the execution of project.

Project Quality Performance

Project quality performance can be defined as the degree of quality attributes in terms of reliability, performance and security which is usually monitored during project development until deployment (Nguyen-Duc, Cruzes and Conradi, 2015). Quality of a system is one of the key in determining the success and that should be accomplished by the project team. Low level of system performance which result from schedule and cost overruns has direct impact on project quality performance (Wallace et al., 2004).

Team Performance

Team performance refers to how much a team can meet its objectives (quality, usefulness, and dependability of outcome), the anticipation from the members, or its cost and time objectives (Ancona and Caldwell, 1992). By implementing general conflict resolution strategies such as confrontation, prevention and cooperation, it can increase the system implementation success and improve the team performance (Leung, 2008).

Methodology

Research Process

The research process flow is shown in Figure 1.

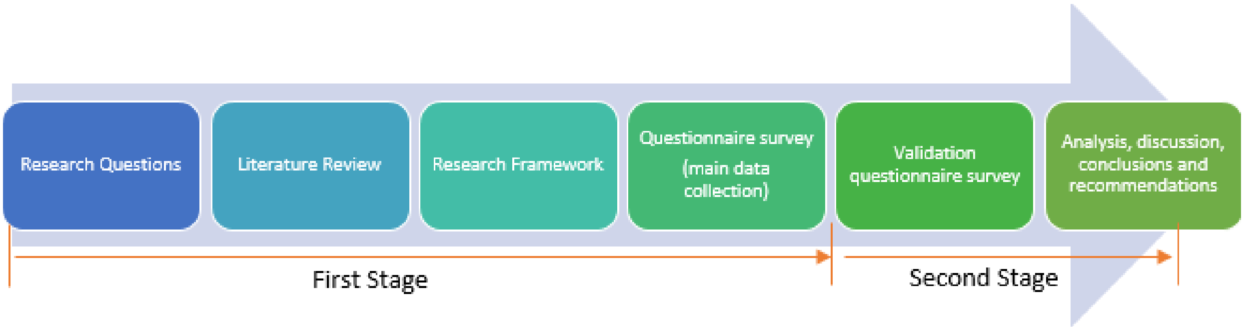

Figure 1: The Research Process

Research Framework

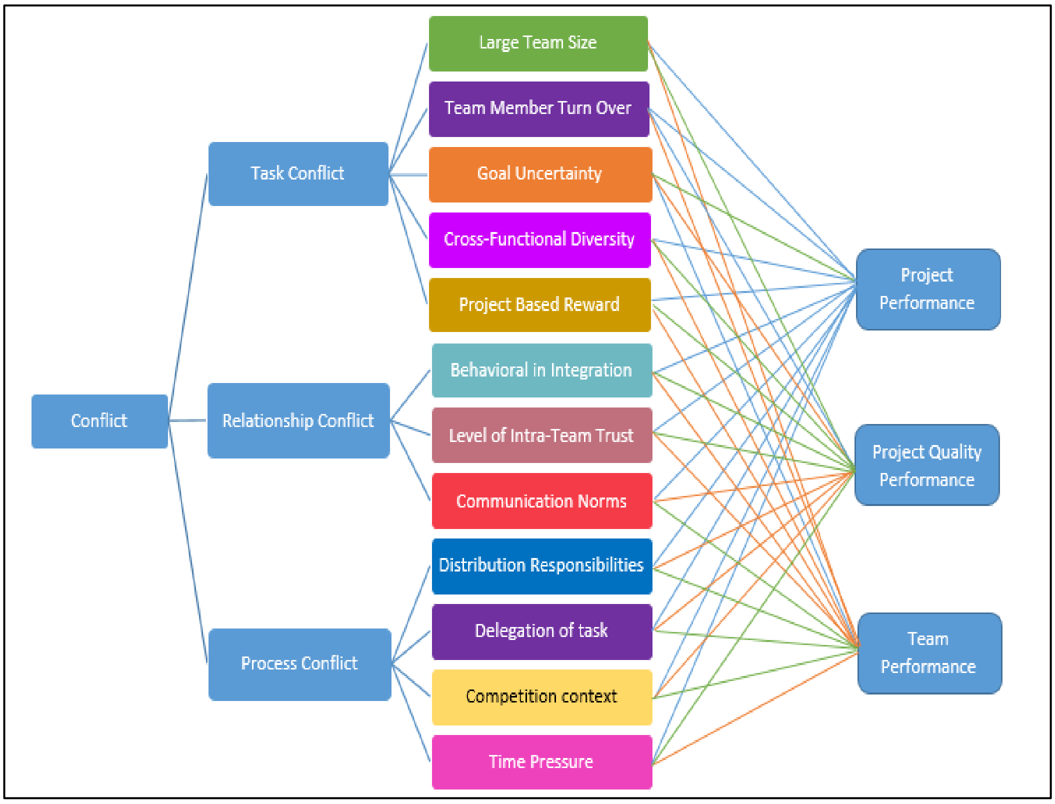

Figure 2: Theoretical Framework of Conflict in IT Project

Based on the previous study of research papers, several criteria has been identified as the factors that have impact on conflicts in IT projects. These three criteria are Task Conflict, Relationship Conflict, and Process Conflict. The first criteria is called Task conflict and it consists of five sub-criteria which are Large Team Size, Team Member Turn Over, Goal Uncertainty, Cross-Functional Diversity and Project Based Reward. Meanwhile there are four sub-criteria in Relationship Conflicts which includes specifically, Behavioural in Integration, Level of Intra Team Trust, and Communication Norms. Lastly in Process Conflict, there are four sub-criteria which are Delegation of Task, Competition Context, Time Pressure, and Distribution of Responsibilities.

Questionnaire Survey

In this research project, it was decided the main data collection will be conducted by using questionnaire survey. The idea was to identify the main criteria in the role of conflicts in IT project as well to determine which to what extent the criteria, sub criteria, and alternatives can influence IT project performance.

Within this stage of the research process, 17 questionnaires were distributed to key personnel in the IT industry, namely; CEOs, project managers, managers, senior managers, system engineers, and system analyst. The aim of the survey was both to explore new findings in terms of conflict causes, and to determine what recommendations might be made in respect of project management strategies to avoid or reduce these causes. The questionnaire was sent by email. The second stage of the research design which is concerned with the validation and testing of the outcomes obtained from questionnaire survey. Later, the results produced by this questionnaire survey were entered in a Super Decision software for further analysis.

Analytic Hierarchy Process (AHP)

Why AHP?

Saaty introduced a decision support tool call AHP, and it can be used to solve decision problem that is complex in nature (1977 and 1994). AHP uses an organized multi-level progressive options (alternatives), criteria, and sub-criteria. When deriving valid data, AHP uses a set of pairwise comparisons. By applying this comparison, the importance weight of criteria, sub-criteria and alternatives will be obtained. A mechanism to improve the consistency will be provided should the result of the comparison found inconsistent. AHP was chosen as the research tool in this research project as it provides a technique deemed useful for examining the consistency level of the evaluations by the decision maker, therefore the bias in the decision making process is reduced.

The Use of Pairwise Comparisons

The pairwise comparison was proposed by Saaty (1980) to determine the relative importance of each criterion. In this approach, the opinion of decision-maker is expressed in the value of one single pairwise comparison at a time. A scale is introduced by Saaty (1980) to make the pairwise comparison and among members of the set: {9, 7, 5, 3, 1, 0.33, 0.2, 0.14, and 0.11}.
The below is sample of algorithm implementation to put the description of pairwise comparison mathematically.

Set of criteria = $C_1, C_2, \ldots C_n$

Quantified judgement on a pair of elements $C_i, C_j = a_{ij}$

Scale values = 1, 3, 5, 7, and 9, where;

This generate an *n-by-n* matrix A as follows:

$C_1, C_2, \ldots C_n$

$$A = [a_{ij}] = \begin{bmatrix} a_{11} & a_{12} & a_{13} & a_{1n} \\ 1/a_{21} & 1 & a_{23} & a_{2n} \\ 1/a_{31} & 1/a_{32} & 1 & a_{3n} \\ 1/a_{n1} & 1/a_{n2} & 1/a_{n3} & 1 \end{bmatrix}$$

Where $a_{ii} = 1$ and $a_{ji} = 1/a_{ij}$, $i, j = 1,2,\dots,n$

In matric A, the problem becomes one of the assigning n elements, $C1, C2, \dots, Cn$ a set of numerical weight $W1, W2, \dots, Wn$, that "reflects the recorded results". Relationship between weight Wi and judgement aij is $W_i / W_j = a_{ij}$ (for i, j=1, 2,….n), assuming A is consistency matrix.

The largest eigenvalue $\lambda_{\max}$ will be:

$$\lambda_{\max} = \sum_{j=1}^{n} a_{ij} \frac{W_j}{W_i}$$

Eigenvector X can be calculated by:=

$(A - \lambda_{\max} I)X = 0$ (Assuming A is consistency matrix)

Questionnaire Design

The questionnaire was divided into two parts. The first part consists of demographic data which includes gender, location of current work, years of experience and type of industry of the respondent. The second part is surveys on criteria, sub-criteria, and alternatives for role of conflicts in IT project. Each criteria will be compared among each other, and then each criteria will be compared with in respective sub-criteria. Last but not least, each node in sub-criteria will be compared with the alternatives.

Analysis Of Data

Respondents profile

Out of 17 questionnaires sent to the experts in IT project companies, 9 valid responses were collected in full. The profiles of responders are tabulated in Table 1.

Table 1: Responders profile

No.	Designation	Gender	Years of experience	Number of Projects Involved	Industry
1.	Project Manager	Male	11 – 25 years	More than 25 projects	Software
2.	Project Manager	Male	11 – 25 years	11 – 25 projects	Software, Hardware, Internet
3.	Manager	Male	11 – 25 years	11 – 25 projects	Computer Hardware, Network
4.	System Analyst	Female	6– 10 years	6– 10 projects	Software
5.	Manager	Female	6– 10 years	11 – 25 projects	Consultancy

6.	Senior Manager	Male	11 – 25 years	6– 10 projects	Software
7.	System Analyst	Female	6– 10 years	6– 10 projects	Software
8.	System Engineer	Male	6– 10 years	6– 10 projects	Computer Hardware, Network
9.	CEO	Male	More than 25 years	More than 25 projects	Software

Geometric Mean Calculation

The response received from survey was firstly tabulated in an excel sheet.

The ratings shown in the questionnaire will be converted and now will carry the values as values below:

Table 2: Comparative importance values

Comparative Importance	Value
Extremely preferred	9
Very strongly preferred	7
Essentially preferred	5
Moderately preferred	3
Equal importance	1
Moderately preferred	0.33
Essentially preferred	0.2
Very strongly preferred	0.14
Extremely preferred	0.11

The Geometric mean calculation is vital as the value obtained will be inserted in the Super Decision software accordingly for further analysis.

Pair-wise comparisons and their definitions

Before getting further results from Super Decision software, the research model framework discussed here will be tabulated accordingly in the software as in Figure 3.

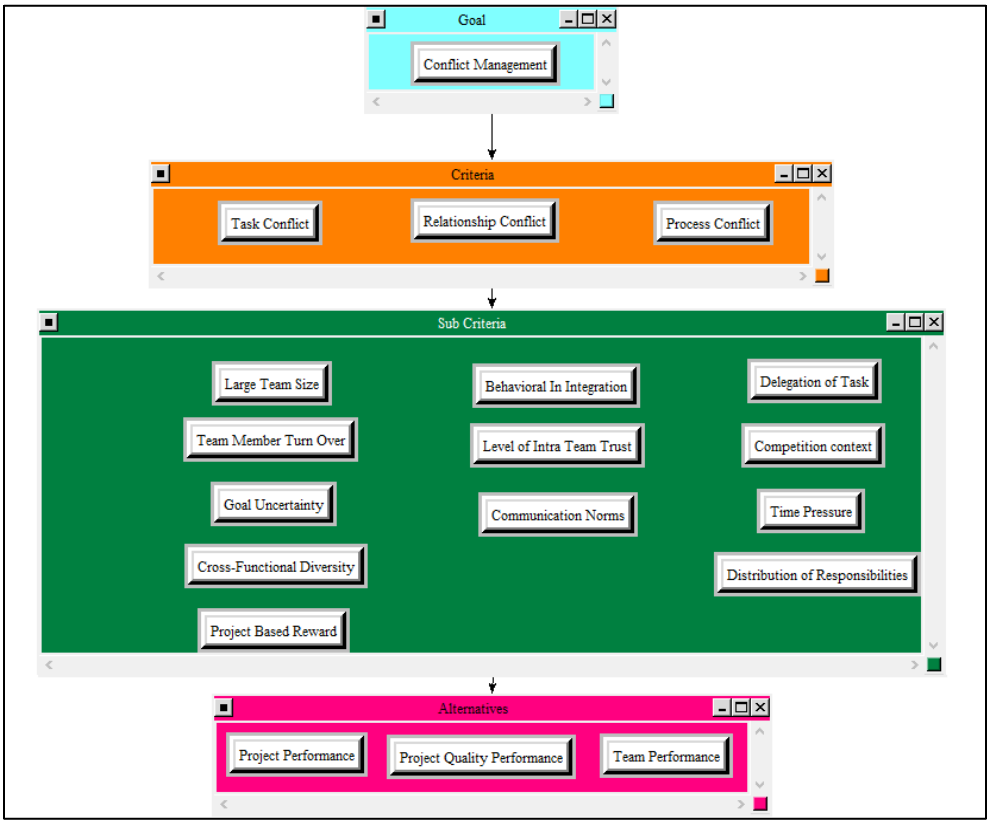

Figure 3: Research model reflected in Super Decision software

As shown in Figure 3, first, the nodes in criteria will be compared among each other, and then each criteria will be compared with nodes shown in respective sub-criteria. Later, each node in respective sub-criteria will be compared with the nodes in last cluster whereby the factors influencing conflict management can be determined. Last but not least, each node in sub-criteria will be compared with the nodes in the Alternatives cluster. Hence, this results in total number of 9 questionnaire to be answered in the second session of the survey. Answers obtained from all the 9 questionnaire will be analysed accordingly

In the first part of the survey, preference between the criteria listed below is analysed:

1. Task Conflict
2. Relationship Conflict
3. Process Conflict

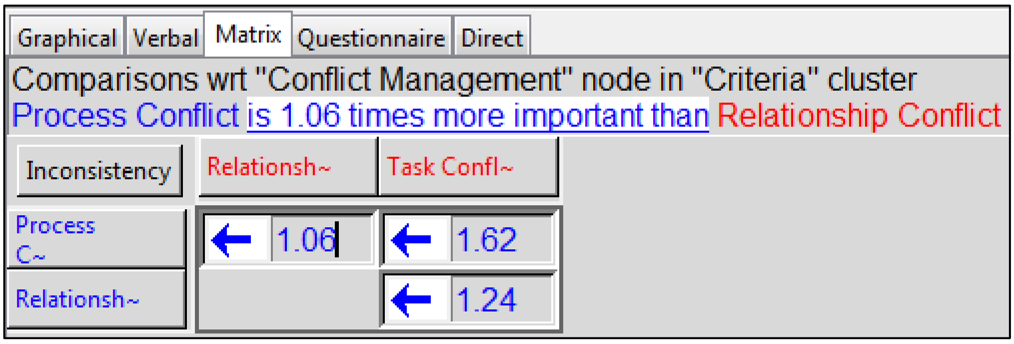

Figure 4: Pair-wise comparison between sub-criteria

Figure 4 shows Process Conflict is 1.06 times more important than Relationship Conflict with respect to conflict management. Process Conflict is also 1.62 times more important Task Conflict. And, Relationship Conflict is 1.24 times more important when compared to Task Conflict. This priority was based on the inputs gathered from the survey questionnaire.

In each comparison practice carried out using the Super Decision software, there is an index that can be further evaluated, analyse, and weigh the validity of the research. The index is known as "Inconsistency Index".

Ideally all pair-wise comparison inconsistency index should be below 0.10. If the inconsistency index are found to be more than 0.10, it's suggested to review again the survey questionnaire respondents.

Figure 5 shows the inconsistency index with respect to conflict management in IT project which is 0.00467 and also falls under the ideal reading which is less than 0.10. Also, from the same figure we can determine that Process Conflict is more important than the other criteria's.

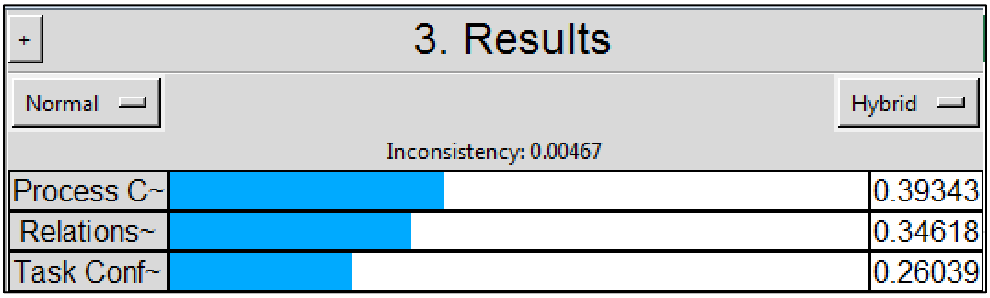

Figure 5: Inconsistency Index for comparison between sub-criteria on conflict management in IT project.

Similar tests were done for all criteria and sub-criteria and the results are discussed.

Discussion

From the outcome of the result, we noticed that all criteria, sub-criteria, and alternatives obtained pair-wise comparison inconsistency index below 0.10. Therefore, we conclude that the output from the survey questionnaire answered by respondents to be acceptable. The role of conflicts in IT project is needed and important to affect the current and future project management strategy. The main criteria of the conflicts (Task Conflict, Relationship Conflict, Process Conflict is the main concern of the majority of the senior executive and management level on the private sector area.

From the pairwise comparison result, **Process Conflict** is identified as the main criteria in Role of Conflicts based on the value with the inconsistency index value of 0.00467

Cross-Functional is identified as the most important criteria in sub-criteria Task Conflict based on the value in the inconsistency index which is 0. 02293. **Behavioural in Integration** is recognised as the most important criteria in sub-criteria Relationship Conflict based on the value in the inconsistency index which is 0.00208. **Competition Context** is acknowledged as the most important criteria in sub-criteria Process Conflict based on the value in the inconsistency index which is 0.04022.

Recommendations and Future Study

While task conflict, relationship conflict, and process conflict are analysed as criteria in part literature (Jehn, 1995; Jehn et al., 2008; Jehn & Mannix, 2001), the examination plan of this research contrasts from different studies by exactly analysing most important criteria, sub-criteria and alternatives of conflict in IT project. This contribution is significant, given that this study represents a change in fundamental that is helpful with regards to industrial, human resource and IT research. So far, in the market, government, or association did not set a standard for handling conflicts in IT project.

By default, each team member need train themselves to have the capability to handle conflict when it happens, to have the capability to keep it robust, and also to ensure that they stay out from conflict in the everyday course of team working. It is also important for team members to understand and appreciate each and every standpoints that varies.

Summary

Conflict exists from differences between people; the same differences that usually make diverse teams more effective than those made up of people with similar experience. When people are assigned to a project or a challenge together with other people that are diverse in viewpoints, knowledge, and experiences, the mutual effort can far exceed what any group of similar individual could accomplish.

Furthermore, IT projects can be an ideal situation for rapid development of conflict. Conflict can occur at any and every stage of the IT project; from difficult stakeholder who undermines the project's success to a disagreement about deliverable feature, project work lends itself to workplace conflict situations. Consequently, conflict influences the team actions and decisions in one way or another.

Role of conflict can be classified into three criteria which are task conflict, relationship conflict, and process conflict. Task conflict usually occur when there are disagreements among team members about the decision that has been taken and involves differences in perspectives, concepts, and thoughts. Relationship conflict occurs when there is inharmoniousness between group members, and typically includes tension, frustration, and hatred between people. Meanwhile, process conflict is triggered when there's disagreements regarding how tasks should be accomplished in a project. Examples of process conflict includes team member altercates over who should do what, who will take responsibility for particular duties, and how resources will be divided.

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THE RELATIONSHIP BETWEEN LEADERSHIP STYLES AND ORGANIZATIONAL COMMITMENT IN THE HOTEL INDUSTRY

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Abstract: *In the hotel industry, high service quality has become concerns to the hotel service providers as a means for gaining the competitive advantage since hotels provide similar services. Apart from that, hotels need to have a committed staff towards improving the quality of service. In this context, organizational commitment of operational employees is necessary in providing better services for the guest. The leadership styles in the hotel industry can provide different motivators that leads to the organizational commitment. Therefore, the purpose of study is to examine the perception on the relationship between leadership styles and organizational commitment. The quantitative approach was applied in this study by using questionnaires through a survey. The data analysis was tested by using the SmartPLS 3.0 software. The results suggested that transactional leadership style and transformational leadership style have a positive relationship with organizational commitment.*

Keywords: *Transactional, transformational, organizational commitment, leadership*

Introduction

The Malaysian Tourism industry, which was recognised as one of the National Key Economic Areas in Malaysia's vision and hence, putting greater effort to promote Malaysian Tourism industry as a tourist destination in order to achieve the vision, a high-income nation by 2020. The Vision 2020 is to achieve 36 million tourist arrivals and RM 168 billion tourist receipts (Tourism Malaysia, 2018). According to Ministry of Tourism, Culture and Environment, Sabah, which the tourism industry in Sabah is booming, thus, accommodation is utmost important (New Straits Times, 2018). Therefore, the establishment of hotels as an accommodation is getting increase as the movement of people within the domestic and from the foreign for the purposes such as business or pleasure.

As hotels provide similar and identical services, high service quality has become the essential factors in gaining competitive advantage and differentiates themselves from other hotel service providers (Ma & Qu, 2011). In order to provide high service quality, hotels need to have committed and loyal employees that can provide better services for the guests (Nasurdin, Ahmad & Tan, 2015). According to Nor Azila, Azilah, Cezar & Azli, (2010) stated that low organization commitment can impact the level of customer-orientation behavior, especially service-based organization such as hotel. Tracey & Hinkin (1996) recommended improving service quality through effective leadership, given the labor intensive nature of tourism and hospitality industries and the rapidly changing industry environment in using human capital.

According to As-Sadeq & Khoury (2006) stated that leadership styles have significant influence on employee outcomes. There are increasing of research interest related to the impact of transformational leadership style and transactional leadership style on employee outcomes such as organizational commitment and performance in hospitality environments (Boyne, 2010 & Brownell, 2010). However, both leaderships styles may enhance different effect in different settings (Dai, Dai, Chen & Wu, 2013). Furthermore, leadership can be used as an antecedent variable for organizational commitment (Meyer & Allen, 1997). Therefore, the aims of this study are to investigate the relationship between leadership styles and organizational commitment in the context of Sabah hotel industry. Specifically, these studies are (1) to examine transactional leadership style and organizational commitment; and (2) to examine the relationship between transformational leadership style and organizational commitment.

The Concept of Organizational Commitment

According to Allen & Meyer, (1990) stated that affective commitment, normative commitment and continuance commitment are the three-dimensional approaches that most widely used model in organizational commitment. Organizational commitment is reflected in three key points, which are active association with the organization, the predictable costs of leaving the organization and the obligation to remain in the organization (Meyer & Allen, 1991). Affective commitment is regarded as an emotional attachment, which strongly committed individual identifies them as involved and likes to be part of the organization (Allen & Meyer, 1990). Employees who had affective commitment would firstly believe in the organizational values and goals, secondly, they would work hard for the organization and thirdly intend to stay with the organization (Mowday, Porter & Steers, 1982). Smith & Hall, (2008) stated that affective commitment appears when an employee wanted to be the part of the profession due to the desired goals.

For normative commitment, it has been viewed as a belief about one's responsibility to the organization and continuance commitment, on the other hand, viewed as the costs that employees associate with leaving the organization (Allen & Meyer, 1990). According to Marsh & Mannari, (1977) stated that the normative commitment appears when an individual's perception of their moral obligation to remain with an organization without seeing how much status improvement or fulfilment the organization gives to the employees during his or her term in the organization. This is in line with Smith & Hall, (2008) stated that normative commitment emerges from the awareness on the responsibility for a commitment.

Continuance commitment, on the other hand, is based on the perceived economic and social cost of leaving the organization (Allen & Meyer, 1990), which number of investment employees make in their current organization and perceived lack of alternatives after leaving the organization. This is in line with Varsha & Monica, (2012), mentioned that continuance commitment includes the attractive benefits of the current organization, the threat of wasting time and effort to get a new job and disrupt personal relationship. Smith & Hall, (2008) stated that continuance commitment is the time when people feel that they should stay in that profession due to an accumulation of capital or lack of comparable alternatives.

The Concept of Transactional Leadership Style

Transactional leadership style is regarded as trades between the leader and follower by which followers are rewarded for meeting specific goals or performance criteria (Trottier, Van Wart & Wang, 2008). According to Bass & Avolio, (1994), transactional leadership depends on contingent reinforcement, either positive contingent reward or negative active or passive forms of management by exception. Bass & Avolio, (1995) explained that transactional leader encourages the participation of employees through both rewards and punishments. In this study, the transactional leadership style is viewed as exchange among leaders and employees that foster the commitment of employees to new ideas by having the tangible recognition or rewards for the initiatives and the development of new ideas, thus the value is communicated directly to the followers (Mackenzie, Podsakoff & Rich, 2001).

The Concept of Transformational Leadership Style

Transformational leadership style is regarded as the leaders motivate subordinates and appeal to their ideals and moral values by creating and representing an inspiring vision of the future (Bass & Avolio, 1997). Bass & Avolio, (1997) further that it involves the creation of an emotional attachment between leaders and employees. In this study, transformational leadership style is viewed as identifying and articulating a vision, providing an appropriate model, fostering the acceptance of group goals, setting high performance expectations, providing individualized support, and promoting intellectual stimulation (Podsakoff, MacKenzie, Moorman & Fetter, 1990).

Transactional Leadership Style and Organizational Commitment

According to Bass, Avolio, Jung & Berson, (2003), several previous studies found a positive relationship between transactional and organizational commitment. This is in line with Chiang & Jang, (2008) and Uen, Wu, Teng & Liu, (2012) found that transactional leadership style has a positive relationship with organizational commitment. However, transactional leadership style has found associated negatively with organizational commitment (Dai *et al.,* 2013) which contrary to Mardiyana, Owin & Juhary, (2019) that transactional leadership style has a positive relationship with organizational commitment. Therefore, this study attempts to test the following hypothesis:

H1: There is a positive relationship between transactional leadership style and organizational commitment.

Transformational Leadership Style and Organizational Commitment

There are other fields of research found that transformational leadership style has a positive relationship with organizational commitment (Jackson, Meyer & Wang, 2013; Judge & Piccolo, 2004; Pillai & Williams, 2004). This is in line with Chiang & Jang, (2008); Uen *et al.*, (2012) and Tuna, Ghazzawi, Tuna & Çatir, (2011) found that transformational leadership style has a positive relationship with organizational commitment. This is also supported by Rini & Diana, (2019) that transformational leadership style has found associated positively with organizational commitment. Therefore, this study attempts to test the following hypothesis:

H2: There is a positive relationship between transformational leadership style and organizational commitment.

Research Design

The scope of the study has been carried out among the operational employees in hotel industry. This study focused on the employees that worked in operational department such as food and beverage department, housekeeping department and front office department, which is a purposive sampling technique for the respondent selection. The sample size for this study is 139 respondents. Questionnaires through the survey are used as data collection instruments and have distributed to the operational employees. The unit of analysis in this study is individual, as an operational employee in hotel. The study used a five-point Likert scale in the survey instrument, which ranging from strongly disagree (1) to strongly agree (5).

Assessment of Measurement Model

The measurement model is examined for the internal consistency reliability, convergent validity, and discriminant validity. Consistency reliability of the constructs is examined through the Cronbach's alpha, composite reliability and Rho_A (Hair, Hult, Ringle & Sarstedt, 2017; Dijkstra & Henseler, 2015b). Moreover, convergent validity of the constructs is examined through the outer loadings, and average variance extracted (AVE) (Hair *et al.*, 2017; Hair, Hult, Ringle & Sarstedt, 2014). On the other hand, discriminant validity of the constructs is examined using cross-loadings, Forner-Lacker criterion, and HTMT as suggested by Hair *et al.*, (2017) and Henseler, Ringle & Sarstedt, (2015).

The threshold value is 0.70 for Cronbach's alpha, composite reliability and Rho_A that indicates internal consistency (Ramayah, Cheah, Chuah, Ting & Memon, 2018). All the constructs involved in this study exceeded the threshold criterion. For outer loadings, the threshold value is 0.70 and for AVE, the threshold value is 0.50, which suggested an adequate convergent validity (Hair *et al.*, 2017; Hair, Black, Babin, Anderson, & Tatham, 2010; Bagozzi & Yi, 1988; Byrne, 2016). All the constructs involved in this study were exceeded the threshold criterion. Table 1 shows the Cronbach's alpha, composite reliability, Rho_A, outer loadings, and average variance extracted (AVE) for all the constructs.

Table 1: Assessment of Outer Loadings, Cronbach's Alpha, Rho_A, Composite Reliability and AVE

Constructs	Items	Outer Loadings	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted AVE
Transformational	TFLS1	0.746	0.791	0.793	0.865	0.616
	TFLS2	0.837				
	TFLS3	0.806				
	TFLS4	0.746				
Transactional	TSLS1	0.806	0.878	0.883	0.911	0.672
	TSLS2	0.788				
	TSLS3	0.848				
	TSLS4	0.817				
	TSLS5	0.840				
Organizational Commitment	AC	0.792	0.756	0.766	0.859	0.671
	CC	0.823				
	NC	0.842				

In assessing the cross-loadings, each indicator should load high on its own constructs but low on other constructs. Table 2 shows that each indicator is high on its respective construct than its cross-loadings on any other constructs.

Table 2: Cross-Loadings

	COMMITMENT	TRANSFORMATIONAL	TRANSCATIONAL
AC	**0.792**	0.459	0.432
CC	**0.823**	0.394	0.509
NC	**0.842**	0.498	0.588
TSLS1	0.393	**0.746**	0.477
TSLS2	0.444	**0.837**	0.540
TSLS3	0.415	**0.806**	0.417
TSLS4	0.471	**0.746**	0.418
TSLS5	0.491	0.540	**0.806**
TFLS1	0.441	0.417	**0.788**
TFLS2	0.527	0.486	**0.848**
TFLS3	0.535	0.479	**0.817**
TFLS4	0.568	0.492	**0.840**

The Fornell-Larcker criterion, where the square root of AVE (diagonal) is larger than its correlations (off-diagonal) for all constructs. Table 3 shows that the square root of AVE of each of the constructs is larger than its correlations with other constructs.

Table 3: Fornell and Larcker Criterion

	COMMITMENT	TRANSCATIONAL	TRANSFORMATIONAL
COMMITMENT	**0.819**		
TRANSCATIONAL	0.629	**0.820**	
TRANSFORMATIONAL	0.552	0.590	**0.785**

The values are lower than the required threshold value of HTMT that suggested by Henseler *et al.*, (2015), which is 0.90 and the confidence interval does not show a value of one on any of the constructs, indicating the discriminant validity. Table 4 shows the values has fulfilled HTMT criterion.

Table 4: HTMT Result

	COMMITMENT	TRANSCATIONAL	TRANSFORMATIONAL
COMMITMENT			
TRANSCATIONAL	0.759 CI 0.90 (0.321, 0.584)		
TRANSFORMATIONAL	0.706 CI 0.90 (0.163, 0.375)	0.707 CI 0.90 (0.471, 0.683)	

Structural Model Assessment

The collinearity issue needs to be assessed in the initial stage of assessing structural model by looking at the VIF value. The collinearity issue exists when a VIF value is higher than 5 (Hair *et al.,* 2017). Table 5 shows that all the Inner VIF values for the independent variables (Transformational and Transactional) are less than 5, thus indicating collinearity is not an issue.

Table 5: VIF Values

	COMMITMENT	TRANSCATIONAL	TRANSFORMATIONAL
COMMITMENT			
TRANSCATIONAL	1.534		
TRANSFORMATIONAL	1.534		

The coefficient of determination, R^2 represents the amount of variance in the endogenous (Organizational Commitment) explained by all of the exogenous constructs linked to it (Transactional and Transformational). According to Chin, (1998) stated that 0.67, 033, 019 respectively, describing substantial, moderate, or weak levels of predictive accuracy. Table 6 shows the R^2 values, which is 0.445, implying that 44.5% of organizational commitment is predicted by transactional and transformational leadership styles.

Table 6: R^2 Values

Construct	R^2
Organizational Commitment	0.445

Next, the assessment of the structural model for examining the hypothesized relationships among the constructs through a bootstrapping procedure with 5000 sub samples (Hair *et al.*, 2017). The path coefficients are obtained for the structural model relationships, which represent the hypothesized relationships that link the constructs by looking at the beta (β), R^2, and the corresponding t-values (Hair *et al.*, 2017; Hair, Ringle & Sarstedt, 2011). Table 7 shows the significance results of the structural model. All the hypothesized relationships are supported at $p < 0.01$.

Table 7: Results of the Structural Model

Hypothesis	Path	Std Beta (β)	Std Error	t-values[a]	p-values	LL	UL	Decision
H1	TRANSCATIONAL -> COMMITMENT	0.465	0.079	5.892**	0.000	0.315	0.577	Supported
H2	TRANSFORMATIONAL -> COMMITMENT	0.278	0.064	4.319**	0.000	0.162	0.376	Supported

*Significant at p<0.05; **Significant at p<0.01
[a]Notes: (t(4999), One tailed test: t(0.05; 4999)=1.65; t(0.01;499))=2.33

Discussions and Conclusions

The aims of this study are to examine the relationships between leadership styles and organizational commitment. Specifically, it attempts (1) to examine the relationship between transactional leadership style and organizational commitment; and (2) to examine the relationship between transformational leadership style and organizational commitment. All hypothesized relationships are supported, and t-values are statistically significant. Besides, the results demonstrated good measurement model in terms of internal consistency, convergent validity and discriminant validity.

The results have demonstrated a positive direct relationship between transactional leadership style and organizational commitment. This indicates that a leader who understanding, providing and committing in terms of employee needs and reward leads to an employee who wants to and feel accepted, perceived the benefit of effort, obligation and loyalty to organization by willingness to contribute and work hard to achieve organizational goals.

Besides, the results have showed a positive direct relationship between transformational leadership style and organizational commitment. This indicates that a leader who stimulate interest, generate awareness, develop higher performance and motivate to take highest advantage of opportunities, which leads to an employee who wants to have sense of acceptance, the benefit of contribution, obligation and loyalty to organization by willingness for being a competitive employee to achieve organizational goals.

Both transactional and transformational have been considered as the important contemporary leadership styles, that leads to organizational commitment in the hotel industry. Previous studies have reported different results on the effect of both transactional and transformational leadership styles on organizational commitment. According to Chiang & Jang (2008) and Uen *et al.*, (2012) that transactional and transformational leadership styles have been found associated positively with organizational commitment. However, transactional leadership style has found associated negatively with organizational commitment (Dai *et al.*, 2013). Besides, transformational leadership style has found associated positively with organizational commitment (Tuna *et al.*, 2011).

To conclude, transactional and transformational leadership styles should not be viewed as mutually contradictory, but as complementary, which the best leaders should have both transactional and transformational qualities (Chiang & Wang, 2012). Besides, this study would have added value to the literatures on leadership styles and organizational commitment, especially in Sabah hotel industry settings.

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A TRANSITION FROM SST TO GST: IMPLICATION TO THE CAPITAL STRUCTURE AND PERFORMANCE OF MALAYSIAN PUBLIC LISTED COMPANIES

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Abstract: *This study seeks to investigate the impact of a transition from SST to the GST implementation on the relationship between capital structure on corporate performance of Malaysian PLCs especially in the consumer products sectors. 60 PLCs were chosen and financial data from 1st April 2014 until 1st April 2017 are observed. The result shows that GST implemented by the Malaysia Government lead to low corporate performance. Further, this study confirms that GST implementation has a moderation role on the relationship between the capital structure and corporate performance of companies. This suggest that short-term debt tends to be less expensive and therefore increasing debt with a relatively low interest rate will lead to an increase in profit levels. This result is consistent with the Static Trade-off Theory (Myers, 1984) whereby when debt is employed in capital structure, there will be a need for trade-off because firms are faced with the challenges of tax and bankruptcy cost.*

Type of Paper: *Empirical Paper*
Keywords*: Capital Structure; Firm Performance; Bursa Malaysia; GST Implementation*

Introduction

Goods and Services Tax (GST), also known as Value Added Tax (VAT) is a form of expenditure or consumption tax. Prior to the implementation of GST, among the expenditure taxes in force were the Sales and Service Tax (SST). Under SST, consumers were charged at the total of 16% tax rate (sales tax 10% and service tax 6%). Sales Tax is a single stage tax imposed on goods manufactured in or imported into Malaysia. Service Tax, also a single stage tax was imposed on taxable services provided by taxable persons. An announcement by the Prime Minister and Minister of Finance of Malaysia, Dato Seri Najib Bin Tun Abdul Razak during the 2014 Budget on 25th October 2013 stated that GST will be implemented and it will governed by GST Act 2014, GST Regulation 2014, and Goods and Services Tax Order 2014 (Ching et al., 2017). With the implementation of GST, they are charged at 6% rate. The announcement has stirred both positive and negative reactions in the society ever since the announcement was made. Will the society satisfy over the current economic policy that has been implemented?

The objectives for GST to be introduces in Malaysia are twofold; as first, to enhance the revenue collections and second is to use the GST system as a mechanism to mitigate transfer pricing manipulation (BNM, 2013). Both aims are to reduce the tax collection leakage that has happened earlier. Thus, to overcome the problem, government has decided to replace the SST system with the GST starting from April 2015. The proponents of GST claimed that the well-designed structure of GST makes it a particularly more efficient tax among all (Rashid et al., 2014). Even though GST is imposed at each level of the supply chain, the tax element does not become part of the cost of the product because GST paid on the business inputs is claimable (Zakaria, 2017). Hence, it does not matter how many stages where a particular good and service goes through the supply chain because the input tax incurred at the previous stage is always deducted by the businesses at the next step in the supply chain. In reality to the implementation of GST, companies claimed that they are the most affected by the introduction of the GST due to lack of resources and funds to comply (Adam & Yusof, 2018). Companies see significant impact on their revenue as they are the most in need to customise financial planning, tax filing, and invoice billing to comply with GST collection (Kim-Soon et al., 2018). At the early stage, companies have allocated a limited budget and possessed inadequate resources and knowledge in facing the new tax system on their business.

In analogous to Modigliani and Miller's (1963) propositions, Miller (1977) incorporated both corporate taxes and personal taxes into his model. According to Miller (1977), the value of the firm depends on the relative level of each tax rate, compared with the other two. Miller (1977) indicated that relative level of each tax rate determines firm value, and that the gain from employing debt may be smaller than what was suggested in Modigliani and Miller (1963). In particular, this study conjecture that GST implementation will have an impact on the capital structure of the companies whereby when companies facing limited budget, they tend to acquire more financial resources either debts or equity financing. With the current fluctuation in economic conditions, the burden faced by companies could lead to the assumption that companies should ensure that their capital structure is greatly weighted towards a higher level of debt. However there is a limit to the amount of debt a firm should take on (De Wet, 2004). Hence, a number of questions require an answer. With the implementation of GST, does capital structure positively or negatively impacts on corporate performance? Does higher leverage lead to better firm performance?

Therefore, the implementation of GST has motivated this study to examine the performance level of Malaysian corporation in the period both before and after GST implementation by focusing on public listed companies (PLCs) in the consumer products sector. Besides, the aim of this study is to investigate whether GST implementation has a moderation role on the relationship between the capital structure and corporate performance of Consumer Products PLCs.

Literature Review

The Impact of Capital Structure on the Corporate Performance

The utilization of different levels of debt and equity in the firm's capital structure is a firm-specific strategy used by managers in the search for improved performance (Gleason et al., 2000). Pandey (2004) opined that, the capital structure decision of a firm should be examined from the point of its impact on the value of the firm. He further stated that if capital structure decision can affect a firm's value, then firms would like to have a capital structure which maximizes their value. Hence, most firms have strived to achieve an optimal capital structure in order to minimize the cost of capital or to maximize the firm value. This subsequently will improve its competitive advantage in the marketplace through a mixture of debt and equity financing. Thus, selecting the right type of debt is an equally important issue as opting for an appropriate debt to equity ratio. However, as noted by Myer (2001), each theory works under its own assumptions and propositions, hence, none of the theories can give a complete picture of the practice of capital structure.

Previous empirical studies on the relationship between capital structure and firm performance can be divided into two perspectives. First, researchers consider capital structure as the dependent variable and try to seek for its determinants, including indicators of firm performance. The second perspective looks at the determinants of the firm performance, including capital structure as one of explanatory variables. This study is design in accordance with the second perspective, considering capital structure as the choice variable for maximizing the firm value. However, prior empirical studies have not reached an agreement about the relationship between capital structure and firm performance yet.

Earlier paper, Stulz (1988) argued that debt can have both positive and negative effect on firm value. Aggarwal and Kyaw (2006) also posited that, debt can have both positive and negative effects on the value of the firm so that the optimal debt structure is determined by balancing the agency costs and other costs of debts as a means of alleviating the under and over-investment problems. Specifically, when firms have surplus cash flows, debt will force managers to pay out funds that might otherwise have been invested in negative net present value projects. However, firms with outstanding debt may have incentives to reject projects that have positive net present value if the benefit from accepting the project accrues to the bondholders without also increasing shareholders' wealth.

In addition, McConnell and Servas (1995) posited that the seeds of under-investment problem lie in the solution of over investment problem. They investigated the relationship between corporate values, leverage and equity ownership of the US firms. They discovered that for firms with high price/earnings (P/E) ratios or for high-growth firms, value is negatively related to leverage and that in firms with low P/E ratio or low-growth firms, value is positively related to leverage. Their evidence supports the contention that for low-growth firms, leverage act as a monitoring mechanism to enhance firm value, whereas for high-growth firms, leverage causes under investment and destroys the value of a firm.

Some of the earliest studies suggest that increasing leverage in capital structure, by acquiring debt should have positive implications for firm value and performance (Heinkel, 1982; Ross, 1977; Noe, 1988). Furthermore, positive result is also supported by Hadlock and James (2002) where they concluded that companies prefer debt (loan) financing because they anticipate a higher return. According to Champion (1999), the use of leverage is one way to improve the performance of the firm. Similarly, Margaritis and Psillaki (2010) observed a significant positive relation between capital structure and firm's performance. They used a sample of both low and high growth French firms for the period 2003-2005 and found that leverage have positive effect on firms' efficiency over the entire sample. In addition, using panel data consisting of 257 South African firms over the period 1998 to 2009, Samuel (2013) investigated the association between capital structure and firm performance. To test the relationship, he used GMM regression approach and found a positive and significant relation between financial leverage and firm's performance. Aliakbar et al. (2013) also found a significant positive link between capital structure and firm performance in the Tehran Stock Exchange.

In contrast, a rigorous study was performed by Rajan and Zingales (1995) to investigate the capital structure of 48 from the US during the period 1981–1990. Result of that study revealed that there is a negative relation between profitability and debt-level, and the relationship would be more visible if firm size gets bigger. They also added that if return on stock and investments are fixed in a short term, and the main way of external financing is debt, there is a negative correlation between performance and leverage. Another study by Gleason et al. (2000) concluded that high levels of debt in the capital structure would reduce the firm's performance. They observed that firm's capital structure has a statistically significant negative effect on firm's performance matrixes, i.e., return on assets (ROA), growth in sales (Gsales), and pretax income (Ptax). Same result was also found by Ebrati et al. (2013). Whereas in Sri Lanka, Manawaduge et al. (2011) concluded that most of the Sri Lankan firms employ short-term debt capital as against the long-term debt and firm performance is negatively affected by the use of debt. Similar result was also noticed in Nigeria by Arowoshegbe & Idialu (2013). In addition, they documented that firms use retained earnings first, then debts and finally equity.

In Malaysian stock market, Mohamad and Abdullah (2012) tried to explore the impact of debt and equity financing on the performance of the firms listed in Bursa Malaysia. Using a sample of 130 firms for the period 2001-2010 combined with multiple regression analysis, they cited a statistical significant negative relation between capital structure and firms' performance. Using a sample of 237 Malaysian companies during 1995-2011, Salim and Yadav (2012) studied the relationship between capital structure and firm performance. Their analysis revealed that firm performance measured by ROA, ROE and EPS have negative relationship with the capital structure while Tobin's Q has significantly positive relationship with short-term debt and long-term debt.

No relationship between capital structure and firm performance also being observed by several studies. For instance, Ebaid (2009) examined the influence of capital-structure choice on firm performance in Egypt. His study based on a sample of non-financial listed firms for the period 1997 to 2005 and used multiple regression analysis. Results suggested that firm performance has weak to no relationship with capital structure choice. Likewise, Khalaf (2013) also found negative and insignificant relationship between short-term and long-term debt ratio, and ROA and profit margin in Bangladeshi firms. Similarly, Hassan et al. (2014) found that there is no significant relation exists between capital structure and firm's performance as measured by ROE and Tobin's Q in the 36 Bangladeshi firms listed in Dhaka Stock Exchange during the period 2007–2012.

The Impact of Taxation on the Corporate Performance

Previous researchers on capital structure have given different interpretations on the impact of taxation on corporate finance decisions. Mackie-Mason (1990), in his study on the impact of tax on corporate financing decisions, provides evidence that tax has a significant influence on choices between debt and equity. He concluded that changes in the marginal tax rate should affect financing decisions. A firm with a high tax shield is less likely to finance with debt, since tax shields lower the effective marginal tax rate on interest deductions. Graham (1996) concludes that, in general, taxes do affect corporate finance decisions, but the extent of this effect is insignificant. On the other hand, DeAngelo and Masulis (1980) showed that there are alternative tax shields such as depreciation, research and development costs and investment deductions that can substitute the role of debt. Titman and Wessels (1988) concluded that the substitution effect is difficult to measure as finding an accurate proxy for tax reduction that excludes the effect of economic depreciation and expenses is arduous.

Leland and Toft (1991) stated that the value of a firm is the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. Modigliani (1980) pointed out that the value of a firm is the sum of its debt and equity and this depends only on the income stream generated by its assets. The value of the firm's equity is the discounted value of its shareholders earnings called net income. That is, the net income divided by the equity capitalization rate or expected rate of return on equity. The net income is obtained by subtracting interest on debt from net operating income. On the other hand, the value of debt is the discounted value of interest on debt.

For firms in the underdeveloped market, tax rates play a significant role in taking decisions about the optimal capital structure decisions (Karadeniz et al., 2009). Stulz (1988) argued that debt increases the likelihood for financial distress and debt also provides tax benefit. In practice, firms tend to use capital structure, preferred stock and common equity with which the firms plans to raise needed funds. Since capital structure policy involves a strategic trade-off between risk and expected return, the optimal capital structure policy must seek a prudent and informed balance between risk and return. The firm must consider its business risk, tax positions, financial flexibility and managerial conservatism or aggressiveness. While these factors are crucial in determining the target capital structure, operating conditions may cause the actual capital structure to differ from the optimal capital structure.

Research Method

Based on the views presented in the literature reviews section, the proposed conceptual framework is developed based on the Pecking Order Theory (Myers & Majluf, 1984) as well as Static Trade-off Theory (Myers, 1984). Consistent with Pandey (2004), this study conjecture that the capital structure decision of a firm should be examined from the point of its impact on the value of the firm. Further, consistent with the Static Trade-off Theory (Myers, 1984), this study postulates that GST implementation in Malaysia has a moderation role on the relationship between the capital structure and corporate performance of Malaysian Consumer Products PLCs. Figure 1 is the research framework for this study.

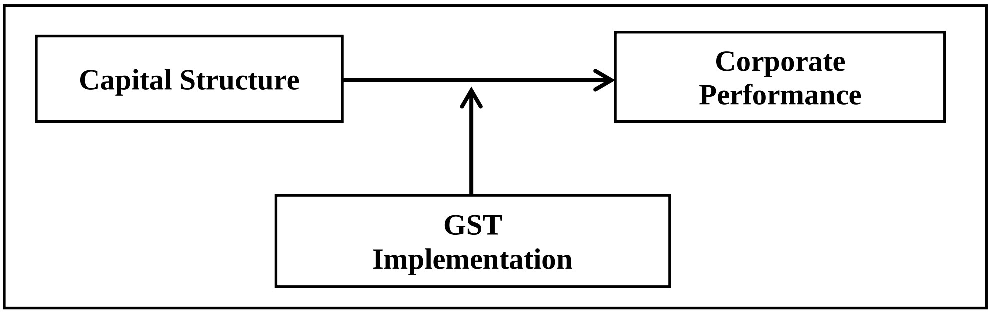

Figure 1: Conceptual Framework of the Study

Data Collection Procedure

This study decided to concentrates on the consumer products sector. It is believes that the consumer products sector is the most sector affected by the GST implementation. The selection process of the PLCs in the consumer products sector is based on the total market capitalization. This study chooses to select the 30 PLCs with the largest market capitalization and 30 PLCs with the smallest market capitalization. After this selection process, the sample size was 60 PLCs. All the financial data was obtained from the annual report of the respective PLCs retrieved from the Bursa Malaysia website.

This study covers two different periods with regards to GST implementation. Depicted in Figure 2, the data will be collected in two different periods; (a) Period 1: Before GST implementation which cover the period from 1st April 2014 to 31st March 2015, and (b) Period 2: After GST implementation which cover the period from 1st April 2016 to 31st March 2017. After the implementation of GST on 1st April 2015, there is a cooling period of one year. The decision for one year cooling period is taken based on the assumption that the impact of GST on the firms can be seen after one year of its implementation. In order to avoid any distortion of the effects from the recent and current listing, this study imposes two criteria on the sample so that it will not distort the results. The two criteria to be fulfilled by all companies included in the sample are that they must be listed in more than one year before GST implementation and none of them is expelled after one year of GST implementation period.

Measurement of the Variables

The literature suggests many ways of measuring performance. Based on the literature and empirical evidence, the effect of capital structure on corporate performance can be explained by using return on assets (ROA) and return on equity (ROE) in order to see the performance of firms. Thus, in the study of performance, measurement of ROA is based on researcher Ahmad et al. (2012) and Abor (2007) where ROA is calculated as "net profit divided by total assets" whereas for ROE, it is calculated as "earnings before interest and tax divided by equity" is following studies by Ahmad et al. (2012) and Abor (2005).

According to Champion (1999), the use of debt or leverage is a way to improve performance of the firm. This study measures the capital structure using short-term debt and long-term debt. Consistent with previous studies, the short -term debt is calculated as "short-term debt divided by total capital" (Abor, 2005; Abor, 2007; Ahmad et al., 2012; Kyereboah & Coleman, 2007). Further, following Kyereboah and Coleman (2007), long-term debt is calculated as "long-term debt divided by total capital". While a dummy variable is created to measure the GST implementation. In this study, the period before GST implementation is measure as 0, while the period after GST implementation is denotes as 1.

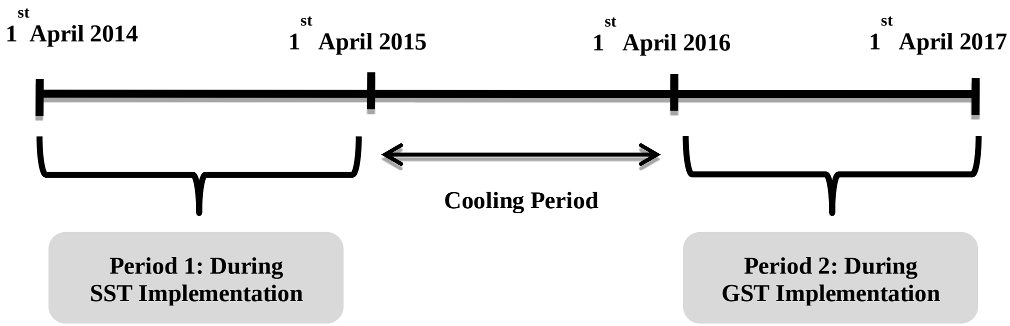

Figure 2: Research Timeline

This study also control for other variables that affect firm performance. In this study, two control variables had been used that are firm size and sales growth. Following Abor (2007) and Ahmad et al. (2012), size is measured by the log of the total assets. While based on study by Abor (2005), sales growth is measured by annual growth rate in sales which is consistent with Ahmad et al. (2012) and Agarwal and Elston (2000).

Results And Discussion

Table 1 reports that there is a statistically significant difference in the mean scores of performance level which measure using return on assets (ROA), return on equity (ROE), and price earnings ratio (P/E Ratio). This result indicates that there is a significant difference in the performance level of Malaysian Consumer Products PLCs during SST period and after GST implementation. For instance, the corporate performance in term of return on assets (ROA) and P/E Ratio of the sample firms is lower in the period after GST implementation. Contrary, the performance of return on equity (ROE) is lower in the period of SST implementation and increased after the GST implementation.

Table 1: Corporate Performance Before and After GST Implementation

Variables	n	Before GST: Mean	After GST: Mean	Independent Sample *t*-test	
				t-statistic	*p* value
Return on Assets	60	7.61	3.59	**-4.823**	**.004*****
Return on Equity	60	7.91	22.37	**3.545**	**.012****

Note: Result is significantly different from zero at the *** 1 percent level and ** 5 percent level, respectively, using two-tailed tests.

The main objective of this study is to investigate whether GST implementation has a moderation role on the relationship between the capital structure and corporate performance of Consumer Products PLCs. Theory along with the literature evidences, the hierarchical regression analysis is conducted to find out the magnitude of impact of the GST implementation on the relationship between capital structure and the corporate performance. A series of regression analyses were executed for two different models according to the measures of dependent variable, i.e. corporate performance (Model 1 is using return on assets (ROA) and Model 2 is based on return on equity (ROE).

As it is evident from the results of Table 2, the *F*-statistics for the Models 1 and 2 is respectively, 4.826 and 5.896, while the *p*-value is significant (*p*-value = .000) for both two models, which indicate Model 1 and 2 are significant at 1% level in general. In addition, the R^2 values for both models are 25.8% and 29.8%, respectively. These show that the estimated models explain respectively 25.8% and 29.8% of changes in dependent variable.

Table 2: Hierarchical Regression Results

Variables	Model 1: ROA			Model 2: ROE		
	Beta	*t*-stat	*p* value	Beta	*t*-stat	*p* value
Intercept		-1.613	.110		-1.574	.118
Short-term Debt (STD)	**0.310**	**2.075**	**.009*****	-0.200	-1.857	.066*
Long-term Debt (LTD)	0.025	0.222	.824	**-0.400**	**-3.864**	**.000*****
GST	**-0.215**	**-2.057**	**.042****	**-0.029**	**-3.282**	**.007*****
STD*GST	**0.275**	**2.043**	**.043****	**0.238**	**3.910**	**.005*****
LTD*GST	-0.007	-0.071	.944	-0.106	-0.988	.325
Firm Size	0.166	1.868	.064*	**0.174**	**2.081**	**.040****
Sales Growth	**0.298**	**3.279**	**.001*****	0.091	1.050	.296
R^2 value (%)		25.8%			29.8%	
F value		4.826***			5.896***	
No. of Observations		120			120	

Notes: Relationship is significant at the *** 1 percent level; ** 5 percent level; * 10 percent level, respectively, using two-tailed test.

For the effect of GST implementation on the corporate performance measures, a dummy variable GST has been added to the models. The results in the Table 2 shows that the GST implementation has a significant negative impact on the return on assets (ROA) and return on equity (ROE). This indicates that the GST implemented by the Malaysia Government lead to the low return on assets (ROA) and return on equity (ROE) in the consumer products sector during the period investigated in this study. Finally, this study conjectures that GST implementation has a mediation role on the relationship between capital structure and corporate performance. After controlling for firm size and growth, the result in Table 2 reveals that the GST implementation has a moderation role on the relationship between short-term debt (STD) and corporate performance (return on assets (ROA)) and shareholders' return (return on equity (ROE)) of Malaysian Consumer Products PLCs and it is statistically significant at 5% and 1% level, respectively for Model 1 and Model 2.

Conclusion

Capital structure decision making is vital for the success of a company. Equity and debts are the two main sources of finance for a company. The choice of right proportion of debt and equity in capital structure will help in increasing the company's profitability. Debt on one hand allows companies to do things that they would not be able to do otherwise, but on the other hand it also increases overall risk of the company. There is slight difference of opinion about the role of debt in profitability. The literature reveals different results under different circumstances.

Overall, this study concludes that the performance level of Malaysian Consumer Products PLCs during the SST implementation period & after GST implementation is different. It is observed that the corporate performance and shareholders' equity are lower in the period after GST implementation. Perhaps, the transition from SST to GST implementation may have some impact to the performance of these PLCs. Besides, the result reveals that PLCs in 30 lowest market capitalization has negative return on assets (ROA) for the period after GST implementation. This indicates that these PLCs are badly affected due to GST as compared to its counterpart.

Two general regression models are utilized as the dependent variable, i.e. return on assets (ROA) and return on equity (ROE) to assess the effect of capital structure on corporate performance. A series of standard multiple regression analysis were executed for each model, where either one of the capital structure proxies is included in each analysis. In summary, all capital structure indicators has a positive effect on the corporate performance (ROA) after the GST implementation. This finding is consistent with Pecking Order Theory (Myers & Majluf, 1984), which states that there is a positive relationship between the debt levels and the profitability of a company. In addition, studied by Grossman and Hart (1986) who argued that higher levels of debt in the firm's capital structure will be directly associated with higher performance levels.

Contrary, long-term debt (LTD) and short-term debt (STD) has a negative effect on shareholders' return (ROE) regardless of GST implementation. Thus, the higher the debt, the lower the shareholders' profitability. It concurs with Pecking order theory. Debt appears to be more costly due to certain reasons, therefore increasing the proportion of debt in capital structure will results in low profitability for shareholders. The results of this study concur with Habib et al. (2016), Shubita and Alsawalhah (2012), and Kebewar (2013). This result implies that that capital structure has an immediate or long term effect on returns to shareholders. Even though returns to the firm as whole increase with the increase in long-term debt (LTD) level, this does not contribute to higher return to equity holders.

Finally, the findings of this study reveals that GST implemented by the Malaysia Government lead to the low corporate performance and shareholders' return in the consumer products sector during the period investigated in this study. The hierarchical regression results confirm that GST implementation has a moderation role on the relationship between the capital structure (short-term debt (STD)) and corporate performance of Consumer Products PLCs. The positive sign of beta coefficient indicates that once GST has been implemented in Malaysia, PLCs in consumer products sectors have to increase their short-term debt level in order to enhance their corporate performance. This suggest that short-term debt tends to be less expensive and therefore increasing short-term debt with a relatively low interest rate will lead to an increase in profit levels. This result is consistent with the Static Trade-off Theory (Myers, 1984) whereby when debt is employed in capital structure, there will be a need for trade-off because firms are faced with the challenges of tax and bankruptcy cost.

Limitations & Recommendation of Future Research

Some limitations of this study should be acknowledged and directions for future studies should also be suggested. First, this study is focused on companies in consumer products sector listed on the Bursa Malaysia and therefore the findings of this study does not represent unlisted companies or companies listed on other stock exchanges. Hence, to get a better picture for future studies, it can include more sectors such as construction, plantation, infrastructure and others in the research. Besides, it was restricted to the financial data of PLCs for the one year before and after the GST implementation on the 1st April 2015. It therefore does not represent time periods beyond this. It thus suggested that one can extend the analyses time to cover the longer time period. This will give a full understanding of how debt works over the business cycle and affects the overall performance of the company. Although this study focuses on the variables that were repeatedly used by other researchers to explain firm operating performance, however this study found low explanatory power of these variables. Thus, suggestion for further researchers should seek other firm characteristics variables such as Tobin's Q and gross profit margin that might provide better explanation of firm operating performance before we would suggest that fundamental analysis of a firm is of little value to investors.

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ISLAMIC ESTATE PLANNING (IEP): KEY FACTOR FOR MUSLIM WOMEN NOT HAVING ESTATE PLANNING PRODUCTS

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Abstract: Islamic Wealth Management (IWM) is one of the services available in Islamic Financial Institutions and is applicable to all ages through its comprehensive financial planning cycle: wealth creation, accumulation, purification, protection and distribution. Customers are generally exposed to the first three stages of wealth cycle but wealth distribution receives less attention especially from Muslims due to over reliance on fara'id distribution law. Muslim's frozen asset in Malaysia has increased to over RM60 billion in January 2018 due to longer process taken for the cases under fara'id and with no will writing. This paper investigates the relationship between Financial Obstacle, Lack of Knowledge, No Major Life Events, and Islamic Estate Planning (IEP) Product as not being important with 'Not Having Estate Planning Products'. Google forms were sent to Muslim women in a banking industry already exposed to IWM or Wealth Management (WM) and Descriptive Analysis, Pearson Correlation and Regression findings reveal that Financial Obstacle, Lack of Knowledge and Non-Importance of Products are contributing factors to these women not having any Intention to have any Islamic Estate Planning products. The findings expose that despite respondents having had major events in their life, it still does not have significant correlation with the intention to have IEP products.

Keywords: *Fara'id, Will, Islamic Wealth Management, Islamic Estate Planning*

Introduction

Maqasid Shariah (MS) governs Islamic financial planning that supports the basic needs of Muslims to accumulate and spend wealth, care for the poor and leave inheritance for the family members. Hence, it is crucial to have financial planning to add value to each financial decision made (Amalina & Junaina, 2013). Islam basically allows wealth holders to enjoy accumulated wealth that has been ethically acquired as long as the wealth is also manage as a trust from the Creator to add value to the lives of many others (Ariff & Ramadili Mohd, 2017). A total frozen Muslim's assets in Malaysia amounted to RM 60 billion as at January 2018 is an indicator for poor take up rate for a comprehensive IEP (Nik Wajis et al., 2018). Frozen assets are economically non-beneficial to family members and the society in general and Muslims especially women need to be assisted through professional financial advices to safeguard their present and future generations.

Muslims can fulfil the obligation to attain al-falah (success) through assets gained, protected and distributed if wealth creation, accumulation, protection and distribution are planned and effectively utilised to protect the rights of the dependents, non-dependents and society at large (D. M. Rashid, Abdeljawad, Ngalim, & Hassan, 2013). Excessive wealth beyond one's basic needs and requirements is deemed as 'kanz' (hoarding) in Islam; a

Muslim must as outlined by the Maqasid Shariah (MS) create and accumulate substantial wealth to pass on to family members (Asad Ibrahim, Jamal Elatrash, & Omar Farooq, 2014). A study by (Jaafar, 2002), states that although MS recognizes wealth as adding value to having a meaningful life, wealth must principally be a tool for human to carry the dual responsibilities of serving the Creator and protecting mankind. In Islam, good life is a balanced satisfaction of material and spiritual needs that covers the now and hereafter (Amalina & Junaina, 2013). Hence, it is only right that Muslims be exposed to a comprehensive IWM that covers final planning till wealth distribution; this final cycle which is holistically covered through IEP will guide Muslims to effectively plan for a balanced goal since all decisions and actions will be either rewarded or punished in the hereafter.

The historical concept of IWM stems from the primary source (Quran and Sunnah) and secondary source (Qiyas and Ijma). IWM is supported by the strong presence of Islamic economics and finance that first started with a basic financial planning that can be traced as far back as 1960 (Cahyo, 2018). IWM has several cycles and Wealth Distribution represents the last cycle that promotes IEP; the main goal of IEP is to guide Muslims to plan their 'now and after death' wealth distribution, for their heirs, non-heirs and as 'hereafter' assets through charity and wakaf. Wealth Distribution process can be more effectively planned when supported by Wealth Protection products so that proceeds from takaful can be utilized to cover the initial administrative cost of IEP after death, to settle debts and to increase wealth to be left behind for heirs and ultimately to allocate for wakaf and trusts as a mean to attain al-falah (success) and gain perpetual blessings from the Creator (Abdullah, 2015). The framework of social responsibility and mutual cooperation are among the pronounced fundamental objectives of takaful industry; this concept is strongly advocated in Islam where Muslims are given personal rights but with the responsibilities towards others to ensure social justice (Abdullah, 2015). Shared responsibility or joint guarantee concept under takaful is governed by Shariah with the main goal of ensuring mutual protection as well as eliminating or mitigating peril; this concept gives an extra edge to takaful against its counterpart insurance since shared responsibility allows all participants within the same takaful plan to gain 'barakah' through the concept of 'fard kifayah'(social obligation); this shared responsibility ease the way for the rich to assist those who are worse off. Takaful is therefore better planned together with Wealth Distribution through IEP to safeguard against all possibilities so that wealth can be effectively distributed to the benefits of dependents and non-dependents while looking after the immediate and 'hereafter' goals of participants (Abdullah, 2015).

Despite all the benefits, many Muslims unfortunately are still shying away from planning and managing their wealth distribution to better plan their future and the most affected shall be the women, minors (children below legal age), adopted and step children, and those dependents with special needs (Muhammad Ridhwan Ab.Aziz et al., 2014). The redistribution of wealth to even out wealth accumulation in a society is attainable as already spelled out in the Islamic doctrine where wealth is to be utilized and managed in line with Shariah as approved by the Creator; wealth distribution is a tool that allows planned distribution of one's wealth to the loved ones, to those in need and to indirectly generate the economy since in Islam, the absolute owner of wealth is the Creator (Kandis & Lampung, 2015); the study further reveals that better educated wealthier people are more inclined and opened to be will-holders but their pattern of distribution are similar with the preferences of the those with lower wealth and educational level. Financial resources and educational level have been highlighted to impart influences on the decision to have a will but family or

Beneficiary's situation or status, affect the decision on those chosen to be beneficiary or beneficiaries. Customers in constant IEP sessions with financial advisors are reported to have a will written due to well-structured financial planning process and charity is commonly seen as part of a beneficiary. This strengthens the importance of IEP since in Islam, Wealth Distribution is closely related to infâq (spending) of which is one way to obtain blessing from the Creator through activities inclusive of sadaqah, zakah, hibah and waqf (Cahyo, 2018).

Literature Review

Property can be freely transferred by Muslims while they are alive while fara'id and bequest mandatory rules will automatically take effect upon death (Nik Wajis et al., 2018). Fara'id is a tool that is with specified allocations of which is emplaced to provide a wider scope of wealth distribution to heirs; this is to allow more people to have a share to the wealth and hence enable more people to be productive to the economy through consumption and saving (Zuleika & Desinthya, 2014). Fara'id is meant to minimize disparity of wealth among individuals by eliminating wealth concentration; this type of distribution is to eradicate poverty and wealth concentration and hence directly impacting the socioeconomic matters of a society (Muhammad, Usman, Majid, & Rasool Lakhan, 2013). Fara'id specified allocations however, does not cover for special needs of woman such as a full-time housewife or those under polygamy and may also not be able to cater to the needs of daughters of whom is allocated half of those allocated for sons (Awang, 2008). Although fara'id is designed to spread wealth, it however does not provide the extra safety net for heirs with special needs or non-heirs with special relationship with the deceased. Hence, a written wasiyyah (Islamic will) is presently crucial to ascertain a smooth processing of the estate administration and settlement; this entails for an IEP for Muslims beyond the provision of fara'id and bequest rules (Alma'amun, 2010). Estate Planning is comprehensive in nature since it covers both the management of assets as well as the liabilities that may be left behind to protect the deceased and his or her dependents and non-dependents; in addition, IEP also manages assets meant and allocated for benevolent cause for the sake of doing good deeds for hereafter rewards (Chieffe, 1999).

Nowadays, it is crucial for both genders, men and women to be knowledgeable about asset transfers since based on historical data, women normally outlive men; furthermore, exchange of household responsibilities between husbands and wives, increasing divorce rates, and single women trend are becoming more rampant. Prudent individual and family financial management should incorporate 'estate planning' for decision-making on transfer of assets during life or upon death; unfortunately, many people especially women do not possess the necessary knowledge on will to comprehend the legal intricacies associated with asset transfer (S.Smith, J.Kish, & B.Crawford, 1987). For Muslims, IEP has a solution for married couples to transfer asset to each other through hibah (gift) of which is gaining popularity since there are many companies offering hibah in Malaysia such as As-Salihin Trustee Berhad, Warisan Mukmin and Wasiyyah Shoppe Berhad to name a few (Adilah Mohd Sa'afie & Mohd Zamro Muda, 2018). Hibah may be the best solution for a Muslim to transfer an asset or assets especially fixed assets to his or her spouse or identified persons (Buang, 2008). In Malaysia, fara'id governs the administration of Islamic property so much so that it has negatively affected the well-being of the community (Buang, 2008); in fact, the frozen assets figures of Muslims in Malaysia are on an increasing trend due to high dependency on fara'id as the key tool of IEP (Kamarudin & Alma'amun, 2013). This trend should trigger an interest in the Muslim society to be knowledgeable in IEP so that the right tool or tools can be used to circumvent frozen Muslim assets dilemma to the benefits of heirs and dependents, and also close non-dependents.

In Islam, wasiyyah or will, of which is one of various known modes of wealth distribution and disposal only allows bequeathing of 1/3 or in other words, 30% of the total assets; wasiyyah is a declaration made on movable and non-movable assets while living but the benefits shall be enjoyed upon death for permissible activities by an Islamic law (Buang, 2008; M. Rashid, Abdeljawad, Ngalim, & Hassan, 2013). Due to humans many social and financial conditions, the 'Hukum' or 'requirement' to write a 'will' can either be sunnah (optional) or harus (recommended) or can also be wajib (compulsory) of which can be ascertained through an IWM advisory services. A will is extremely important to ensure that debts of the deceased and minor's welfare are well taken of; will writing is however, not popular amongst Malaysians although it is widely practiced in the Middle East, such as Eqypt that has firmly established its Islamic inheritance procedures (M. Rashid et al., 2013).

Muslims women must understand that the key to planning and managing wealth distribution is to circumvent the hassle and pain of having had to deal with frozen assets. Muslims will be presented with various Shariah compliant tools under wealth distribution by financial planners during an IEP session; thus far, will and trust are two of the products under an Islamic Financial market that are being mainly utilised for Muslims to pass over assets to the surviving family or non-family members (Ab Aziz, Nooh, Khairi, & Johari, 2014). The benefits of IEP as shared by (Muhammad Ridhwan Ab.Aziz et al., 2014) need to be made known to Muslims; the various advantages of estate planning which include: (1) fast distribution of property estate to beneficiaries, (2) reduced expenses, (3) reduced strain on deceased's family, (4) reduced taxes (on deceased's estate) and (5) increased assurance to the deceased's family (Muhammad Ridhwan Ab.Aziz et al., 2014). In another study by (Ariff, Chung, & Mohamad, 2013), IWM that is governed by Shariah that is anchored to the guiding principles in Quran and Sunnah, are beneficial to Muslims through its building blocks: wealth creation/ generation, accumulation, purification, protection and distribution cycles; the last cycle where estate planning lies is where the final plan for the transfer of estate after death can take place (Ariff & Ramadili Mohd, 2017). Estate are generally made up of cash, clothes, jewellery, cars, houses, land, retirement, investment and savings accounts; more than 90 percent of Malaysians are without a will since estate planning is not part of a Malaysian culture. The belief that will are only meant for the rich and that they have to build up wealth before writing a will runs deep in a society. In addition, even those who took the trouble to do will do so in verbal form to seal agreement among parties involved, but in actuality, with the absence of a written agreement, it can only lead to many family disputes (Ismail, Hashim, Kamis, & Harun, 2013). To top it all, Malaysia is seeing an increasing trend in the number of unclaimed inheritances (Noordin, Shuib, & Zainol, 2012) In fact, in various studies before, the accumulation of unclaimed inheritance has been highlighted to be a serious predicament that requires immediate attention (Ghul, Yahya, & Abdullah, 2015). Hence, the key factors in determining Muslim women from having IEP products are studied in this research since Muslim women are vulnerable due to their over-reliance on fara'id although the distribution does not cover their special needs and requirements.

Research Methodology

Questionnaires are used with a five-point Likert scale measurement ranging from "strongly disagree (1) to strongly agree (5). The target population of the study is 250 Muslim women in a banking industry who are more than 95% are from the Klang valley areas. Stratified random sampling is used wherein questionnaires were sent to 80% existing Muslim women employees of an Islamic Bank, to 10% ex-bank Muslim female staff and to 10% existing Islamic Banking Muslim female customers. The sample size based on responses received is 201 and unit of analysis is individuals Muslim female.

Findings and Discussions

Demographic Profile of Respondents

Questionnaires comprising of 8 demographic questions and 6 IEP questions were sent via google form to 250 Muslim women in a banking industry of whom more than 95% are from the Klang Valley areas and all respondents are having account with Bank Muamalat (M) Berhad, a full pledged Islamic Bank. 201 respondents duly completed the questionnaires and 51.2% of the respondents are from age 21-40, 47.8% age 41-60 and only 1% are above 60. Malay constitutes to 97.5% of the respondents with the remaining 0.5% Chinese, 1% Indian and 1% others. Unintentionally, 68.7% are already married, 20.9% single, 8.5% divorcee and only 2% widow of which will add value to this research since married people should be relatively more concern on IEP and Wealth Distribution. Educationally, 44.3% of respondents are Degree holders, 25.9% Diploma, 10.9% High School (SPM/STPM) Certificate holders, 17.9% with Masters and 1% PhD; IEP requires understanding and respondents of 89.1% exposure in the tertiary education should also add value to this research. Work wise, 48.3% are from executive level, 36.8% middle management, 8.5% senior management, 2.5% clerical, 2% director and 2% top management; with only 2.5% from the clerical level, exposure to IEP should be substantial or at least adequate. 1.5% of respondents are with monthly income of less than RM2,000, 25.9% from RM2,001-RM3,999, 29.4% in between RM4,000-RM5,999, but majority or 43.3% are earning RM6,000 and above per month; this means that 72.7% are taking home an average income of RM4,000 and more a month. The household income of respondents are 27.9% coming from RM4,000 and below, 20.4% are from RM4,001-RM6,999 range, 23.4% from RM7,000-RM10,999 and more than a quarter or 28.4% household monthly average income are RM11,000 and above; more than half of the respondents are from an average household income of RM7,000 and above. These high income individuals are ready market segment for wealth products and hence are perfect to answer questions on IEP. Demographically, the survey was completed by majority of the respondents coming from a substantial income range, almost half from managerial and above positions, 89.1% with higher education and 79.2% are either still or were once married to fully understand the questionnaires and appreciate the benefits of IEP. The profile of respondents is summarized in Table 1 below:

Table 1: Respondents' Profile

Variables	**N**	**%**	**Variables**	**N**	**%**
Age Group			**Gender**		
21 years to 40 years	103	51.2	Female	201	100.0
41 years to 60 years	96	47.8	**Religion**		
Over 60 years	2	1.0	Islam	201	100.0
Race			**Position**		
Malay	196	97.5	Clerical	5	2.5
Chinese	1	.5	Executive	97	48.3
Indian	2	1.0	Middle Management	74	36.8
Others	2	1.0	Senior Management	17	8.5
Marital Status			Top Management	4	2.0
Married	138	68.7	Director	4	2.0
Single	42	20.9	**Average Income last 3 months**		
Widow	4	2.0	RM2, 000 and Below	3	1.5
Divorcee	17	8.5	RM2, 001 – RM3, 999	52	25.9
Educational Level			RM4, 000 - RM5, 999	59	29.4
SPM/ STPM	22	10.9	RM6, 000 and above	87	43.3
Diploma	52	25.9	**Average 3 months monthly household Income**		
Degree	89	44.3	RM4, 000 and Below	56	27.9
Master	36	17.9	RM4, 001 – RM6, 999	41	20.4
PhD	2	1.0	RM7, 000 – RM10, 999	47	23.4
			RM11, 000 and Above	57	28.4

The following hypotheses are to analyse the relationship between financial obstacles of respondents, lack of knowledge on IEP, products of IEP deemed as not important and no major life events with the Intention to have or acquire IEP products.

Hypothesis: There is a relationship between financial obstacles, lack of knowledge, products as not important and no major life events with the Intention to have any of Islamic Estate Planning products.

H_1 : The greater the financial obstacle of an individual, the higher the intention of not having any IEP products will be.

H_2 : The greater lacking in knowledge an individual has, the higher the intention of not having any IEP products will be.

H_3 : The more no major life events occurrence in an individual's life, the higher the intention of not having any IEP products will be.

H_4 : The higher that Islamic Estate Planning products are thought to be not important, the higher the intention of not having any IEP products will be.

Firstly, after the demographic analysis, the Pearson Moment Correlations was conducted to gauge the direction of the relationship as well as to test the associations between variables. The findings show that the correlations of the variables such as financial obstacles, lack of knowledge, not important product and no major life events with the Intention to have any Islamic Estate Planning products are displayed in Table 2. Since all of the questions were drafted in a negative mode, the results are to be carefully explained to better represent the answers from the questionnaires sent out. Apparently, from the results, all the variables have shown positive association with the lesser intention to have any Islamic Estate Planning products. Financial obstacles, lack of knowledge and not important product are with moderately positive association with the lesser intention to have Islamic Estate Planning products ($r = 0.352$, $r = 0.440$, $r = 0.362$ respectively) while no major life events depict a weak positive association with the lesser intention to have Islamic Estate Planning products ($r = 0.218$). This can be explained that an individual with more financial obstacle, look upon IEP products as not being important and are lacking in knowledge on IEP or wealth distribution, the lesser would the intention to purchase the IEP products be; the relationship is weaker for no major events indicating that no major events in one's life is not a major determinant factor for an individual to decide on not having IEP products but is still one of the contributing factor but at a smaller scale. Since the relationship on H1, H2 and H4 are each moderately explained, and H3 with weak relationship, it can be concluded that although a person is with or without major events, a 360 degree change in a person's financial obstacle, lack of knowledge and thinking on IEP products as being not important, may propel that particular person to actually buy or have IEP products.

Table 2: Correlations with Intention to have any Islamic Estate Planning products

		Financial obstacle	Lack of Knowledge	Products are not important	No major life events	intention to have any IEP products
Financial obstacle	Pearson Correlation	1	.223**	.124	.104	.352**
	Sig. (2-tailed)		.001	.080	.141	.000
	N	201	201	201	201	201
Lack of Knowledge	Pearson Correlation	.223**	1	.310**	.188**	.440**
	Sig. (2-tailed)	.001		.000	.008	.000
	N	201	201	201	201	201
Products are not important	Pearson Correlation	.124	.310**	1	.674**	.362**
	Sig. (2-tailed)	.080	.000		.000	.000
	N	201	201	201	201	201
No major life events	Pearson Correlation	.104	.188**	.674**	1	.218**
	Sig. (2-tailed)	.141	.008	.000		.002
	N	201	201	201	201	201
Don't have any intention to have any IEP products	**Pearson Correlation**	**.352****	**.440****	**.362****	**.218****	**1**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.002**	
	N	**201**	**201**	**201**	**201**	**201**

**Correlation is significant at the 0.01 level (2-tailed).

Table 3: Relationship between independent variables (financial obstacles, lack of knowledge, not important product and no major life events) with dependent variable (Intention to have any Islamic Estate Planning products)

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	**Sig.**
(Constant)	.612	.265		2.309	**.022**
Financial obstacle	.236	.056	.255	4.187	**.000**
Lack of Knowledge	.284	.058	.310	4.868	**.000**
Products are not important	.296	.093	.265	3.196	**.002**
No major life events	-.048	.086	-.045	-.565	**.573**

Regression analysis was conducted to examine the relationship between the independent and dependent variables. Based on the regression analysis (see Table 3), it is found that all hypotheses are supported, except for no major life events. The relationship between financial obstacle, lack of knowledge and products are not important with do not have any intention to have any Islamic Estate Planning products are significant ($p < 0.01$). This finding supports H1, H2 and H4 while H3 is not supported; this translates to 'no major events' as not being a contributing factor towards the decision of not having had IEP products. This can be concluded that based on the results, individuals are affected to buy or not buy IEP products based on their financial status, their knowledge on IEP and or wealth distribution and their thought on the importance of IEP products. Major life events in a person's life are a non-contributing factor or do not carry much weight on the decision to have or not have IEP products as reflected in this study.

Concerns

Estate planning is complicated and according to a study by (Noordin, Shuib, Zainol, Azam, & Adil, 2012), delay and expensive costs in the claim processes and administration plus distribution of Islamic inheritance has caused uncertainty with regards to which procedures to adopt. It is a fact that estate value increases as time progresses and the longer a Muslim's claim inheritance is managed, the higher will the settlement fees be since it is calculated based on the value of the estates concerned (Noordin, Shuib, Zainol, et al., 2012). Fara'id is the foundation to the Islamic law of succession/inheritance through which heirs' rights are protected through fixed apportionment for eligible heirs; however, Islamic inheritance system is not only made up of fara'id but also encompasses bequest (will) and inter vivos gift (hibah) amongst others (Kamarudin & Alma'amun, 2013). Another study echoes the same thing and states that although fara'id is a divinely given set of rules, bequest (will or wasiyyah) and inter vivos gift (hibah) can be adopted by individuals based on their needs; however, it must be known that both will (wasiyyah) and hibah are differently treated depending on property, time horizon and restrictions (Noordin, Shuib, Zainol, et al., 2012).

Empirical studies on 300 Malaysian Muslims and their practice of hibah that were conducted by Salleh, Abu Hasan, & Sabtu (2007) in Lembah Klang, Malaysia reveals that only 31.7% of respondents receive hibah while majority or 68% never used hibah as an estate distribution mechanism (Salleh, Abu Hasan, & Sabtu, 2007). This implies that Muslim community relies heavily on fara'id and is not aware or exposed to the other estate distribution tools to manage their assets (Salleh et al., 2007). The ageing of the world population has led to an increase of interest in old age generally. Malaysia too has experienced a considerable increase in the number of elderly people. The population aged 60 and above Malays, made up 56.1 percent of the total population (Sharifah Norazizan, Roznah, Tengku Aizan, Lina, & Mohd Rizal, 2006). This trend entails for personal wealth management to become critically important especially now that the life expectancy of people is getting longer due to better healthcare; in addition, longer age will mean more accumulated wealth and this will warrant for well-planned estate distribution.

The results from this research reveal that Muslim women will not be inclined to have IEP products when they are faced with financial obstacles, lack the knowledge on IEP or wealth distribution and think that IEP products are not important. Although majority of the respondents have gone through or have had major events in their life such as marriage, divorce and death of a loved one, yet there is no significant relationship between major life events with their intention not to have IEP products. From the survey, it is interesting to note that a total of 154 or 77% of respondents did agree or strongly agree that they would purchase IEP products if they are free from financial obstacles. It is a duty of a financial advisor to plan an effective financial planning that is holistic in nature so that the whole financial aspects from financing to saving to the whole cycles of the IWM can be better enjoyed by individuals, covering the now and hereafter of a Muslim person's needs.

Conclusion

Islam promotes a healthy balance between the spiritual fulfilment and the worldly obligations since in Islam, merits on earth shall be judged by the Creator to determine the success in the hereafter (Amalina & Junaina, 2013). Shariah best feature is its well-defined mechanism that is designed to help not only family members, but also the poor and needy in a society through several tools such as zakat (redemption), waqf (public usage), hibah (gift) or wasiyyah (bequest) (Amalina & Junaina, 2013). As in any society, a nation wealth is controlled by the older population and this can be better planned through estate planning services; the challenge is that fara'id has caused a misconception that a 'Will' is not encouraged in Islam (Kamarudin

& Hisyam, 2018). When Muslims die without a 'Will', fara'id will automatically come into effect and distribution of the deceased's estate, of which may not support the deceased's wishes, can cause dissatisfaction and even disputes amongst surviving dependents. The matter may turn ugly especially when the deceased either has adopted children or has all female children or is survived by a childless wife (Kamarudin & Hisyam, 2018). However, statistics shown that only 10% of the eligible population (those above 18 years old) have written Wills although Malaysia has a population of 32.5 million in the third quarter, 2018 (Department of Statistics and Economic Planning Unit, 2018). Latest, there are a total of RM60 billion frozen assets in Malaysia as at January 2018 (Nik Wajis et al., 2018); this shows that Muslims are confused over the law and procedures on bequest so much so that it has translated into escalating unresolved unclaimed inheritance issues (Nor Muhamad, 2017).

The findings from this survey reveal that even if the Muslim women have experienced or witnessed major life events, the decision of not buying or having any IEP products are related to financial obstacle, lack of knowledge and products being seen as not important. Hence, major life events' is not influencing the decision making on the purchase of IEP products. A such, marketing on IEP products can cover all Muslim women from all life cycles and family stages since major events in one's life is irrelevant to the buying decision. In addition, it is important that IEP benefits and its products be communicated to all Muslim women. Muslim women are also to be advised on financial planning so excess monthly money can be channelled to purchase IEP products. Since this study is limited to Klang valley area to specific groups of people, other studies on Malaysian Muslim women and IEP should be conducted in other states or with different demographics to enable effective solution to be drawn up in the near future to safeguard Muslim women and their dependents.

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CO-INTEGRATION AND CAUSALITY BETWEEN MALAYSIAN STOCK MARKET AND MACROECONOMIC DETERMINANTS: LATEST EVIDENCE POST THE 2008 GLOBAL FINANCIAL CRISIS

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Abstract: *Academic literatures pertaining to co-integration and causality between Malaysian stock markets and domestic macroeconomic determinants such as interest rate, money supply, consumer price index and industrial production index are by now well documented. Nevertheless, to the best of our knowledge, there is particular gap in literatures relating foreign macroeconomic determinants. Hence, this study aims to investigate co-integration and causality between Kuala Lumpur Composite Index (KLCI) with domestic macroeconomic determinants namely private sector domestic credit, gross international reserves and foreign currency assets, exchange rate of Malaysian ringgit (MYR) to the US dollar (USD), along with foreign macroeconomic determinants namely world crude oil and gold prices and five world major stock market indices; Singapore's Straits Times Index (STI), Chinese Shanghai A Share Index (SHAI), the US's Dow Jones Industrial Average (DJIA), Hong Kong's Hang Seng Index (HSI) and Japanese Nikkei 225 Index (NIK). Using monthly data from January 2010 to December 2018, the Augmented Dickey-Fuller (ADF) proves all data series are not stationary in level order, but are only integrated when converted into order one or first difference. The Trace statistics of Johansen co-integration reveals KLCI moves together with gross international reserves and foreign currency assets, world gold price and STI in long run, respectively. The Vector Error Correction Model (VECM) suggests there is no long or short runs causality running from or to respective variables except for STI that causes KLCI in short run. The pairwise Granger-causality shows unidirectional causality running from KLCI to gross international reserves and foreign currency asset but not otherwise. The results are meaningful to stock market investors, fund managers especially in foreign diversified investment portfolio besides benefiting the government regulatory bodies like the Central Bank and Bursa Malaysia for future planning and forecasting.*

Keywords: *KLCI, Macroeconomic Determinants, Co-integration, Causality, Malaysia*

Introduction

The economy of Malaysia has encountered massive growth particularly resulted from the successful industrial transformation in 1990s. The Malaysian stock market has also been growing tremendously since then and played an important role in the global stock markets. In the aftermath of the 1997/1998 Asian financial crisis, the Malaysian Stock Exchange had to freeze approximately USD4.47 billion worth of shares that belonged to 172,000 investors in attempt to deal with the 1997 Asian financial crisis. The severe impact of the Asian financial crisis could also be seen at the other Asian markets, where Thailand stock market was down by 80 percent, Korean stock market suffered 65 percent fall, Indonesia and Singapore dropped by 60 percent respectively, and even the developed stock market of Japan declined by 38 percent.

Bloomberg reported that the benchmark FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMKLCI) has been one of the best performing in the world, rising by nearly 118% since the recovery from the 2007/2008 global financial crisis. From 838 points in early March 2009, the index closed tremendously higher at 1,691 points in December 2018. The surge by FBMKLCI was not surprising, as the domestic market had been well-supported by sound macroeconomic fundamentals, continued growth of the corporate sectors and the inflow of foreign funds into Malaysian equity market, against the backdrop of international investors seeking alternative to developed economies such as the United States.

There were a few series of world events that affected the performance of world stock market including Bursa Malaysia such as Black Monday, which was the worst stock market crash in history of Wall Street on October 19, 1987. The crash began in Hong Kong and then spread to the European region, finally hitting the United States after other markets had already declined by a significant margin. In July 1990, the United States entered its recession, which lasted till March 1991. The recession was mild relative to other post-war recessions as well as characterized by a sluggish employment or jobless recovery. Meanwhile, the Tequila crisis was a Mexican peso sudden devaluation against the U.S. dollar in December 1994. It became one of the first international financial crises ignited by capital flight. A few years later, in July 1997 another currency crisis that gripped much of East Asia to get involved in serious financial crisis and raised fears of a worldwide economic meltdown due to financial contagion.

The development of technology to support industry liberalization and globalization that created the dot-com bubble was a historic speculative bubble covering roughly 1997–2000. As a result, the equity value rises rapidly in the Internet sector and related fields. Over the last ten years, another financial crisis known as subprime mortgage crisis began in 2007, had created a great depression and contributed towards total collapse of large financial institutions, which needed financial assistance from the governments. The stock markets dropped worldwide and created volatility and vulnerable performance. It was then followed by global economic downturn in 2008 as Asian market had experienced great recession. As a result, the “bull” of Bursa Malaysia has had a solid run over the last decade. Another ongoing crisis was sovereign debt crisis. It involved countries of the euro zone since early 2009, when a group of 10 central and eastern European banks asked for bailout.

Economic recovery becoming tough to global market when oil prices fell more than 50% since the peak in mid-June of 2014. Since Malaysia directly involved in the oil & gas (O&G) industry, its capital market has also been more volatile. As consequence, the last two quarters of 2018, Bursa Malaysia seen to continue its bearish trend resulted from the declining of trading volume. However, it was in line with the global performance due to several factors such as fluctuation in world commodity prices, especially crude oil, crude palm oil and gold. Investors’ sentiment also was dampened when the new government of Malaysia was elected in May 2018 with Bursa Malaysia adjusting to government policy shifts. The investors now are waiting to observe policies and direction of new government. On top of that, Bursa Malaysia is expected to be continuously influenced by, among others, the US-China trade tensions, China's economic growth and US interest rate hikes. Nevertheless, Bursa Malaysia would continue to be resilient, given the country's sound economic fundamentals and its diversified economic sectors and investor base.

The rest of the paper will be arranged as follows. The following section presents the literature review, next section explains the data and methodology of study, then it continues to discuss the results and findings, and the paper ends with the conclusion and recommendation.

Literature Review

It is utmost crucial to examine interaction between the stock market and macroeconomic determinants, and to investigate how the changes will affect each other. This will help the parties of interest to measure the effectiveness of the policies and strategies undertaken and its impact. In addition, such study findings would be very beneficial to stock market investors and market analysts, fund managers and businesses in making well informed decisions and minimizing the risk exposure particularly those involved in diversified foreign investment. Besides, the results or findings could as well be used to do forecasting and planning for future.

Ibrahim (1999) reported that the Malaysian stock market co-integrate with the consumer price index (CPI), domestic credit aggregates and official reserves (excludes gold). Nevertheless, the author concluded there was informational inefficiency in the stock market due to non-existence of co-integration between the stock market and the other three determinants namely the industrial production index (IPI), money supply and foreign exchange rate. His finding is consistent with Mahmood and Dinniah (2007) for IPI and foreign exchange rate, but not for CPI. This suggests that stock prices and macroeconomic determinants diverge from each other in the long run. These findings are in contrast to another study by Ibrahim (2000) and Asmy et al. (2009), who revealed the existence of co-integration between the stock market with money supply and foreign exchange rate. They further found that in short run, there was unidirectional causality running from the official reserves and foreign exchange rate towards the stock prices, respectively. Hamidi et al. (2018) has also shown that there are co-integrations between the Malaysian stock index with the foreign exchange rate, money supply, inflation rate and IPI.

Malaysian stock market had also seemed to be affected more by domestic determinants. Ibrahim and Yusoff (2001) indicated that money supply particularly was negatively associated with the stock market in long run. However, money supply positively affected the stock prices in short run. Vejzagic and Zarafat (2013) disclosed that Malaysia Hijrah Shariah Index (MHSI) had significant relationship with interest rates, foreign exchange rate and money supply. The MHSI was discovered to negatively influence the interest rate and foreign exchange rate whilst it had positively affected money supply. However, CPI was shown to be insignificant. Hussin et al. (2012) concluded that Kuala Lumpur Shariah Index (KLSI) was having significant positive relationship with CPI whereas it had negative relationship money supply. Meanwhile, the KLSI showed insignificant negative relation with Islamic Interbank Rate (IIR). The finding that worth noting is both MHSI and KLSI had negative significant relation with the foreign exchange rate.

Wongbangpo and Sharma (2002) found the changes in stock prices of five ASEAN stock markets namely Indonesia, Malaysia, Singapore, Thailand and the Philippines resulted from the changes in interest rate, money supply and gross national product (GNP). The finding suggests that the past values of macroeconomic determinants would be able to predict future movement or changes in stock price or indices. Likewise, stock price or indices could also be used as leading indicator to forecast future changes in the macroeconomic determinants. In

Japanese stock market, Kurihara (2006) revealed that the stock prices were caused by exchange rate and the US stock prices whereas no impact was found by interest rate on the Japanese stock prices. Mahmood and Dinniah (2007) reported that the stock prices of Japan, Korea, Hong Kong and Australia move together with the exchange rate, CPI and IPI in long run, respectively. There was also short run causality between the stock prices and the macroeconomic determinants, except for Hong Kong.

According to Brahmasrene and Jiranyakul (2007), the co-integrations exists between the Thailand stock index and IPI, money supply, exchange rate and oil price before and after the periods of financial crisis. Money supply affected the stock index positively whereas IPI, exchange rate and oil price posed negative impact during pre-crisis period. Meanwhile, only money supply influences the stock index positively for post-crisis period. Valadkhani and Chancharat (2008) concluded that in long run, there is opportunity to minimize the uncontrollable risks connected with the diversified investment portfolio that is across borders of countries. They reported three unidirectional causal relationships in short run running from the stock market returns of Hong Kong, the Philippines and the UK to Thailand stock market, respectively. Two unidirectional causal relationships were spotted running from the Thailand stock market to those of Indonesia and the US in short run. Interesting results are noticed that there are bi-directional causal relationships running from Thailand stock market to those of Malaysia, Singapore and Taiwan, and vice versa, respectively.

Ray (2012) found unidirectional causality between Indian stock price and inflation, foreign direct investment, gross domestic product, exchange rate, and gross fixed capital formation, respectively. Meanwhile, he revealed bidirectional causality between the stock price and foreign exchange reserve, money supply, crude oil price and whole price index, respectively. The study also suggested that crude oil price and gold price have significant negative influence on the stock price whereas foreign exchange reserve had positive impact on the Indian stock price. He further concluded no causality between the stock price and interest rate and industrial production index. A study by Patel (2012) discovered that co-integration exists between interest rate, inflation, exchange rate, IPI, money supply, gold price, silver price and oil price with the two Indian stock market indices namely Sensex and S&P CNX Nifty. This study is consistent with Ray (2012) on the unidirectional causality from exchange rate to stock market indices but contradicting results for crude oil price and IPI as both turned to be unidirectional instead of bidirectional and no causality, respectively. Patel (2012) concluded that global gold, silver and crude oil prices are major determinants for the Indian stock markets. Agrawal et al. (2010) proved a unidirectional causality running from the Indian Nifty index to the exchange rates particularly when there is a hike in the stock return, it will result the exchange rate (Rupee to USD) to depreciate, not vice versa.

Kalyanaraman and Tuwajri (2014) revealed existence of long run association between the CPI, industrial output, money supply, exchange rate, oil prices and Saudi all share stock index. All the selected macroeconomic determinants, except the US S&P 500 index, were found to contribute to the changes in Saudi stock prices. The existence of long run causality was spotted from the determinants to the Saudi stock prices. However, short run bidirectional causality was only found between the stock prices and oil prices. Majid (2018) reported that the co-integration exists between the Indonesian Islamic stock index with the Islamic stock indices of Japan, the UK and the US, where the Japanese index shows more dominance on the Indonesian index than the other two stock indices.

In Greece, the country's macroeconomic determinants namely IPI, interest rate, exchange rate and foreign stock markets changes only explain partially the stock market behaviors. Whereas, oil price changes affect the stock price movements and have negative impacts on the Greece economy (Hondroyiannis & Papapetrou, 2001). Buyuksalvarci and

Abdioglu (2010) found unidirectional causality running from Turkey's stock price to foreign exchange rate, gold price, money supply, IPI and inflation rate in long run. Both noted that future changes in the macroeconomic determinants of Turkey can be led or caused by the changes in its stock index. Kalyanaraman and Tuwajri (2014) proved that co-integration exists between the Saudi's CPI, industrial output, money supply, exchange rate, oil prices, and stock prices with the US S&P 500 index. All the tested macroeconomic determinants are noticed to affect the US stock index. Nevertheless, the US index does not cause the Saudi index. Their study revealed the existence of long run causality from the macroeconomic determinants to the stock indices. Bidirectional causality was only spotted between stock indices and oil prices in short run.

Barakat et al. (2016) discovered co-integrations between the Egyptian and Tunisian stock markets with the CPI, money supply, exchange rate and interest rate, respectively. They proved the causality exists between both stock markets and the selected macroeconomic determinants except for CPI in Tunisia that indicated no causality with its stock market. Parsva and Lean (2018) reported the existence of bidirectional causality between Jordan, Kuwait and Saudi Arabia stock markets with their respective exchange rates, inflation rates and oil prices for periods after the 2007 global financial crisis. Nevertheless, the authors did not find any causality for the Iranian stock market. Meanwhile, they noted bidirectional causality for Oman stock market with the selected determinants for both periods before and after crisis. These findings suggest that even though the countries are located in the same region and sharing almost similar economic fundamentals, but there were conflicting findings when it comes to the co-integration and causality between their stock markets and the macroeconomic determinants, respectively.

Data and Methodology

We use monthly data from January 2010 to December 2018 obtained from the Datastream. We choose the year 2010 onwards because we want to eliminate the effects of global financial crisis that occurred during 2007-2009. Our study covers the latest data up to the year 2018. As far as we are aware, previous studies on Malaysian market were covered for the year 2014 and before. We employ Augmented-Dickey Fuller (ADF) to test the unit root problem, then Vector Autoregressive (VAR) test to determine the optimal lag length of the models; next we run the Johansen co-integration test to examine the long run association-ship between the Malaysian stock index and the selected macroeconomic determinants.

Once the co-integration test is done, we conduct the Vector Error Correction Model (VECM) to investigate the long run and short run causality between the stock index and the selected determinants. Lastly, we run the Granger Causality tests to find out the pairwise short run causality between the KLCI with selected determinants as well as between macroeconomic determinants. We use the EViews 10 software to run all the tests. The results obtained are analysed according to the sequence of tests explained above. The variables or determinants of study are summarized in Table 1 as follows:

Table 1: Summary of Variables

Dependent variable	Domestic macroeconomic determinants	Foreign macroeconomic determinants
Malaysia's stock market proxy by FBMKLCI that composes of the 30 largest companies' stocks listed at the Bursa Malaysia.	1. Gross international reserves & foreign currency assets (held by Bank Negara Malaysia or the Central Bank of Malaysia. 2. Private sector domestic credit (loans and debt securities held by local businesses) 3. Foreign exchange rate (Malaysian ringgit to the US dollar)	4. World crude oil price (based on WTI) 5. World gold price 6. Five major foreign stock market indices: Singapore, China, the US, Hong Kong and Japan (Malaysia's top 5 trading partners in 2018, which constitute 51.3% or USD126.9 billion of total Malaysian exports)

Source: Datastream (Thomson Reuters)

Results and Analysis

Unit Root Test

Table 2 presents the results of unit root test using the Augmented Dickey Fuller (ADF). The data series is found not stationary in level I(0) order, where the probability (*p*) values of all variables are more than 0.05 and further supported by all the absolute t-statistics that are less than the test critical values at 5% significance level. Nonetheless, when converted into 1st difference I(1), all the variables become stationary or integrated with *p*-values less than 0.05 and the absolute t-statistics are more than the critical value. These results fulfil the assumption and requirement prior to performing the Johansen's co-integration test, where all variables must be stationary and integrated at or in the same order, in this case in 1st difference.

Table 2: Results of Unit Root Test

	ADF test			
	in Level		in 1st Difference	
Variables	Prob.	t-Statistic	Prob.	t-Statistic
FBMKLCI	0.1149	-2.514343	0.0000*	-10.25354
PRIVATE_CR	0.9431	-0.124794	0.0000*	-11.04758
INT_RSRV	0.6189	-1.318543	0.0000*	-7.054357
EXCHANGE_R	0.8546	-0.645847	0.0000*	-9.529210
CO_WTI	0.6796	-1.183418	0.0000*	-10.06463
GOLD	0.4038	-1.749152	0.0000*	-11.81712
STI	0.0637	-2.785605	0.0000*	-11.42122
SHANGHAI	0.1199	-2.493928	0.0015*	-4.100980
DJIA	0.8518	-0.657507	0.0000*	-10.15447
HANGSENG	0.3655	-1.827516	0.0000*	-10.14349
NIKKEI225	0.8255	-0.761195	0.0000*	-11.42589
critical values at 5% significance level	-2.888669, -2.888932 -2.889753		-2.888932, -2.889753	

Lag Length Selection

Table 3 shows the results of lag length selection using Vector autoregression (VAR) model. The results of all the criterion namely sequential modified LR test statistic (LR), Final prediction error (FPE), Akaike information criterion (AIC), Schwarz information criterion (SIC) and Hannan-Quinn information criterion (HQIC) are unanimous, where the optimal or maximum lag is 8. Appropriate lag length is very important before conducting the co-integration test since too many lags could result in loss in degree of freedom, statistically insignificant coefficients and multi-collinearity problem, whereas too few lags most probably would lead to specification errors. In this study, we test the variables using lags 2, 4 and 6, respectively to see the consistency of results of the co-integration test.

Table 3: Results of Lag Length Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-7716.613	NA	3.66e+53	154.5523	154.8388	154.6682
1	-6630.757	1911.107	1.54e+45	135.2551	138.6940	136.6469
2	-6561.250	107.0402	4.68e+45	136.2850	142.8761	138.9525
3	-6444.437	154.1933	6.33e+45	136.3687	146.1121	140.3120
4	-6290.987	168.7946	5.21e+45	135.7197	148.6153	140.9388
5	-6085.679	180.6719	2.23e+45	134.0336	150.0814	140.5284
6	-5898.257	123.6981	2.63e+45	132.7051	151.9052	140.4758
7	-5589.248	135.9638	9.51e+44	128.9450	151.2973	137.9914
8	-4577.228	222.6445*	6.11e+39*	111.1246*	136.6292*	121.4467*

Multivariate Johansen Co-integration Test

Despite of the maximum lag of 8 as suggested above, we run the Johansen co-integration test using three different lags to see whether the results are consistent or otherwise. Table 4 summarizes the results of multivariate Johansen co-integration test. We could see that the Trace and Maximum Eigenvalue statistics reveal consistent results except for lag 2 of Maximum Eigenvalue, which is slightly insignificant. Nevertheless, overall results suggest that there are co-integrations among the variables tested, which are proven based on the Trace and Max-Eigen statistics that are larger than the critical values at 5% level of significance, respectively. In addition, the *p*-values below 0.05 support the existence of long run association-ship among the variables. This co-integration test is based on the linear deterministic trend assumption. The multivariate Johansen co-integration test merely reveals the existence of co-integration without specifying which variable co-integrates with which variable. Therefore, we have run bivariate Johansen co-integration test as discussed in the following section.

Table 4: Results of Multivariate Johansen Co-integration Test

Lag	**Trace**			**Maximum Eigenvalue**		
	Trace stat.	Critical value	Prob.	Max-Eigen stat.	Critical value	Prob.
2	346.7876	285.1425	0.0000*	69.77841	70.53513	0.0587
4	555.9731	285.1425	0.0000*	130.0958	70.53513	0.0000*
6	738.8053	285.1425	0.0000*	151.8494	70.53513	0.0000*

Bivariate Johansen Co-integration Test

We found three series that co-integrate with each other as revealed by the results presented in Table 5 namely between KLCI with Malaysia's gross international reserves and foreign currency assets, KLCI with world gold price, and KLCI with Singapore's STI. The three series show Trace statistics larger than the critical value and are significant at 5% level. These findings suggest that the KLCI is moving together with gross international reserves and foreign currency assets, world gold price and STI in long run, respectively. The findings also explain that those series are moving towards the same direction in long run. In other words, KLCI could be used to predict future direction or trend of the international reserves and foreign currency assets, world gold price and STI, and vice versa. Meanwhile, the other series do not show any long run association-ship as revealed by the results. This indicates other series are diverging from each other in long run. Based on the Maximum-Eigen statistics, there is no co-integration noted between the series. Nevertheless, under this test assumption, if one of the two results show the existence of co-integration, it is sufficient to conclude the findings.

Table 5: Results of Bivariate Johansen Co-integration Test

Series	**Trace**		**Maximum Eigenvalue**	
	Trace stat.	Prob.	Max-Eigen stat.	Prob.
FBMKLCI INT_RSRV	16.29711	0.0378*	12.20577	0.1031
FBMKLCI GOLD	19.61850	0.0113*	14.20292	0.0511
FBMKLCI STI	16.93303	0.0302*	11.66680	0.1238
Critical Value	15.49471		14.26460	

Vector Error Correction Model (VECM)

Once we have identified the co-integration that exists of the three series, we have then performed the VECM test on the four variables to check on any long run or short run causalities among the variables. We have summarized the results as follows:

Table 6: Results of VECM Long Run Causality Test

Dependent variable	**Coefficient**	**Prob.**
FBMKLCI	-0.074459	0.2668
INT_RSRV	-5.886060	0.1846
GOLD	-0.023299	0.7762
STI	0.403658	0.0209*

Table 6 indicates the results from VECM test for long run causality among the variables. In this test, each variable was made as dependent variable and run against the other three as independent variables, respectively. Apparently, there is no long run causality running from the three independent variables to the dependent variable, respectively since none of the series fulfills the two conditions in order for a long run causality to exist. The two conditions state that the coefficients must be negative and the *p*-value must be significant or below 0.05. Despite KLCI, gross international reserves and foreign currency assets, and world gold price show negative coefficients, but the respective *p*-values are insignificant. Meanwhile, STI has significant *p*-value but the coefficient is not negative. Hence, we can conclude that even though the series are moving together in long run, but they do not affect or cause each other in long run. Then, we have examined short run causality among the four co-integrated variables using the Wald test, which the results are tabulated in Table 7 below.

Table 7: Results of VECM Short Run Causality Test

Running from	**FBMKLCI**	**INT_RSRV**	**GOLD**	**STI**
FBMKLCI	-	0.1059	0.1497	0.0115*
INT_RSRV	0.0652	-	0.0875	0.1113
GOLD	0.1215	0.0524	-	0.3677
STI	0.6730	0.0538	0.0654	-

We have only found one-way or unidirectional short run causality that is running from the Singapore's STI to the KLCI, where the Chi-square *p*-value is 0.0115, that is significant below 0.05. This means that the variation or movement in KLCI in short run is caused by the STI, but not the other way around. Meanwhile, the other variables show no short run causality among each other.

Pairwise Granger Causality Test

We have also conducted the pairwise Granger Causality test using the lag 8 suggested to check on the causality among the variables. We notice that only one-way or unidirectional causality exists between the variables. Among the interesting findings is Malaysia's international gross reserve and foreign currency asset is Granger-caused by KLCI, private sector domestic credit, the US's DJIA and Japanese Nikkei 225, respectively. Malaysia's MYR-to-USD exchange rate is found to Granger-cause the private sector domestic credit.

Meanwhile, only Shanghai Index is spotted to be Granger-caused by Malaysia's gross international reserve and world crude oil price. The US's DJIA is observed to be Granger-caused by Singapore's STI and Hong Kong's HSI, respectively. The result also reveals that there is unidirectional causality running from the Japanese Nikkei 225 to Singapore's STI. The summary of significant results is presented in the Table 8 below.

Table 8: Results of Pairwise Granger Causality Test

Null Hypothesis	**F-Statistic**	**Prob.**
FBMKLCI does not Granger Cause INT_RSRV	3.02771	0.0049*
PRIVATE_CR does not Granger Cause INT_RSRV	2.41682	0.0213*
EXCHANGE_R does not Granger Cause PRIVATE_CR	2.06295	0.0488*
PRIVATE_CR does not Granger Cause GOLD	2.19889	0.0356*
INT_RSRV does not Granger Cause SHANGHAI	2.42406	0.0209*
DJIA does not Granger Cause INT_RSRV	2.22949	0.0331*
NIKKEI225 does not Granger Cause INT_RSRV	3.73295	0.0009*
CO_WTI does not Granger Cause SHANGHAI	3.32226	0.0024*
STI does not Granger Cause DJIA	2.08433	0.0464*
NIKKEI225 does not Granger Cause STI	2.09640	0.0451*
HANGSENG does not Granger Cause DJIA	2.24955	0.0316*

*Denote the 5% Significance Level

Conclusion and Recommendation

This study investigates the co-integration and causality between the Malaysia's KLCI with selected domestic and foreign macroeconomic determinants. All selected variables are noted to be integrated in first difference. The five criterions are unanimous in lag length selection, which is at the optimal lag of 8. The Trace statistics and Max-Eigen statistics under multivariate Johansen co-integration test proves the existence of at least one co-integration among the variables at the significance level of 5%. Bivariate Johansen co-integration test further reveals the series that co-integrate with each other, where it discloses that Malaysia's KLCI is an important economic and leading factor to forecast the future changes in Malaysia's gross international reserve and foreign currency assets held by the Central Bank. In addition, the KLCI is also a potential indicator to predict future movements of the world gold price and Singapore's STI. Likewise, the three determinants are also good indicators to forecast the changes in KLCI in future.

Another significant finding is that Malaysian stock investors could not take advantage to diversify their investment in Singapore market and vice versa since both stock markets are moving in the same direction in long run. Meanwhile, the other determinants show a divergence from each other in long run. The significant implication is that Malaysian investors or fund managers could take this opportunity to diversify their stock investment in the Chinese, Hong Kong, the US and Japanese stock markets as there is absence of co-integration among the respective markets. Further, VECM results show that there is no causality in long or short runs among the variables except a unidirectional short run causality running from the Singapore's STI to the KLCI. This indicates that the variation in KLCI in short run is caused by the STI but not vice versa.

Lastly, the pairwise Granger causality test reveals the Malaysia's international gross reserve and foreign currency asset is Granger-caused by KLCI, private sector domestic credit, the US's DJIA and Japanese Nikkei 225, respectively. Malaysia's MYR-USD exchange rate is found not to be Granger-caused by any of the determinants. Meanwhile, Shanghai share index is found to be Granger-caused by Malaysia's gross international reserve and world crude oil price whereas the US's DJIA is found to be Granger-caused by Singapore's STI and Hong Kong's HSI, respectively. The result also discloses a unidirectional causality running from the Japanese Nikkei 225 to Singapore's STI.

This study is confined to Malaysian stock market with merely several domestic and foreign macroeconomic determinants and tested for the period after the 2007/2008 global financial crisis. In future, it is recommended to conduct other studies involving other countries that have almost similar economic fundamentals such as Indonesia and Thailand. This is important to see the consistency of results among these countries. In addition, we suggest that future researchers to study on other macroeconomic determinants and cover the period of financial crisis to see the volatility effects as well using other types of tests such as logistic and probit regressions as robustness. The objectives of future studies could also include the examination of market informational efficiency or asymmetry to observe the reaction and behavior of stock markets or investors towards the changes in macroeconomic determinants and to discover the investment diversification opportunities among various markets.

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RELIGIOSITY AND SUSTAINABLE DEVELOPMENT: APPLICATION OF POSITIVE PSYCHOLOGY

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Abstract: *Positive psychology emphasizes human strength and potential, as much interest in building the best things in life as in repairing the worst. One of the four pillars in the positive psychology is resilience. Resilience refers to a set of individual-level variables that protect well-being under stressful circumstances. Resilience also implies ability to resist, effective coping, recover from, and succeed in the face of adverse life experiences. This paper attempts to test empirically the model of resiliency and the importance of religiosity in developing resilient adolescents by using structural equation modeling (SEM). The adolescents' conception of resiliency measures dimensions such as active skills, future orientation, risk taking and independence while religiosity is examined through one's ability to cope and involve in religious activities. This study was done on a total sample of 308 adolescents from the east-coast of peninsular Malaysia. The Resiliency Belief Scales (Trammel, 2003) and Religiosity Scale (Boswell, 2003) were employed in this study. Analysis of the items resulted in a well-fitting model with composite reliability (CR) of .64 and variance extracted (VE) of 72% (χ^2/df = 1.199; GFI = .943; CFI = .989; RMSEA = .025; AIC = 259.806). The direction and magnitude of the factor loadings were substantial and statistically significant. This shows that the model fits with the sample of data in this study. Religiosity explains 70% of variance in resiliency.*

Keywords: *(Sustainable Development, Positive Psychology, Religiosity, Resilience, Adolescence)*

Introduction

Positive psychology has developed since Martin Seligman's APA president address in 1998 (Wong, 2011). Positive psychology has effectively changed the landscape of mainstream psychology and it continues to grow exponentially in the research, teaching and applications of psychology. Virtue, meaning, well-being and resilience are the four pillars of positive psychology. Resilience in recent years has been the focus of an increasing number of books, articles and research in the human survival, service and including the field social work (Cabness, 2003).

There is no consensus regarding operational definitions of resiliency. Resiliency finds its theoretical and empirical roots in the developmental psychopathology literature on vulnerability to stress (Cabness, 2003). Resilience is the capacity for and outcome of adjustment in spite of challenging or threatening circumstances. Therefore, resilience is the positive pole of the vulnerability-resilience continuum (Wong, 2011). Resilience is seen as an internal factor which is highly influenced by the environmental factors and the individual's developmental process (Holmes, 2006).

Religiosity was found to strengthen the individual's ability to fight back against the pressure exerted by the environment (Griffing, 2002). This implies that a deeply religious individual will be in the position to withstand all kinds of pressures and problems encountered in his or her life and be able to develop and enjoy good mental health. Thus the goal of education should not simply to educate individuals cognitively but also spiritually (Carlton, 1991) so that they can stand up to any forms of adversity.

Literature Review

Pearce and Haynie (2004) considered religiosity as one of the protective factors needed to develop a resilient individual. However, in the past, psychologists, such as Sigmund Freud, did not pay much attention to the possible crucial role of religiosity in human development. Nevertheless, psychologists like William James and Carl G.Jung did emphasize on the importance of the attribute in human development in their work (Chase, 2001). The transformation made of DSM-III R to DSM-IV (Diagnostic and Statistical Manual of Mental Disorders) has led to the acceptance of religiosity as an additional condition to be emphasized in clinical observation. To date, religiosity is believed to be an important factor which helps to heighten one's internal strength or ability to deal with hardships and misfortunes such as trauma, divorce, lost of jobs and physical disability (Eubanks, 2006).

Adolescents are usually categorized as the vulnerable or at-risk group in society because their behavior tends to be easily influenced by the environment they live in. In an attempt to make such transition, many may fail due to their inability to withstand the real life overwhelming challenges. Resilience should be established among adolescents because it can protect them against health risk behaviors such as suicide ideation or attempts (Morrison, 2003).This study focused on adolescents because as individuals age from childhood to adulthood, they pass through a critical period during which the characteristics of maturity, cognitive skills, coping skills and relationships develop. According to Resnick et al. (1993), the major health risks facing the estimated 34 million adolescents in the U.S. today are traceable to psychosocial, behavioral and economic factors (Morrison, 2003). In 2006, Malaysian government has approved additional expenses of RM6.1 million per year to handle social problems, especially among adolescents (Malaysia's Education Ministry, 2006).

However, literature reviews have given more emphasis on risk factors compared to factors that contribute strengths (Borman & Rachuba, 2001). By focusing on strength or resilience, we can recognize the potential each individual has. Furthermore, resilience can function as innate drives to achieve self-actualization, increased motivational energy to grow, potential buffer to stress, capacity to bounce back, recover from adversity and sustainable development among adolescents. The main purposes of this study are to develop a model of resilience and to examine whether religiosity contributes to resilience of adolescents. The objectives of this study were:

1. to establish the reliability and validity of Resiliency Belief Scale (RBS) and Religiosity Scale (RS).
2. to develop a model of resilience and examine whether religiosity contributes to resilience of adolescents.

Methodology

Sample

This study involved a total sample of 308 adolescents from the east-coast of peninsular Malaysia, representing 45% male and 55% female sample. The sample was divided into two groups: 160 and 148 respectively, for cross-validation analysis. Approved letter from Ministry of Education and State Department of Education were attached with the questionnaire. The questionnaire was group administered to the students during their regular class hours with permission from their school principals and teachers. The participants were given brief description of the research project and the process of informed consent was done.

Instrument

Two instruments used in this study are Religiosity Scale and Resiliency Belief Scale. Religiosity Scale (RS) was developed by Boswell (2003). This five-point response scale consists of 8 items that measure religious involvement and religious coping.

Resiliency Belief Scale (RBS) based on Mrazek & Mrazek, 1987 and was developed by Jew, 1997 (as cited in Trammel, 2003). The scale consists of 45 items. Conceptualization of RBS is based on three factors; active skills, future orientation, risk taking and independence. The active skills focus on the skills needed to be resilient such as rapid responsivity to danger in order to avoid harm, information seeking and cognitive restructuring of painful events. Future orientation is related to the conviction of being loved, optimism, altruism, formation of relationship for survival, positive projective anticipation and hope. Risk taking and independence are related to ability of the adolescents to take risk or decisive risk taking, confident, competence and independent.

Using back to back translation procedure, the items were translated from English to Malay by two experts in English and Malay languages. The sample was required to indicate their beliefs and conceptions of the resiliency assessment of RBS on a six-point response scale (Strongly Agree, Moderately Agree, Agree, Disagree, Moderately Disagree and Strongly Disagree). Each statement was worded in a manner to capture the meaning attached to one of the three dimensions.

Results and Discussion

The main task in this model testing procedure is to determine the goodness of fit between the hypothesized model and the sample data. To arrive at the conclusion, a confirmatory factor analysis (CFA) was conducted on the hypothesized structural model using Analysis of Moment Structure (AMOS) version 7. Assessment of the measurement model involved confirmatory factor analysis (CFA) (Bryne, 2016). CFA assessed the reliability and validity of the individual items and the overall measurement model. The program adopted maximum likelihood estimation to generate estimates in the measurement model.

Confirmation of the overall fit of the measurement model using CFA was obtained from the Maximum Likelihood estimation, Chi-Square (χ^2) statistics produced by AMOS, and various other goodness-of-fit criteria. Byrne (2016) suggested the goodness of fit indexes are the chi-square (χ^2), the smaller the chi square, the better and p value greater than .05, Goodness of Fit Index (GFI) and Comparative Fit Index (CFI) greater than .90 and the absolute fit of the model, Root Mean Square Error of Approximation (RMSEA) below .08.

The overall fit of the 53-item measurement model is summarized in Figure 1. The goodness-of-fit results indicate the hypothesized model is consistent with the data. Root mean square error of approximation (RMSEA) has been recognized as one of the most informative criteria in covariance structure modeling. The RMSEA takes into account the error of approximation in the population (Byrne, 2016).

In the analysis of data by using structural equation modeling (SEM), the researcher makes use of estimates of composite reliability and variance expected. The analysis for composite reliability (CR) resulted in high values of .64 and variance extracted (VE) of 72% which indicate that the indicators are really measure the latent.

To further validate the likelihood of the hypothesized model, cross-validation was applied on the data collected from 308 samples. The results of this analysis shows the well-fitting model (refer to Table 1).

Table 1: Measures of Goodness of Fit based on Confirmatory Factor Analysis (CFA)

Latent Variables (Resiliency)	N1 = 160	N2 = 148	Latent Variable (Religiosity)	N1 = 160	N2 = 148
χ^2/df	1.47	1.53	χ^2/df	2.29	1.58
GFI	.90	.95	GFI	.99	.99
CFI	.94	.92	CFI	.99	.99
RMSEA	.06	.06	RMSEA	.09	.06

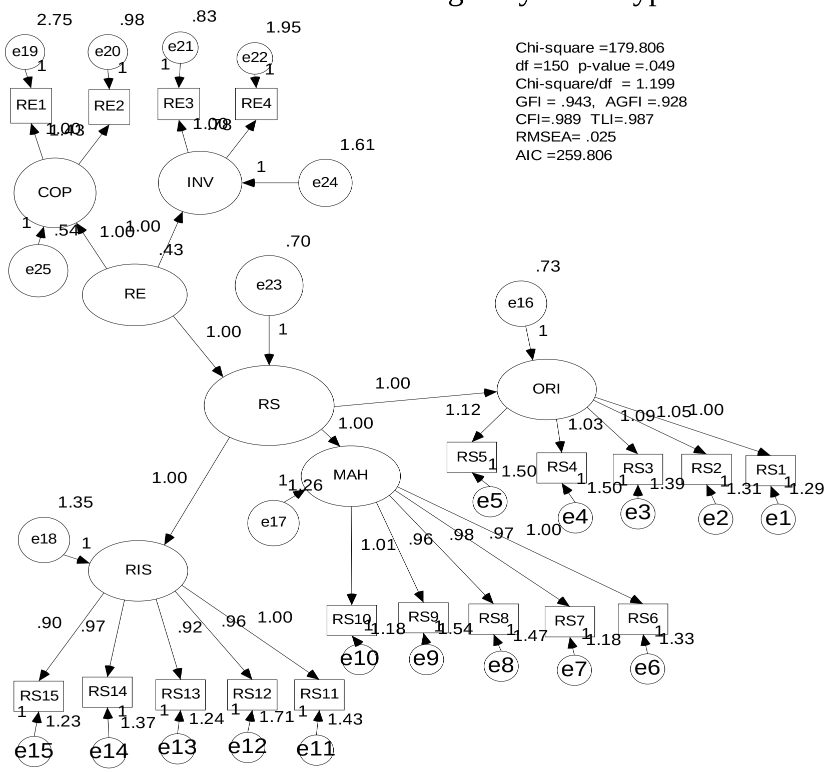
In the analysis of CFA, all items of resilience and religiosity have non-zero loadings to all factors. The direction and magnitude of the factor loadings for the maximum likelihood estimation were substantial and statistically significant. The model was free from offending estimates and the internal consistency estimates satisfied the standard deemed necessary in scale construction. Furthermore, analysis of the 53 items from both instruments resulted in a well-fitting model, (χ^2/df = 1.199; GFI = .943; CFI = .989; RMSEA = .025; AIC = 259.806). Both fit indicators, the GFI and CFI exceeded the threshold of .90, the standard deemed important for model fit (Byrne, 2016). The root mean square error of approximation (RMSEA = .06) indicated a well fitted hypothesized model. Root Mean Square Error of Approximation (RMSEA) has been recognized as one of the most informative criteria in covariance structure modeling. The RMSEA takes into account the error of approximation in the population (Byrne, 2016). Values less than .05 indicate good fit and values as high as .08 represent reasonable errors of approximation in the population. For CFI (Comparative Fit Index) and GFI (Goodness of Fit Index), values close to 1.00 being indicative of good fit. Although a value of >.90 was originally considered representative of a well-fitting model, a revised cutoff value close to .95 has recently been accepted (Byrne, 2016).

The overall fit of the 53-item structural model is summarized in Figure 1. The goodness-of-fit results indicate the hypothesized model is consistent with the data and religiosity contributes strongly to resilience in this model (R^2 = .70).

Religiosity explains 70% of variance in resiliency. In other words, the variation of 70% shows that religiosity strongly contributes to resilience in this age span. This study set out with the aim of assessing the importance of religion in building resilience for sustainable development among adolescents. Religion is important for resilience; find a means for expressing your spiritual needs. This can be in the form of a mosque, a fellowship support group, or an outing with friends who have similar beliefs. Religiosity is important for the human spirit. It can also help to foster resilience in adolescents. The findings lend support to the claim that religion is important for resilience. It helps in times of crisis and stress. It also provides coherence, faith, purpose, stability and a positive attitude. This study produces results which are consistent with the finding of other previous studies on religiosity and resilience (Eubanks, 2004; Griffing 2002; Chase, 2001).

The results of the present study forward evidence for construct validity for religiosity and resilience. Furthermore, both instruments demonstrated evidence of internal consistency reliability. The findings also show that the RBS and RS are reliable and valid measures to be employed in assessing resilience and religiosity among adolescents. Evidently, the current study which made use of RBS and RS in Malay version yields consistent findings with previous studies which used the English version of the measures.

Figure 1. Model of Resilience and Religiosity: The Hypothesized Model



Conclusion

This study will contribute to a greater understanding of the social and cultural foundations of resilience, shedding light on resilience building and the promotion of human sustainability. This study also has implications for educational and psychological practices, especially in building strength and potential of adolescents. Since the 53-item structure yields a valid and reliable structural model, the conception scale is therefore, useful in conducting diagnostic assessment of resilience and religiosity among youths in Malaysia. The findings of this study forward evidence that religiosity can help to foster resilience in youth. This research contributes to a greater understanding of resilience building, the promotion of mental and spiritual health of Malaysian youth which are crucial for sustainable development of youth. Future research should examine whether the present findings generalize to other samples and settings.

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TRANSFORMING THEORETICAL PREMISES TO DYNAMIC PRACTICES VIA TEACHERS' PERCEPTIONS AND IMPLEMENTATION OF LEARNER-CENTERED EDUCATION: A FOCUS ON UNIVERSITY SECOND LANGUAGE TEACHING

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Abstract: *Although Learner-Centered Education (LCE) is claimed to have several learning gains, research suggests that teachers' attitudes and practices play a crucial role in promoting its prolific outcomes. This study examines the adaptation of LCE and examines how it has been implemented in second language teaching by university teachers since launching an educational shift embodied in the Learner-Centered reform a decade ago. In so doing, a questionnaire was distributed to a random sample of 128 instructors. The data collected were analyzed through descriptive and inferential statistical analyses using the Statistical Package for Social Sciences SPSS 16.0 software. Meanwhile, interviews were analyzed qualitatively. The quantitative analysis of data provides a snapshot of instructors' attitudes towards LCE and the extent to which they implemented it in their courses. More importantly, the analysis of qualitative interview results outlines a 'contextualized' framework that takes into account the conceptual nature of the global premises of LCE by linking them to teachers' perceptions and practices in a particular context. The findings provide insights into the dynamism of meeting college students' second language learning needs. The study further addresses the problems of designing teacher training that aims at promoting higher education second language learning in the Middle East and North Africa (MENA) context.*

Keywords: *adapting education reform, theory-practice divide, teacher education, second language learning*

Introduction

Globalized approaches to education are growing in spread and influence forming and informing current educational reforms. They are trendy for policy-makers to encourage and trendy for universities to offer reflecting the paradigm shift in education towards learner-centeredness (Slavin 2019; Donovan and Bransford, 2005; Grossman et al., 2007; Li and Edwards, 2014; Nicolescu and Neaga, 2014; Weimer, 2013; Annemarie, 2011; Cheng et al., 2016). With this regard, learner-centered education (LCE) has been viewed as a model that emerged at the turn of the twentieth century, summing up the human teaching experience, shaping a new understanding of learning, establishing current instructional practices, drafting the blueprint for educational reforms, and paving the way for future prospects of what teaching and learning ought to be like in the new millennium (Lee and Hannafin, 2016; Aslan and Reigeluth, 2015; Weimar 2013; Cornelius-White and Harbaugh, 2009; Danzig et al., 2017; Keengwe et al., 2009; Watson and Reigeluth, 2008; Franklin et al., 2014).

Since 2007, conforming to a global paradigm-shift in the methods of teaching and learning, the system of higher education has aimed at emphasizing learner-centeredness by means of encouraging students' active learning and developing problem solving skills (Palmer et al., 2016; Annemarie, 2011; Idri, 2012; Azzi, 2012; Jackson, 2015). This paper explores second language teachers' attitudes and implementation of LCE, focusing on its benefits and limitations for second language teaching and learning in the context of Middle East and North Africa higher education.

Review of Literature

Learner-Centered Education (LCE) has established a worldwide track record in motivating students, stimulating personal growth and lifelong learning, and developing communication skills, among other gains (e.g., Hallinger and Lu, 2013; Berdut et al., 2014, Slavin, 2019, ; see Cornelius-White, 2007 for a meta-analytic review). However, the gains of LCE are claimed to be largely dependent on the way teachers view, perceive, and implement it, especially that it is claimed not to belittle the teacher's role but, rather, to multiply it (Weimer, 2013); a premise that maybe challenging to many teachers (Massouleh and Jooneghani, 2012). In addition, previous studies have indicated that the implementation of LCE pedagogies requires high levels of awareness and specialized skills on the behalf of teachers, together with encouraging school environments (Hallinger and Lu, 2013; Polly and Hannafin, 2011). From this perspective, the present study addresses the discrepancy between theoretical educational standards and classroom instructional practices.

Moreover, despite that several studies advocate that implementing LCE is challenging in terms of both course design and the development of instructional methods and materials (Mansfield and Beltman, 2014; Polly and Hannafin, 2010; Rezig, 2011), a number of research reports have shown that LCE has been successfully implemented even where teacher-centered instruction used to be the norm such as North Africa and East Asia (e.g., Moussaoui, 2012; Hallinger and Lu, 2013; Berdut et al., 2014; Shehdeh, 2010). Likewise, the present study is relevant because it not only explores how LCE is perceived by instructors as one of chief agents in educational change but also examines to what extent and in what ways LCE has been implemented in the Algerian university context to improve students' second language learning. This research, thus, attends to the mounting need for empirical research on the implementation of LCE methods in higher education contexts.

The Present Study

The purpose of the present study is to contribute to the emergent body of knowledge on the betterment of alignment between espoused and enacted practices as means of increasing the effectiveness of LC educational reforms (Polly and Hannafin, 2011; Idri, 2012; Senussi, Orafi and Borg, 2009; Nicolescu and Neaga, 2014). In so doing, it tackles the need for research on instructors' adoption and adaptation of the conceptual values advocated by educational reforms to actual teaching practice (Underwood, 2012; Chaco, 2005; Grossman et al., 2007). Previous studies have shown that research evidence is crucial for eliminating the gap between espoused educational standards and enacted practices. Therefore, this study is important since it addresses the discrepancy between theoretical ideality and practical reality with regard to the implementation of LCE.

From an interdisciplinary stance, the paper aims at contributing to the literature on second language instruction in higher education. By so doing, it investigates teachers' attitudes and implementation of LCE methods, namely task-based, content-based, project-based, cooperative and collaborative methods in university second language courses (this study comprehensively focuses on the use of these particular methods as concrete terms to refer to current teaching practices reflecting learner-centered education). More particularly, the objectives of this study are:

1) To explore teachers' attitudes and implementation of LCE in the context of higher education second language instruction.
2) To investigate the challenges teachers face and derive recommendations based on their experiences with the implementation of LCE.

Research questions can therefore be formulated as follows:
1. What are second language teachers' perspectives regarding LCE?
2. To what extend do second language teachers implement LCE in their courses?
3. What implications can be derived from second language teachers' implementation of LCE methods?

Method

Participants

To achieve the aforementioned aims, a descriptive exploratory study is carried out where a questionnaire is surveyed to a random sample of 128 second language teachers in the departments of French, English and Translation working at Algerian Universities. The participants were largely homogeneous in terms of background and included male and female as well as experienced and early-career participants. All of the participants speak Arabic as their mother tongue and were teaching French or English as second languages. At the university level, second languages are mostly taught for academic (translation and literature) and educational purposes (applied linguistics and second language acquisition). The language programs taught by the participants were sets of compulsory courses including grammar, phonetics, literature, general linguistics, translation, language history and culture, TEFL (Teaching English as a Foreign Language), and educational psychology, or ESP (English for Specific Purposes) for non-English major students, all taught in the second language, i.e., French or English (demographic information of questionnaire participants in Appendix 5). As for the interview, the participants were 9 teachers selected from the initial questionnaire sample based on their implementation rates reported in the questionnaire (general Information of interview participants in Appendix 3 and interview excerpts in Appendix 4).

Data Collection and Analysis

This study employed quantitative and qualitative approaches to data collection and analysis. In accordance with the purposes of this study, a survey was designed based on the literature reviewed on LCE (Cornelius-White and Harbaugh, 2009; Weimer, 2013).

First, the questionnaire was designed to elicit information about second language teachers' backgrounds, attitudes, practices, and implementation of LCE and consisted of three sections. The first four questions constitute the first section and are meant to gather information about teachers' age, gender, and work experience. The next section included question items about teachers' views of teaching and learning conceptions related to LCE. Teachers were required to indicate how far they agree with some statements associated with LCE using: strongly agree, agree, disagree or strongly disagree. The focus of the third section was narrowed down to an inquiry into teachers' implementation of LCE methods. In this section, teachers were required to indicate the extent to which they use LCE methods in their courses; English version of the questionnaire in Appendix 1. Cronbach's Alpha for the questionnaire was .891.

Second, the semi-structured interview sought information on teachers' evaluation and implementation of LCE methods in their courses. Participants were required to reflect on the difficulties they faced and the solutions they found practical within their teaching situation (context, learners, etc); English version of the interview questions in Appendix 2.

The choice of questionnaire and interview for data collection was based on the purpose of this study. The initially constructed versions were followed by revisions based on the feedback provided by three senior teacher educators in Languages and Human Sciences School at Biskra Mohammed Kheider University from which the study sample was taken. Using both questionnaire and interview data is appropriate for investigating teacher's beliefs and practices and for inspecting challenges teachers face in their implementation of LCE, along with the coping strategies they have developed.

The data collected were analyzed through descriptive and inferential statistical analyses using the Statistical Package for Social Sciences SPSS 16.0 software. Meanwhile, interviews were audio recorded and analyzed qualitatively.

Results

Teachers' Attitudes towards LCE

Attitudes toward LCE approaches to instruction show variation across questionnaire statements in the participants' responses.

Table 1: Descriptive Results of Teachers' Attitudes Towards LCE

Items in Category 1*	N	Mean**	Std. Deviation
Item1	128	2.84	.781
Item2	128	3.39	.679
Item3	128	2.79	.969
Item4	128	2.63	.946
Item5	128	3.88	.323
Item6	128	3.18	.837
Attitudes	128	3.1185	.59641
Valid N (listwise)	128		

N: Total number of participants
*Category 1 of the questionnaire: Attitudes
**Mean weight of responses given that response options are weighted as follows: strongly agree=4, agree=3, disagree=2, strongly disagree=1

Table 1 shows the descriptive results of questionnaire items indicating that, overall, teachers agree with the pedagogic premises associated with LCE (total mean for Attitudes Category: 3.11=agree, see response weights bellow). However, from the responses' means in the questionnaire data (Item 1: the view of teaching as knowledge transmission, Item 3, usefulness of providing learning opportunities, and Item 4: students' responsibility for their own learning), it was obvious that teachers assign a remarkable amount of importance to the transmission of knowledge from teachers to students. While it is rational that teachers might hold that a LCE approach have both advantageous and disadvantageous outcomes, there seems to be some contradiction in their responses since they are evidently aware of the LCE orientation towards encouraging active learning (Items 2, 5, 6; Category 1).

Teachers' Implementation of LCE Methods

Table 2 shows participants' responses about using specific LCE methods in their classes, namely Content-, Task-, and Project-Based, Cooperative and Collaborative methods (Items 1, 2, 3, 4, 5; Category 2) as well as Awareness Raising and Scaffolding (guidance and support) strategies (Items 6 and 7, Category 2). The responses from the questionnaire (Table 2) indicate that teachers variedly, though overall moderately, adopt reform-oriented LCE methods (total mean: 2.41= average, see response weights below). Specifically, content and task-based methods (Items 1, 2: Category 2) are the most commonly used since they are regarded as the most practical as they can be easily adapted to teacher-fronted classrooms. Similarly, interview data point toward the practicality of joining the two methods.

Table 2: Descriptive Results of Teachers' Implementation of LCE Methods

Items in Category 2*	N	Mean**	Std. Deviation
Item 1	128	2.88	.790
Item 2	128	2.76	.929
Item 3	128	1.49	.589
Item 4	128	2.23	.837
Item 5	128	2.30	1.022
Item 6	128	2.50	1.004
Item 7	128	2.75	.763
Implementation	128	2.41629	.543770
Valid N (listwise)	128	2.88	

N: Total number of participants
*Category 2 of the questionnaire: Implementation
**Mean weight of responses given that response options are weighted as follows:
always=4, often=3, sometimes=2, never=1

Interview[1] data also indicate positive attitudes and gains from jointly implementing content and task-based methods. As a teacher interviewee clarifies "… with regard to LCE methods, when the teacher reviews course content, explains a language point related to the course content as part of feedback on students' task performance or contribution, content knowledge will be deepened because students not only understand, but also apply course content and the language they use to express it."(Excerpt 1, Senior 2) Likewise, another interviewee notes: "frequently requiring learners to solve a problem, arrive at a conclusion, or complete a task and to share information allows them to collect information and cultivate themselves" (Excerpt 2, Senior 3).

In addition, a relatively large number of teachers have employed cooperative and collaborative methods (Survey Items 4, 5, Category 2). Similar findings are revealed in the reported experiences through qualitative interview data. As a senior teacher pointed, "though time consuming, cooperative and collaborative methods can foster growth in many areas: learning to use interpersonal skills effectively, understanding and applying the course content to life situations, developing self-esteem and ability to explain concepts to others" (Excerpt 3, Senior 5). Similarly, a teacher interviewee reports "through encouraging student-student interaction, positive interdependence and individual accountability, students gain greater

[1] Note that interview data are not reported in question-answer format. Instead, they were thematically organized, in accordance with the research questions, to allow for triangulation with questionnaire results.

motivation and self-confidence, learn to work cooperatively, and eventually become autonomous learners" (Excerpt 4, Novice3). Another teacher notes: "varying teacher-student interaction through collaborative dialogue and mentoring students' groups stimulates the negotiation of meaning and allows the maximum of students to contribute to the discussion and develop as thinkers, and communicators in the second language… This is because students have the opportunity to benefit from the presence of the teacher and peers, to receive feedback from multiple sources" (Excerpt 5, Novice 1).

Conversely, few teachers reported using project-based methods, (Questionnaire Item 3: Category 2). The findings also suggest that many teachers seem to doubt the usefulness of raising students' awareness of their active role in the learning process, assuming that to the teacher-centered mode of instruction and changing their habits may cost lots of effort and time, and regard the provision of adequate support and guidance as challenging (Questionnaire Items, 6 and 7, Category 2). In the interview, this theme was raised in specific reference to students' readiness and the challenges that teachers face in implementing the LCE reform. One interviewee comments: "we cannot ignore that LCE methods require students to enlarge their knowledge by doing extra readings, investigate issues in depth, and solve problems and other study skills to which many students may not be used to… especially in over-crowded classrooms or lecture halls" (Excerpt 6, Senior 1). Another point raised by a teacher interviewee is that: "language teachers and learners come to class with a lifetime of experiences and preconceived notions about teaching and learning" (Excerpt 7, Novice 2).

Teachers' Attitudes and Implementation of LCE

The results show that despite that the correlation among teachers' attitudes (Category 1) and implementation (Category 2) of LCE is significant (Table 3), the descriptive statistics point to a noticeable gap between the two survey categories (Table 4).

Table 3: Correlation Among Teachers' Attitudes and Implementation of LCE

		Attitudes	Implementation
Attitudes	Pearson Correlation	1	.837**
	Sig. (2-tailed)		.000
	N	128	128
Implementation	Pearson Correlation	.837**	1
	Sig. (2-tailed)	.000	
	N	128	128

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4: Descriptive Statistics of Teachers' Attitudes and Implementation of LCE

Questionnaire Categories	N	Mean	Std. Deviation
Attitudes (Category 1)	128	3.1185	.59641
Implementation (Category 2)	128	2.41629	.543770
Valid N (listwise)	128		

N: Total number of participants
*Mean weight of responses given that response options are weighted as follows: Attitudes (Category 1): strongly agree=4, agree=3, disagree=2, strongly disagree=1; Implementation (Category 2): always=4, often=3, sometimes=2, never=1

The gap between teachers' attitudes and implementation of LCE indicated in Tables 3, 4 suggest that many instructors have found difficulty in adapting LCE approaches and conceiving how the conceptual premises of LCE can be translated to instructional practices. In consonance with the quantitative results, interview data highlight a tension between teachers' attitudes toward the reform standards and the practicality of educational reform though many teachers are cognizant of the benefits of LCE reform for second language learning. For instance, an important point that was raised by a number of participants is skills integration. As a senior instructor explained: "A LCE framework provides a natural context for integrating the four skills. Oral interaction helps wiring development at least in two ways. First, content will be enhanced, through brainstorming in groups, for example" (Excerpt 8, Senior 5). Similarly, another teacher views that "the acquisition of new vocabulary and improvement of learners' grammar are stimulated by interaction and likely to occur through scaffolding during collaborative work" (Excerpt 9, Senior 4). In the same vein, a writing teacher reported: "… In a learner-centered classroom writing not only triggers reading, but listening and speaking as well; this is likely to lead to an increase in students' overall competence and writing abilities thereby" (Excerpt 10, Senior 6).

Discussion

Question 1: *What are second language teachers' perspectives regarding LCE?*

The results (Table1) show that though teachers are evidently aware of the LCE orientation towards encouraging active learning through guided discovery in order to enlarge students' resources such as online learning and self-study instead of the heavy reliance on teacher's 'spoon-feeding', they still assign a remarkable amount of importance to the transmission of knowledge from teachers to students. These findings have been clarified by triangulation with interview results where participants frequently show concerns about the time needed to cover the programs' content and the demands discovery-based learning necessitates on both students and teachers. This contradiction is consistent with research findings pointing to the significance of reform-focused training (Polly and Hannafin, 2011) and, at the same time, provide support to previous studies indicating the need for adapting educational reforms according to the context of implementation (Idri, 2012; Rezig, 2011; Senussi, Orafi, and Borg, 2009; Nicolescu and Neaga, 2014).

Question 2: *To what extend do second language teachers implement LCE in their courses?*

On one hand, the findings indicating positive attitudes and gains from jointly implementing content and task-based methods, especially within frameworks cooperative and/or collaborative learning, are in consonance with of experimental research on the effectiveness of content-based, cooperative and collaborative language teaching methods (e.g., Moussaoui, 2012; Valeo, 2013). One example is Valeo's (2013) study which provides evidence for the effectiveness of content-based with task-based approaches (focus-on-form activities) in a language program for adults.

On the other hand, the findings that teachers moderately raise students' awareness of their active role in the learning process and regard the provision of adequate support and guidance as challenging lend support to the view that the adoption and adaptation of LCE reform requires collaboration between the teacher and the learners who have already constructed notions about what their role in the classroom is. The results also suggest that the implementation of LCE is a process that requires gradually refining epistemological beliefs and dropping stereotypical notions about learning and instruction. These findings are consistent with research in similar contexts (Idri, 2012; Senussi, Orafi and Borg, 2009; Annemarie, 2011) which has highlighted the effect of students' responsiveness and readiness for a reform-oriented approach to teaching; especially if the approach entails learning skills students may not be equipped with, study strategies they may not be aware of, and responsibilities they did not expect.

Question 3: *What implications can be derived from second language teachers' attitudes and implementation of LCE methods?*
The results are in accordance with previous studies that examined the implementation of standards-based educational reforms and found inconsistency between conceptualization and practice in instruction (e.g. Polly and Hannafin, 2010, 2011). In addition, the findings provide evidence that if LC strategies are to be successfully implemented, teachers need to informedly tailor the implementation of these methods according to their teaching situations through what Kumaravadivelu (2003) refers to as 'theorizing from practice'; he further explains:

> *Such a continual cycle of observation, reflection, and action is a prerequisite for the development of context-sensitive pedagogic theory and practice…no theory of practice can be fully useful and usable unless it is generated through practice. A logical corollary is that it is the practicing teacher who, given adequate tools for exploration, is best suited to produce such a practical theory. The intellectual exercise of attempting to derive a theory of practice enables teachers to understand and identify problems, 107nalyse and assess information, consider and evaluate alternatives, and then choose the best available alternative that is then subjected to further critical appraisal. In this sense, a theory of practice involves continual reflection and action. (p.35)*

Taken together, the findings draw attention to the effects of teachers' and students' epistemological beliefs and pre-assumptions of roles and responsibilities on reform implementation, adding, thereby, to previous studies on reform implementation (e.g., Grossman, Onkolb, and Sands, 2007; Li and Edwards, 2014; Nicolescu and Neaga, 2014; Makgato, 2013) and, more particularly, contributing to the literature on the implementation of LCE (Hallinger and Lu, 2013; Berdut et al., 2014; Massouleh and Jooneghani, 2012; Watson and Reigeluth, 2008; Karimi, 2011) and on the contextualization of second language education (Wolff, 2000; Atkinson, 2003; Underwood, 2012, Chaco´ n, 2005; Tamtam et al., 2012). At this point, it can argued that, besides being informed about existing choices, teachers need to investigate reform-oriented methods by themselves, neither to conform to nor to reject them, but rather to make sense of them so that they can be meaningfully implemented within their own teaching situations. The findings further raise questions as to how attitudes toward the distribution of roles and responsibilities develop and change and how LCE methods can be better assimilated into educational routines in a particular context.

Implications for LCE-oriented Reform Implementation

The cornerstones of a Contextualized Framework of LCE

One of the purposes of this study was offering insights and inspirations for contextualizing educational reform by exploring the challenges and the merits of incorporating LCE methods. With this regard, the findings of this study indicate that the alignment of global premises of reforms largely depends on the perceptions and practices of educators. In light of these findings, it is suggested for instructors and teacher-educators to take into consideration the following implications derived from the themes highlighted by teacher interviewees.
First, to achieve high levels of the effective use of LCE methods, it is highly recommended to give importance to teachers' professional autonomy in teacher education programs. With this regard, three main suggestions have been given by teacher interviewees based on their experiences:

1. Teachers' cooperation and teacher-generated materials can be a useful way to deal with the lack of time associated with learner-centered activities. Teachers' cooperation toward the same goal (a syllabus, a series of tasks, a textbook, etc.) can help teachers gain time and efforts. In addition, they can promote a culture of cooperation as they become an example for their students to learn from the attests of team spirit and collegial integrities. Similarly, materials generated by a teacher for a particular context can be used and improved by another teacher and so forth.
2. Teachers need not only to exchange expertise but also to research on their own to explore suitable ways of properly implementing the strategies in their classrooms. This can also have cultivating effects on teachers' academic awareness. As an interviewee teacher suggested, there can be teachers' newsletter so that more theoretically based innovations, including LCE methods, will be put into contextualized practice by encouraging teachers to undertake research endeavors. In so doing, teachers need to work together to find the right content and tasks which provide suitable levels of motivation and desirable learning outcomes. In this way, larger curriculum goals may be more easily attained.
3. LCE methods are not always the best way, but one way to teach the second language. It is up to the teacher's knowledge, experience, and preferences to construct the best way in accordance with their aims, learners, and the context they are in. In other words, LCE methods cannot be effectively implemented if they are taken to mean superficial practice. Rather, what, when, and how to implement them need to be systematically thought over, especially through conducting action research.

The Dynamism of Meeting Students' Needs

According to the findings of this study, reform alignment requires dynamism is designing instruction around two main pillars: students' responsiveness and social capital.

First, epistemological beliefs play an important role in understanding the piecemeal nature of learner autonomy which is essential for the successful implementation of LCE reforms. Students' conceptual beliefs about the nature of learning and assumptions about teacher's role are observed to change gradually as they gain more subject knowledge and familiarity with reform-oriented activities. Therefore, it is recommended that:

1. Organizing learning activities according to students' readiness for autonomy is likely to reduce anxiety and derive better learning outcomes. "Charging students of a large number of assignments and projects is not enough". Rather, students need to have a clear mental representation of what they are supposed to do specific activities and to be provided by useful tips or suggestions about how to approach these activities (Excerpt 11, Novice 2). For example, while theoretical or factual information might be presented in whole class lectures, learner-centered activities might be the appropriate way of cooperatively practicing skills and applying the learned information; creative individual activities which may require teacher-student collaboration; however, can be left to a later stage to ensure that all students have acquired the underlying knowledge or skills and are able to use it in new situations. Systematically developing longer products, such as research papers, can be of great help since the chief reasons that students waste time off-task are that they do not know what they are supposed to be doing, or they do not know how to approach it.
2. Bearing in mind the piecemeal nature of learner autonomy, clearly defining the task at hand, timeframes, and the organization of various steps needed to complete the assignment can improve students' study skills and overall achievement. For instance, in cases where group tasks may continue through weeks or months, it is particularly helpful to guide the groups in determining short-term goals within the longer-term objectives, a procedure which is likely to enable students to organize their learning and gradually move towards

autonomy. As noted by Bradley-Bennett et al. (2010): "It's a harsh reality – we love our students, but our goal should be to help them get to a level of competence and achievement where they don't need us anymore." (p.7). Promoting learner autonomy can be helped by encouraging learners to learn how to learn, and equipping them with the means necessary to self-direct and self-monitor their own learning.

Moreover, the findings of this study suggest that if LCE methods are to be efficiently implemented, teachers need to capitalize on and develop students' social capital; thus:

1. Teachers have the role of co-communicators; they need to give importance to classroom interaction as a means of promoting second language acquisition processes and whole-person development.
2. Students need to be aware of their active role in language learning, attentive to the opportunities which arise, and eager to maximally benefit from the presence of their teacher and classmates. As Kanar (2011) notes:

   Some students sit passively in a lecture or class discussion, letting their minds wander, not taking notes, and never asking questions. ... The key to getting more out of class, and out of one's college experience as a whole, is one's active engagement in the process. An active learner is one who gets involved by taking notes, asking questions, participating in discussions. (p.17)
3. Some students may crucially need preparatory elective courses such as effective note-taking, study skills, learning strategies, critical reading and research skills. Likewise, many students will benefit from advice and coaching about how to focus on the task at hand, and how to prioritize and organize tasks into sub-tasks. They also need help in learning how to provide constructive feedback on their classmates' contributions.

Figure1 sums up the aforementioned implications and illustrates a data-driven model for contextualizing LCE methods into MENA language classrooms.

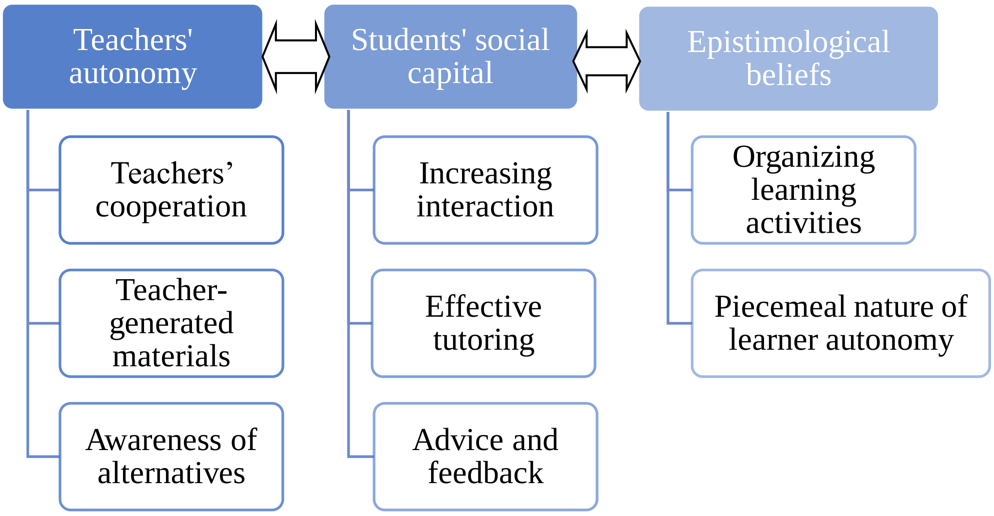

Figure 1: Model for Contextualizing LCE Reform

Conclusion

This paper has explored teachers' perceptions of the challenges and benefits associated with the overall usefulness of implementing LCE methods. It, thereby, contributes to research on the interaction between theory and practice for even and fruitful educational change.

All in all, it can be concluded that, even in the present post-method era, the teacher adopts a particular classroom strategy according to their learners' characteristics and to the whole learning situation as well. According to participants' experiences, the implementation of learner-centered methods in the second language classroom is likely to contribute to the betterment of second language teaching and learning. However, teachers need to progressively introduce LCE methods not necessarily all the methods together or in all of the sessions. Rather, what is to be taken into consideration is that each method shapes and is shaped by the other. For instance, content may shape a task or a project to be completed cooperatively and/or collaboratively. LCE methods, I assume, interweave and interact with each other in a synergic relationship; the result of such a relationship will vary from context to context depending on the teacher, the learners, and the learning objectives.

Noteworthy, LCE methods may not be effective for full-time use in the second language classroom. The effectiveness of LCE is by no means determined by how much time is spent in learner-centered activities. Rather what matters is what methods are used with whom, for what purpose, and in what way. This is not to gainsay the practical usefulness of LCE though; nor is it to suggest that there are rock-solid golden rules for implementing it. Rather, this article is meant to serve as another contribution to the pool of resources on education reform implementation which both provide educators with insights from, potentially similar, implementation contexts together with a set of suggested instructional activities and guide them toward becoming independent teaching material developers. Interestingly, the findings also indicate a teacher-initiated shift towards social-centeredness in reaction to reform-oriented learner-centeredness.

Limitations and Suggestions for Further Research

From the outset of this research, the aim has been to examine the implementation of LCE methods for second language learning in terms of both language and content. What was meant to be done is finding out the limitations and benefits of implementing LCE methods based on university second language instructors' attitudes and experiences. However, this study is not concerned with examining the relationship between implementing LCE methods and a particular aspect of second language learning. For instance, one way to extend the findings of this study is by addressing the effectiveness of LCE methods in promoting English academic writing, in particular, due to this ability's importance in higher education contexts. It would also be desirable to conduct such a research using experimental or longitudinal designs with the analysis of students' perspectives.

Further intriguing issues with regard to the LCE methods discussed in this study include the challenges and prospects of individualized language teaching, peer assistance and collaborative learning in this same context of the present study. Other possible areas of research include investigating how the use of cooperative discussion tasks which highlight different aspects, options, and alternatives can enhance students' critical and higher-order thinking.

The same as most attitudes-focused research, a limitation of this study is that the findings reflect the attitudes and experiences of the study participants; thus replicating this research in a different context may shed light on other aspects of LCE-oriented reforms. Besides, all that I can claim is that the methods discussed in this study have been found, by many second language teachers, worthy of consideration, yet further research is needed in knowledge areas other than language learning, such as science and technology for instance.

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Appendix 1: English Version of LCE Attitudes and Implementation Questionnaire

Dear teachers,

This questionnaire is part of a research work on Learner-Centered Education embedded in the LMD system reform. It aims at finding out teachers' attitudes, perceptions, and the way they incorporate learner-centered methods to motivate students and enhance second language learning in a framework of purposeful communication.

I would be grateful if you could fill in this questionnaire by ticking (√) the appropriate box, or by making a full statement wherever needed.

SECTION ONE: DEMOGRAPHIC INFORMATION

1. Gender: Male□ Female□
2. Age: 20-30□ 30-40□ 40-50□ above 50□
3. Work Experience (Number of years):________

SECTION TWO: ATTITUDES TOWRDS LEARNER-CENTERED METHODS

5. Please, indicate how far you agree with each of the following notions (associated with learner-centered education)

SA= strongly agree, A= agree, D= disagree, SD= strongly disagree

Statements	SA	A	D	SD
1. Instruction by means of teachers transmitting knowledge and students receiving it has inadequate learning outcomes				
2. Learning is a process of discovery; teachers facilitate and monitor the learning process				
3. Teachers are responsible for providing learning opportunities, guidance and support.				
4. Students should take responsibility over their own learning				
5. Students must have pre-requisite knowledge and skills to benefit from LCE methods				
6. Students have equal opportunities for success in a learner-centered active learning framework				

SECTION THREE: TEACHERS' IMPLEMENTATION OF LEARNER-CENTERED EDUCATION METHODS

6. Would you please indicate how often you use each of the LCE methods and strategies listed below?

LCE methods and instructional strategies	always	often	sometimes	never
1. ***Content-based methods****:* target at both content and language learning.				
2. ***Task-based methods****:* require students to accomplish a task or an activity.				

3. ***Project-based methods**:* require students to develop a project, a research paper for example.				
4. ***Cooperative methods**:* require students to work together in pairs or in groups.				
5. ***Collaborative methods**:* encourage joint knowledge construction through teacher's and students' engagement in instructional conversation and content negotiation.				
6. Raising students' awareness of their active role in learning				
7. Provision of guidance and support along with using LCE methods				

Your comments on the questionnaire and its content are of great significance:
………………………………………………………………………………………………
………………………………………………………………………………………………
…………………………………………………………………………………
If you would like to answer some questions regarding your responses in this questionnaire, please leave your contact details:
Name: Email: Tel:

Thank you very much indeed!

Appendix 2: English Version of LCE Implementation Interview

According to your experience in implementing learner-centered education,

1. Overall, in your view, what are the main advantages and disadvantages of LCE oriented reform?
2. Have you faced any difficulties or challenges in using the learner-centered methods (content-based, task-based, project-based, cooperative, and collaborative)?
3. Which LCE methods have you found the easiest to be integrated in your courses and why? And which have you found the most challenging and why?
4. In your view, how does each of: a-students' levels of ability b- Students readiness/willingness to be active d- Time factor affect the implementation of LCE methods?
5. Are there any other factors or circumstances which you think have facilitated or hindered the implementation of LCE in your class?
6. In what ways did you cope with the limitations of LCE methods and the problems you faced in implementing these methods to enhance second language learning?
7. Are there any strategies that you found effective in implementing LCE methods?

Thank you very much for participating in this interview!

Appendix 3: General Information of interview participants

Code name	Gender	Age	English teaching experience (Years)	Qualifications
Senior 1	female	39	13 years	MA, English Language and Literature
Senior 2	male	46	19 years	PhD, Applied Linguistics and Second Language Acquisition

Novice 1	male	33	6 years	MA, Applied Linguistics and Second Language Acquisition
Senior 3	female	47	17 years	PhD, Translation Studies
Novice 2	female	32	4 years	MA, Translation Studies
Novice 3	female	29	3 years	MA, English Language and Literature
Senior 4	female	57	28 years	PhD, Applied Linguistics and Second Language Acquisition
Senior 5	male	54	25 years	PhD, Translation Studies
Senior 6	female	53	21 years	PhD, Applied Linguistics and Second Language Acquisition

Appendix 4: Interview excerpts in Arabic

Excerpt 1:

"فيما يخص طرق التديس المتمركز على المتعلم, عندما يراجع الأستاذ محتوى الدرس و يشرح نقاط اللغة المتعلقة به كجزء من التعليق التوجيهي لأداء أو مشاركة الطلبة في نشاط ما, فإن معرفة المحتوى تتعمق لأن الطلبة لا يقتصرون على الفهم فحسب, بل يطبقون محتوى الدرس و يوسعون المهارات اللغوية التي يعبرون عنه بها. "

Excerpt 2:

"كثرة تكليف الطلبة بحل المسائل أو أستنتاج الخلاصات أو القيام بنشاط تعلمي ما و مشاركة المعلومات مع بقية الزملاء تمكنهم من تجميع المعلومات و تثقيف أنفسهم. "

Excerpt 3:

"... على الرغم من كونها مكلفة من ناحية الوقت، إلا أنه يمكن لأساليب التعاون والتآزرفي التعليم و التعلم أن تعزز النمو في العديد من المجالات مثل مهارات التعامل مع الآخرين بشكل فعال، وكذلك فهم وتطبيق محتوى الدروس في مواقف الحياة، وتطوير الثقة بالنفس والقدرة على شرح المفاهيم للآخرين"

Excerpt 4:

"من خلال تشجيع التفاعل بين الطلبة، والاعتماد المتبادل الإيجابي والحس بالمسؤولية الفردية، يكتسب الطلاب دوافع أقوى للتعلم و ثقة أكبر بالنفس، كما يتعلمون العمل بشكل تعاوني، ليصبحوا في نهاية المطاف متعلمين مستقلين".

Excerpt 5:

"تنويع التفاعل بين المعلم والطالب من خلال الحوار التعاوني و توجيه مجموعات الطلبة يحفز التناقش البناء ويسمح لعدد أقصى من الطلاب بالمساهمة في المناقشة مما يساعد على النمو الفكري وتطوير مهارات اللغة الثانية ... وذلك لأن التفاعل, و الحوار, و المناقشة تتيح الفرصة للطلبة للاستفادة من وجود المعلم والزملاء، والحصول على التعليق التوجيهي من مصادر متعددة ".

Excerpt 6:

"لا يمكننا أن نتجاهل أن أساليب التديس المتمركز على المتعلم تتطلب من الطلاب توسيع معارفهم عن طريق القيام بقراءات إضافية، ودراسة المسائل بشكل معمق، والقدرة على حل الإشاليات ومهارات الدراسة الأخرى التي يفتقر إليها العديد من الطلاب ... خصوصا في الفصول الدراسية أو قاعات المحاضرات المكتظة. "

Excerpt 7:

" يأتي معلمو اللغة وكذا الطلبة إلى الصف بخبرات وأفكار مسبقة حول التعليم والتعلم تكونت من خلال تجارب الحياة المختلفة ".

Excerpt 8:

" يوفرإطار التديس المتمركز على المتعلم السياق الطبيعي لدمج المهارات الأربع (الإستماع و التحدث و القراءة و الكتابة) إذ أن التفاعل عن طريق التحدث خلال النشاطات الجماعية يساعد على تنمية مهارات الكتابة من خلال إثراء المحتوى و اللغة، على سبيل المثال ".

Excerpt 9:

".العمل التعاوني بين المدرس و الطلبة من شأنه تمكين الطلبة من اكتساب المزيد من المفردات وتحسين المعرفة بقواعد اللغة و استعمالاتها "

Excerpt 10:

على تنمية القراءة فحسب، ولكن الاستماع والتحدث كذلك؛ مما لا تقتصر فوائد نشاطات الكتابة في إطار التديس المتمركز على المتعلم ..."
." يؤدي إلى زيادة في الكفاءة اللغوية الإجمالية للطلاب وبالتالي قدرات الكتابة لديهم

Excerpt 11:

"تكليف الطلاب بحمولات ذهنية تتمثل في عدد هائل من النشاطات والمشاريع لا يكفي لتطبيق التديس المتمركز على المتعلم بشكل فعال"

Appendix 5: Demographic information of questionnaire participants

Gender		Age		English teaching experience (years)		Qualifications	
Male	Female	20-30	30-40	< 10	10-15	MA	PhD
39.2%	60.8%	14.4 %	48.5 %	15.4 %	51.5 %	42.3%	57.7%
		40-50	Above 50	15-20	>20		
		25.8 %	11.3 %	21.6 %	11.3%		

THE MATHEMATICS OF ECONOMIC GROWTH

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Abstract: *Traditionally, economists view mathematics as a universal language that lends clarity to theoretical statements. This paper proposes that mathematics does not function as a mere language but play important roles in economics analysis. State's economic growth can be measured by Gross Domestic Product (GDP). GDP represents total monetary value of all goods and services produced over a specific time period. This study models the GDP data of the state of Sarawak, Labuan and Kuala Lumpur, Malaysia for year 2010-2016. A mathematical model is developed for the state GDP data using Interpolation method. Three types of interpolation model were used, linear interpolation, Lagrange interpolation and Cubic spline. The best fit interpolation model that best fit GDP data for each state was identified based on the comparative error between interpolated data and actual data. The results showed that Labuan GDP data was best fitted by Lagrange interpolation and Kuala Lumpur and Labuan GDP data were best fitted by Linear interpolation.*

Keywords: *Gross Domestic Product (GDP), Interpolation Method, Lagrange interpolation, Cubic splines.*

Introduction

The Gross Domestic Product (GDP) is one of the primary macroeconomic indicators used to assess the condition of a country's economy. It represents the total monetary value of all goods and services produced over a specific time period. Usually, GDP is expressed as a comparison to the previous quarter or year. For example, if the year-to-year GDP is up till 3%, that means the economy has grown by 3% over the last year. Economic production and growth, what GDP represents, has a large impact on nearly everyone within that economy. When the economy is healthy, typically observe low unemployment and higher wages as businesses demand labour to meet the growing economy. A significant change in GDP, whether up or down, usually has a significant effect on market. Investors always worry about negative GDP growth, because it is one of the factors economists use to determine, whether an economy is in a recession. The graph in Figure 1 shows the Gross Domestic Product (GDP) of States in Malaysia from year 2005 until 2015.

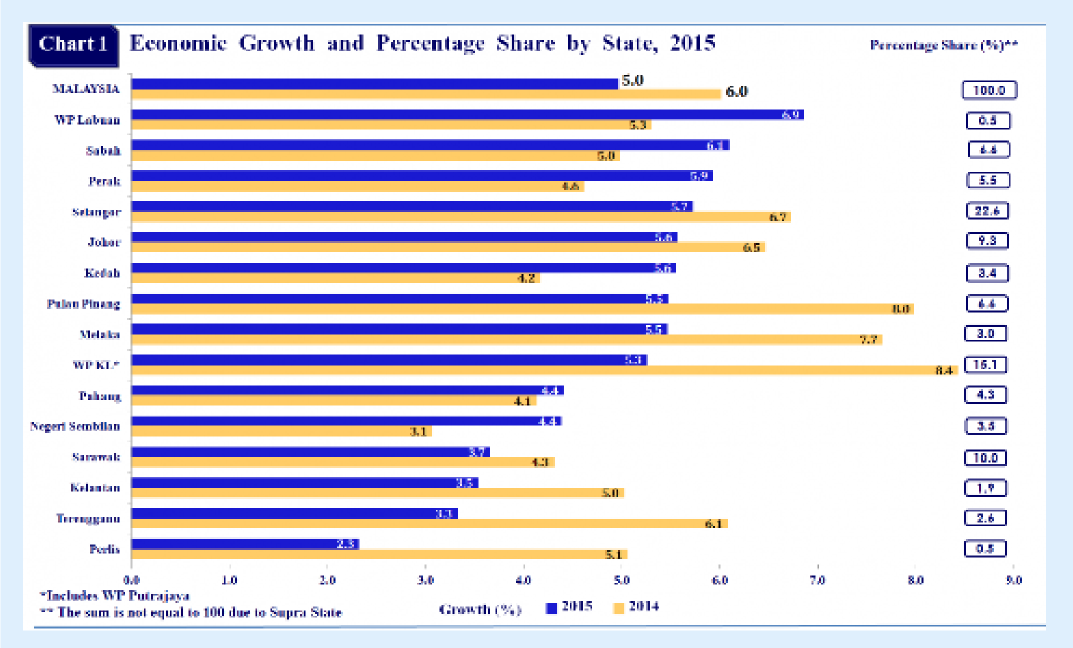

Figure 1: Malaysia States GDP Data in 2010 - 2015

Data that is not monitored and analyzed indeed will affect the economic growth in the long term. Any significant change in the GDP, either up or down, can have a big effect on investing sentiment. For example, if investors believe the economy is improving and corporate earnings along with it, they are likely willing to pay more for any given stock. If there is a decline in GDP or the investors expect a decline, they would only be willing to buy a given stock for less, leading to a decline in the stock market. Apart from that, the economic data releases are also essential for each Forex trader, especially the important reports like the GDP of a country/state which reflects the overall state of the respective economy. Such data create volatility and plenty of speculation is always preceding them. Market players monitor this critical piece of economic data and consider either to enter a new position or add to a current one. Obviously economic activity and growth will be affected if data is not monitored and analyzed. So, to answer this issue, a mathematical model will be employed so that the data shall be monitored and analysed analytically and logically

Literature Review

Probability distribution has been regularly used to model and quantify the GDP. By assuming the distribution of data, analyst can utilize the characteristics of the distribution to make predictions on outcomes. Probability distributions are regularly used to model financial data [1]. In many studies, assuming data normality is common, however the assumption can be resisted and best fitting distribution [2] and multivariate distribution [3] can be substituted. Forecasting of stock prices are regular example of financial data analysis such as in [4] and [5] use forecasting with a two-state Markov-switching autoregressive model to forecast the stock prices. Differential equation is used to obtain the constant dividend and derived the installment option to owner [6]. Another approach to predict the new stock price is by combining the Hilbert-Huang transform [7]. Many studies also used statistical approach to model financial data [8] and [9]. The method is used to analyze daily closed price stock market index. For continuous type of data, integral equation is used to value the installment derivatives where the asset price and time are assumed to be a continuous function [10]. Data mining and predictive technologies require the development of an automated computer program to analyze financial data such as work in [11], develop an automated computer program using data mining and predictive technologies to do a fair amount of trades in the markets. [12] uses a suite of statistical models to predict Latvian GDP. Sample forecasting step had been run out to find out GDP projections and to appraise forecasting accuracy of all individual statistical models. As a conclusion, factor and bridge models are among the best individually performing models in the suite. Forecasting accuracy that was obtained by using disaggregated models of factor and bridge models can be considered as a good alternative to aggregated ones. Furthermore, weighted combination of the forecasts of the statistical models allows obtaining robust and accurate forecasts which leads to a reduction of forecasted errors. [13] uses Artificial Neural Network (ANN) to predict Palestine Gross Domestic Product (GDP). Time series of quarterly observations on (GDP) in Palestine is collected. Forecasting results of Artificial Neural Network (ANN) are compared with those of the Autoregressive Integrated Moving Average ARIMA and regression as benchmark methods. By using Root Mean Square Error (RMSE), the empirical results show that ANN performs better than the traditional methods in forecasting GDP. [14] uses the comparison between non-parametric models to find out the prediction of GDP in Turkey. Two alternative situations had been considered due to seasonal effects. In the first case, a semi-parametric model had been discussed where parametric component is dummy variable for the seasonality. Smoothing spline and regression spline methods had been used for prediction of the semi-parametric models. While in the second case, it had been considered the seasonal component to be a smooth function of time. Therefore, the model falls within the class of additive models. The results obtained by semi-parametric regression models are compared to those obtained by additive non-parametric.

ARIMA modelling techniques also is used by [15] to predict Nigeria GDP between the year 1980 until 2007. For statistical analysis, graphical methods had been used to display data distributions, Autocorrelation functions (ACF), Partial autocorrelation functions (PACF), Residuals and Forecasts, and differencing to check for stationarity. The results are summarized as the ARIMA (1, 2, 1) model was proposed for the data from the second differences which shows stability and invertibility. Then, forecasts were made for future observations up to thirteen years which shows an increasing trend over time. The Akaike Information Criterion (AIC) and the adjusted multiple correlation coefficient (Adjusted R-Square) provided a good summary of the total variability explained by the chosen fitted model. [16] use Kalman filter technique to estimate deseasonalized monthly series for Swiss gross domestic product at constant prices of 1990 for the period 1980-1998. The results are consistent with the quarterly figures estimated by the Federal Office for Economic Development and Labour. The work presented a general approach using the Kalman filter technique, nesting a great variety of interpolation setups. The work also evaluated competing models and provide a time series that can be used by other researchers. [17] stated that a large part of the work in applied economic analysis for large businesses and governments of today is to forecast a future course for key macroeconomic variables such as Gross Domestic Product (GDP), inflation and unemployment to more effectively adjust policies. Nowadays, there are various statistical approaches to form a model in order to get the suitable forecast method for each type of data in economics world.

Interpolation is one of possible approach to forecast the GDP [18]. It is the process of calculating an approximate value based on values that are already known. In this study, two types of interpolation which are Lagrange interpolation and Cubic spline are used. Lagrange interpolation is used for data fitting, but note that the more data points that are used in interpolation, the higher the degree of the resulting polynomial, and therefore the greater oscillation it will exhibit between the data points [19]. Therefore polynomial of order three has been used in this study. Meanwhile Cubic spline is more popular because it is easy to implement and produce a curve that appears to be seamless but not to the application that sensitive to the smoothness of derivatives higher than second. A function $s \in C^2[a,b]$ is called a cubic spline on $[a,b]$, if s is a cubic polynomial s_i in each interval $[x_i, x_{i+1}]$. It is called a cubic interpolating spline if $s(x_i) = y_i$ for given values y_i [19].

Methodology

This study uses the modeling methodology as shown in Figure 2. Five phases are involved begin with data collection, developing interpolation models, error analysis and determining best fit interpolation model.

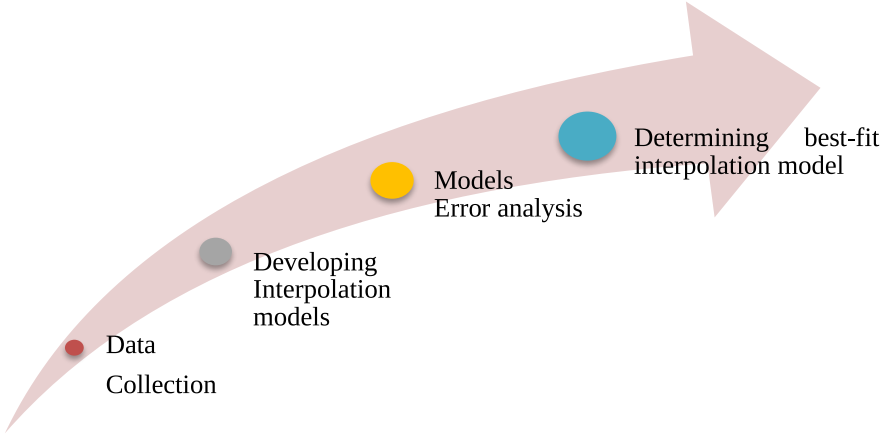

Figure 2: Modeling Methodology

In this study, interpolation method is used to estimate the missing values between the given data sets. Interpolation is a method of constructing new data points within the range of a discrete set of known data points [20]. This means whenever there are some data points that is not mentioned in the data sets but is within the data sets given, we are able to predict the data points by constructing the interpolating polynomial. However, there are numerous ways to construct the interpolating polynomials, such as Lagrange interpolation method and Cubic Splines interpolation method. Therefore, in order to decide the best interpolation among these two methods, the average forecast errors for the interpolated values in each interpolating polynomial have to be determined. The interpolation model that has the lowest forecast error is the best interpolating model to the given data sets.

Data Collection

The graph in Figure 1 shows the Gross Domestic Product (GDP) of Sarawak, Labuan and Kuala Lumpur from year 2010 until 2016. As we can see, the horizontal axis presents the years and the vertical axis shows the number of GDP in (RM Million).

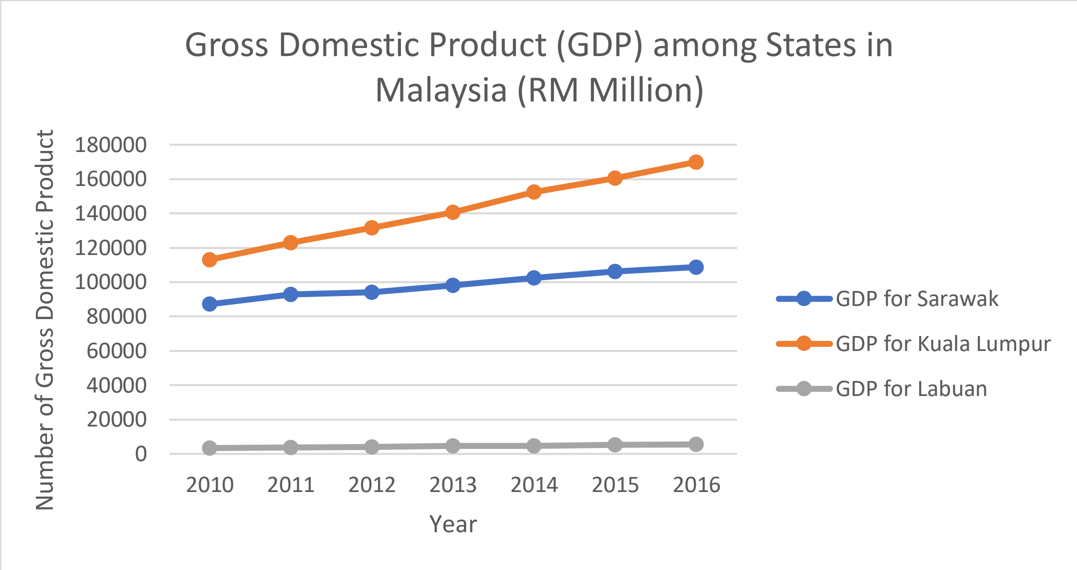

Figure 3: Graph of Gross Domestic Product of Sarawak, Kuala Lumpur and Labuan from 2010-2016

Model Selection

In order to achieve the study objective, an interpolation model needs to be determined. There are two models used in the study, which are Lagrange Interpolation method and Cubic Spline method. Therefore, in order to decide the best interpolation among these two methods, the average forecast errors for the interpolated values in each interpolating polynomial have to be determined. The interpolation model that has the lowest forecast error is the best interpolating model to the given data sets. In our study, the forecast of GDP missing values among states in Malaysia from 2010 until 2016 are estimated using each interpolation method. The collected data of GDP of Sarawak, Kuala Lumpur and Labuan are shown in Table 1 below.

Table 1: GDP of Sarawak, Kuala Lumpur and Labuan from 2010-2016

Year	Gross Domestic Product (RM Million)		
	Sarawak	Kuala Lumpur	Labuan
2010	87131	113095	3389
2011	92700	122890	3852
2012	94013	131514	4167
2013	98089	140534	4549
2014	102359	152477	4789
2015	106307	160490	5119
2016	108778	169971	5488

Model Formulation

This section discusses the formulation of Lagrange and Cubic Spline using the GDP data of Sarawak, Kuala Lumpur and Labuan above. We start fitting GDP data using Linear interpolation for the three states. The model formulation and results are shown in Table 1. The differences between actual data and Linear interpolation data are shown in percentage error.

Table 2: Results of Actual and Linear Interpolation GDP.

Sarawak x (year)	**Actual Data (GDP)**	**Linear Interpolation f(x)**	**Error % (linear VS Actual)**
		Equation $y = \left(\frac{153158}{3}\right) + \left(\frac{21647}{6}\right)[x]$	$\left\lvert\frac{Actual-Linear}{Actual}\right\rvert$
10	87131	87131	0
11	92700	90738.83333	0.021156059
12	94013	94346.66667	0.003549155
13	98089	97954.5	0.001371204
14	102359	101562.3333	0.007783064
15	106307	105170.1667	0.010693871
16	108778	108778	0
Kuala Lumpur x (year)	**Actual Data (GDP)**	**Linear Interpolation f(x)**	**Error % (linear VS Actual)**
		Equation $y = \left(\frac{153158}{3}\right) + \left(\frac{21647}{6}\right)[x]$	$\left\lvert\frac{Actual-Linear}{Actual}\right\rvert$
10	113095	113095	0
11	122890	122574.3333	0.002568693
12	131514	132053.6667	0.004103492
13	140534	141533	0.0071086
14	152477	151012.3333	0.00960582
15	160490	160491.6667	1.03849E-05
16	169971	169971	0
Labuan x (year)	**Actual Data (GDP)**	**Linear Interpolation f(x)**	**Error % (linear VS Actual)**
		Equation $y = \left(\frac{153158}{3}\right) + \left(\frac{21647}{6}\right)[x]$	$\left\lvert\frac{Actual-Linear}{Actual}\right\rvert$
10	3389	3389	0
11	3852	3738.833333	0.0294
12	4167	4088.666667	0.0188
13	4549	4438.5	0.0243
14	4789	4788.333333	0.0001
15	5119	5138.166667	0.0037
16	5488	5488	0

Lagrange Interpolation Model

Lagrange interpolation models were developed for Sarawak. Kuala Lumpur and Labuan GDP data. The calculation of the weighting function $L_{i,j}(x)$and Lagrange function $f(x_i)$ for each state were shown below

Sarawak,

$$S_3(x) = \sum_{i=0}^{3} L_{3,i}(x).f(x_i)$$
$$= -\frac{1}{48}(87131)(x-2012)(x-2014)(x-2016) + \frac{1}{16}(94013)(x-2010)(x-2014)(x-2016) - \frac{1}{16}(102359)(x-2010)(x-2012)(x-2016) + \frac{1}{48}(108778)(x-2010)(x-2012)(x-2014)$$

Kuala Lumpur,

$$KL_3(x) = \sum_{i=0}^{3} L_{3,i}(x).f(x_i)$$
$$= -\frac{1}{48}(113095)(x-2012)(x-2014)(x-2016) + \frac{1}{16}(131514)(x-2010)(x-2014)(x-2016) - \frac{1}{16}(152477)(x-2010)(x-2012)(x-2016) + \frac{1}{48}(169971)(x-2010)(x-2012)(x-2014)$$

Labuan,

$$L_3(x) = \sum_{i=0}^{3} L_{3,i}(x).f(x_i)$$
$$= -\frac{1}{48}(3389)(x-2012)(x-2014)(x-2016) + \frac{1}{16}(4167)(x-2010)(x-2014)(x-2016) - \frac{1}{16}(4789)(x-2010)(x-2012)(x-2016) + \frac{1}{48}(5488)(x-2010)(x-2012)(x-2014)$$

Cubic Spline

In this section, the formulation of interpolation model using Cubic spline for Sarawak, Kuala Lumpur and Labuan is shown.

Sarawak,

$$S_3(x) = \begin{cases} 87131 + 3181.57(x-2010) + 64.86(x-2010)^3, & x = [2010, 2012] \\ 94013 + 39959.87(x-2012) + 389(x-2012)^2 - 141.2(x-2012)^3, & x = [2012, 2014] \\ 102359 + 3820.97(x-2014) - 459(x-2014)^2 + 76.43(x-2014)^3, & x = [2014, 2016] \end{cases}$$

Kuala Lumpur,

$$KL_3(x) = \begin{cases} 113095 + 8754.67(x-2010) + 113.71(x-2010)^3, & x = [2010, 2012] \\ 131514 + 10119.17(x-2012) + 682(x-2012)^2 - 250.54(x-2012)^3, & x = [2012, 2014] \\ 152477 + 9841.67(x-2014) - 821(x-2014)^2 + 136.83(x-2014)^3, & x = [2014, 2016] \end{cases}$$

Labuan,

$$L_3(x) = \begin{cases} 3389 + 412.37(x-2010) - 5.84(x-2010)^3, & x = [2010, 2012] \\ 4167 + 342.27(x-2012) - 35(x-2012)^2 + 9.71(x-2012)^3, & x = [2012, 2014] \\ 4789 + 318.57(x-2014) + 23.2(x-2014)^2 - 3.87(x-2014)^3, & x = [2014, 2016] \end{cases}$$

The results of interpolation models for the states are shown in Table 3. The sum of square error (SSE) between actual GDP data and interpolated GDP data are presented. The lowest SSE showed that the respective interpolation model is best fitted the GDP data for the respective state.

Table 3: Comparative SSE of the states GDP using interpolation models

Model	Sum Square of Error
Linear Interpolation	Sarawak : 0.0089 Kuala Lumpur : 0.0047 Labuan : 0.0153
Lagrange Interpolation	Sarawak : 0.0104 Kuala Lumpur : 0.0103 Labuan : 0.0086
Cubic Spline Interpolation	Sarawak : 0.0104 Kuala Lumpur : 0.0085 Labuan : 0.0102

Based on the comparison between the three techniques, total percentage error for Linear Interpolation model is 0.0089 for Sarawak and 0.0047 for Kuala Lumpur while the total percentage error for Lagrange Interpolation model is 0.0086 for Labuan. Therefore, the most suitable interpolation model that can be used for modelling this GDP data is Linear Interpolation model for Sarawak and Labuan because the total percentage error for Linear Interpolation model is the lowest compared to Lagrange Interpolation and Cubic Spline model while Labuan the best model is Lagrange Interpolation. Therefore, the model from Lagrange Interpolation is recommended for the best fitted interpolation time series model for the selected GDP data for Labuan and Linear Interpolation is recommended for Sarawak and Kuala Lumpur.

Conclusion

This study proposed a method of studying the trend of Gross Domestic Product data for any particular state wherein Interpolation method is a very useful quantitative technique to estimate the missing value between a given ranges. In order to estimate the missing value, two interpolation methods have been tested which is the Lagrange interpolation method and Cubic Splines interpolation method. It's report that Cubic Splines interpolation method has a lower forecast error compares to Lagrange interpolation method. Thus, it can be concluded that, Cubic Splines is a better interpolation model, compared to Lagrange interpolation, to estimate the missing values of gross domestic product among states in Malaysia from 2010 to 2016.

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A STUDY ON LEARNING STYLES, GENDER AND ACADEMIC PERFORMANCE OF UNDERGRADUATE STUDENTS IN PRIVATE UNIVERSITY IN SELANGOR

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Abstract: *The objectives of this study are twofold: (a) to examine the influence of students' learning styles on their academic performance; and (b) to identifies the preferred learning styles of students between high/low achievers, gender, and different clusters. By using VARK standard questionnaire, 433 undergraduate students from four faculties at the Private University in Selangor are used as observations for this study. The study finds that all students were unimodal learners and Kinesthetic (K) type of learning style is the learner type with the most number of students. High achievers are preferred Kinesthetic (K) learning style while Read/Write (R) learning style are more practiced by students with low achievement. Male students are more preferred Kinesthetic (K) learning style, but female students had a preference for Visual (V) learning style. Social science students are more preferred an Aural (A) as compared to the pure science students which are more preferred Read/Write (R) learning style. Further, this study confirms that Visual (V) and Kinesthetic (K) learning style preferences are positively and significantly influence students' academic performance. This indicates that different subjects required different kinds of learning styles and instructions to optimally potentiate and benefit the students. This result is consistent with the "Meshing Hypothesis" which states that the learning outcomes could be highly achieved if learning was matched with predominant learning style of the learner. This study gives a better representation of the current situation in the learning preferences among undergraduate students in Malaysia.*

Type of Paper: *Empirical Paper*
Keywords: *Learning Style, VARK Instrument, Academic Performance, Private University.*

Introduction

Each student learns in different ways and this affects their performance. Students and teachers must update themselves and find appropriate ways for learning (Samarakoon et al., 2013). In such situations learning styles can help them improve their learning ability (Nuzhat et al., 2013). Identifying learning styles of students is important and is sometimes considered to be a teacher's responsibility (Shenoy & Shenoy, 2013). Lecturers must adopt themselves with learning styles of students. In order to achieve maximize students' performance (Kharb et al., 2013).

In Malaysia, students are not spared from the advancement of technology, therefore their learning preferences had also changed with time along due to this advancement. Many higher institutions already have adopted information technology as one of their platforms for student learning and assessments (Ao, 2014; Chun, 2014). With a variety of learning aids available these days, there is need to identify the most efficient way to match and deliver the teaching and learning instructions to help the students to become more capable learners.

Due to advancement of technology that traditional higher education is not structured to provide this balance, severe mismatches commonly occur between the teaching styles of instructors and the learning styles of their students (Felder et al., 2012). Bertolami (2001) has proposed that one reason for students' frustration towards the curriculum is inconsistency between learning content and instructor's teaching methods. These mismatches may lead to negative effects on the academic performance quality of the students and on their attitudes toward their education (Prasad et al., 2017). On the other hand, the quality of students' thoughts is critical to learning and could potentially determine their academic achievement. If the students' learning style is matched with the teaching styles of instructors, then why some students obtained good results in their study but others are not?

Fleming and Mills (1992) designed a questionnaire called as the Visual (V), Aural (A), Read/Write (R), and Kinesthetic (K) (VARK) questionnaire to determine a preferred method of learning. The VARK instrument defined the learning preference based on the sensory modality in which a student prefers to take in new information (Fleming, 2015). The VARK questionnaire is a simple and easy to administer tool that encourages students to describe their learning behavior (Cavanagh & Coffin, 1994; Sandmire et al., 2000). Therefore, this study decided to focus on the identification of students' their learning styles using VARK questionnaire.

Research Objectives

This research explores the following objectives:

a) To identify the preferred learning style of high/low achiever students, different gender, and clusters.
b) To examine the relationship between students' learning styles and their academic performance.

Literature Review

Learning style can be defined as the manner in which and the conditions under which learners most efficiently and effectively perceive, process, store, and recall what they are attempting to learn (James & Gardner, 1995). Further, Reid (1995) defined learning style as an individual's natural, habitual, and preferred way of absorbing, processing, and retaining new information and skills. While Felder and Spurlin (2005) defined learning styles as the diverse ways students take in and process data. Another popular definition for learning styles refers to individuals' characteristics and preferred ways of gathering, organizing, and thinking about information (Fleming, 2005).

The relationship between learning styles and academic performance in educational sector has been extensively studied but remains inconclusive. Some studies point out that there is no effect of learning styles on academic performance (Alghasham, 2012; Tariq et al., 2016). On the other hand, other studies have demonstrated differences between the academic performances of students with different learning styles. Al-Saud (2013) demonstrated that there is a relationship between the learning styles and academic performances of the undergraduate students. Similarly, Hur and Kim (2017) showed that Korean medical students with a reflective learning style preference performed significantly better in participation, problem solving, quiz, and team work. Furthermore, there is scientific evidence that students with intuitive learning preferences perform significantly better than students with sensing preferences in basic science, general pathology, and clinical pathology courses (Demirkan, 2016). Regards to VARK learning style preference, Dobson (2010) found that a solid Kinesthetic (K) learning style had a significant positive relationship with performance in physiology courses among a sample of 64 students.

Studies analyzing gender differences in learning styles of undergraduate students have yielded contradictory results. On the one hand, there is empirical evidence that gender has a significant influence on learning styles (Almigbal, 2015; Raja & Priyadharsini, 2018). For example, Hosford and Siders (2010) found that a significantly higher number of female medical students preferred the sensing mode of learning as compared to males; whereas a significant number of male medical students preferred the visual mode. In addition, there seems to be research evidence that females prefer to learn by trying things (i.e., active learning style) rather than by thinking things through (i.e., reflective learning style) (Tariq et al., 2016). Other related research showed that male students preferred to use the kinesthetic learning style more than females, while female students preferred the aural learning style (Sarabi-Asiabar et al., 2015).

There is a lot of evidence that students from different fields of study often demonstrate different preferences in their learning styles (Derkach & Starova, 2017; Yaroshenko & Derkach, 2012). The nature of the emergence of different learning styles in different fields of study is not finally evident yet. There are a number of studies that have examined the relationship between learning style and academic performance in various fields of studies. Previous research on students learning styles has shown that preferences of these learning styles also differ across different streams and courses from engineering to sciences to humanities, architecture, pharmacy and health sciences (Bakon et al., 2016; Demirkan, 2016). The body of knowledge, end objectives of each of these courses, the teaching strategies, and environment all play a part in shaping and reinforcing the learning strategy preferences of different groups of students (Samarakoon et al., 2013).

Based on these discussion, understanding the type of preferred learning styles enables teachers of different specialties to design course materials so that they can be equally well-learned by all students. Recognising their own methods of study helps students to master the disciplines by developing a strategy of activity in accordance with their preferences, providing a basis for mastering new patterns of behavior (Wilson & Narayan, 2014).

Research Methodology

Matching students' learning styles with a learning framework has resulted in improved academic performance scores, whereas a mismatch between learning styles and curriculum has led to low levels of academic achievement (Aripin et al., 2008). To become effective teachers, educators should understand a learner's characteristics and their learning style (Choudhary et al., 2011). However, there are still a number of important issues that have yet to be established, including the relationship between learning styles and academic achievement (Dobson, 2010). The literature concerning the relationship between learning style preferences and academic achievement contains conflicting results.

Based on the views presented in the literature reviews section, Figure 1 shows the research framework for this study. This study conjectures that the students' learning style preference can be assessed from the point of its impact on the students' academic performance. Hence, this study proposes that there is an influence between learning styles (Visual, Aural, Read/Write, and Kinesthetic) towards the students' academic performance (dependent variable).

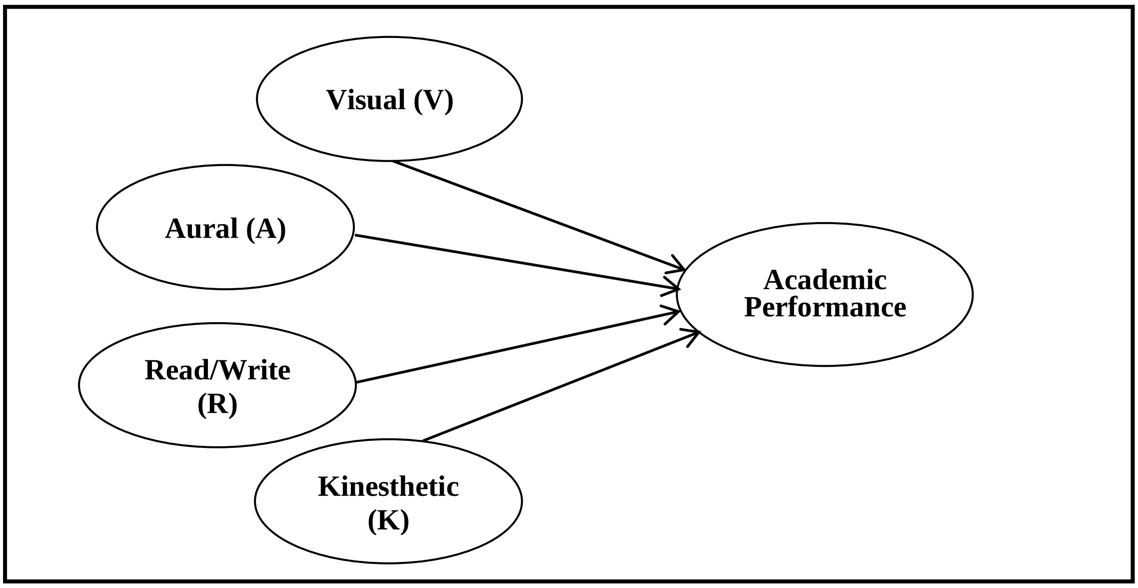

Figure 1: Conceptual Framework

Data Collection Procedure

The sampling frame of this study will be several faculties at the Private University in Selangor. Specifically, this research was carried out in four faculties namely as Faculty of Communication, Visual Arts and Computing, Faculty of Engineering and Life Sciences, Faculty of Educations and Social Sciences, and Faculty of Business and Accountancy. This research's population is the undergraduate students in the respective faculties. As at 31st December 2018, there are a total of 8,437 undergraduate students in these four faculties. This study follows decision model table proposed by Krejcie and Morgan (1970) to determine the necessary sample size because their sample decision model is claimed to be able to provide a good sample size decision. Since the population of undergraduate students in these four faculties are 8,437 students, this research needs at least 368 respondents to initiate the indicatives of sample for generalisability of this research. The cluster sampling method is used in deciding the number of sample from each faculty.

The dependent variable is performance scores (grades) of the students which is measure using Cumulative Grade Point Average (CGPA). On the other hand, the independent variable is learning style that is measure using VARK instrument. The latest English version of the VARK questionnaire was used in this study which is VARK 7.1 (Fleming, 2007). The preference of Visual (V) includes the depiction of information in charts, graphs, flow charts, and all the symbolic arrows, circles, and hierarchies. Aural/Auditory (A) describes a preference for information that is "heard", while Read/Write (R) This preference is for information displayed as words. Finally, Kinesthetic (K) refers to the "perceptual preference related to the use of experience and practice (simulated or real)." This VARK questionnaire was selected because it is reliable, concise, and easy to complete. It has also been used extensively among undergraduate students in many studies and countries. It consists of 16 questions with 4 options each. Students were allowed to choose multiple answers per item to adequately describe their preferred response(s) to the situation. Using factor analysis techniques, the reliability and validity of the VARK questionnaire was confirmed to be satisfactory (Leite et al., 2010).

Results And Discussions

Table 1 reports that the respondents in this study is dominated by female (66.7%) compared to male (33.3%). Respondents also were categorised into two different age groups distribution.

Majority of the respondents involved in this study were in the group of age below than 25 years old. Besides, there are only 33 respondents (7.6%) were at the age in between 25 and 34 years old. Table 1 also shows that the respondents participate in this study came from various faculties. Majority of respondents are undergraduate students from the Faculty of Business and Accountancy (67.2%), followed by Faculty of Engineering and Life Sciences (14.3%). There are around 10.6% participation from the Faculty of Communication, Visual Arts and Computing. Finally, the least participation is from Faculty of Educations and Social Sciences (7.9%).

Table 1: Respondent's Profile

Profile	Characteristics	Frequency	Percentage (%)
Gender	Male	144	33.3
	Female	289	66.7
Age Group	Under 25 years	400	92.4
	25 – 34 years	33	7.6
Faculty	Faculty of Business & Accountancy	291	67.2
	Faculty of Communication, Visual Arts & Computing	46	10.6
	Faculty of Engineering & Life Sciences	62	14.3
	Faculty of Educations & Social Science	34	7.9

Learning Styles of Students

Using the results of the VARK questionnaire, the distribution of the students according to the four learning styles was determined. The distribution of each group according to the learning styles is depicted in Figure 2. The figure shows that all undergraduate students at the public university in Selangor preferred a single sensory modality of learning. Among the unimodal learners, a majority, nearly 131 students (30.3%) preferred Kinesthetic (K) type learners followed by 28.4% of Visual (V) learners (n=123). Further, this study reveals that there are 121 undergraduate students (27.9%) preferred Aural (A) learning style. Finally, the least preferred learning style is Read/Write (R) with only 13.4% (n=58) of learners.

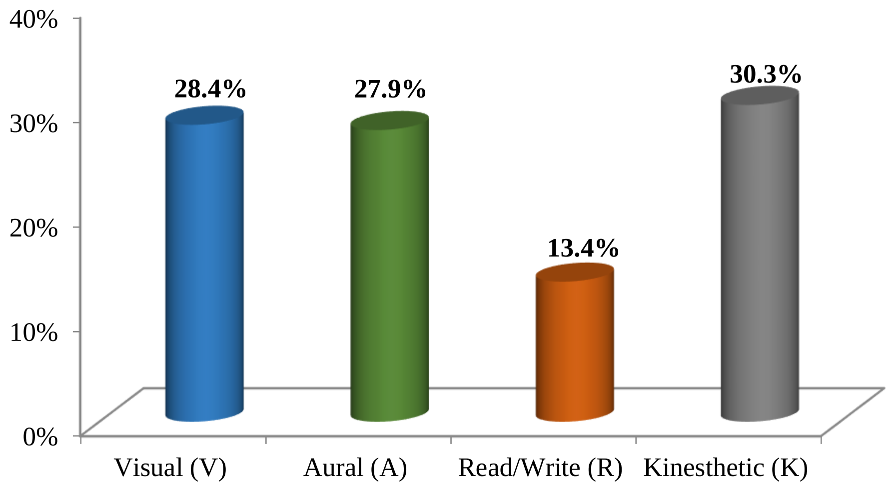

Figure 2: Distribution of Respondents according to Learning Style

Learning Styles of High/Low Achiever, Gender, and Clusters

This section reports and discusses the findings of the study which relate to the first research objective, which is to identify the preferred learning style of high/low achiever students, different gender, and clusters. Table 2 reveals a crosstabulation of learning style preferred by undergraduate students according to their achievement. The results indicate that majority of the respondents of high achievers are preferred Kinesthetic (K) learning style (68.7%), followed by Visual (V) learning style (66.7%). This result is consistent with a finding by Liew et al. (2015) whereby they found that among the middle and high achievers in summative examinations, a majority had Kinesthetic (K) learning style (80.5%).

Table 2: Crosstabulation of Preferred Learning Style according to High and Low Achiever Students

Learning Style	Achievers			Total	Pearson Chi-Square
	Low Achiever	Average Achiever	High Achiever		
	n (%)	n (%)	n (%)		
Visual (V)	14 (11.4%)	27 (22.0%)	82 (66.7%)	123	3.115^{ns}
Aural (A)	14 (11.6%)	31 (25.6%)	76 (62.8%)	121	
Read/Write (R)	**10 (17.2%)**	11 (19.0%)	37 (63.8%)	58	
Kinesthetic (K)	16 (12.2%)	25 (19.1%)	**90 (68.7%)**	131	
Total	**54**	**94**	**285**	**433**	

Note: Pearson Chi-square is significant at *** 1% level, ** 5% level and * 10% level, respectively, using two-tailed tests.

On the other hand, respondents who are preferred Read/Write (R) learning style are tend to get low achievement (17.2%). When comparing the VARK subscale scores of high and low achiever undergraduate students at the private university, the Pearson Chi-Square test result shows that there is no significant difference in the preferred learning style between high achiever students and low achiever students.

Figure 3 depicts the pattern of gender differences among the different modes of learning style. The results show that the female students had a higher preference for Visual (V) learning style (70.7%) while the male students preferred Kinesthetic (K) learning style (35.9%). This result is in tandem with evidence by Sarabi-Asiabar et al. (2015) whereby they found that male students preferred to use the Kinesthetic (K) learning style more than females, while female students preferred the Aural (A) learning style. However, the Pearson Chi-Square test result in the Figure 3 shows that there is no significant difference in the preferred learning style between male and female students. This result is similar to several studies that found there is no significant gender difference in learning approach (e.g., Heikkilä & Lonka, 2006; May et al., 2012; Richardson, 2013).

Table 3: Crosstabulation of Preferred Learning Style according to Gender

Learning Style	Gender		Total	Pearson Chi-Square
	Male	Female		
	n (%)	n (%)		
Visual (V)	36 (29.3%)	**87 (70.7%)**	123	8.353^{ns}
Aural (A)	43 (35.5%)	78 (64.5%)	121	
Read/Write (R)	18 (31.0%)	40 (69.0%)	58	
Kinesthetic (K)	**47 (35.9%)**	84 (64.1%)	131	
Total	**144**	**289**	**433**	

Note: Pearson Chi-square is significant at *** 1% level, ** 5% level and * 10% level, respectively, using two-tailed tests.

In order to assess the preferred learning styles of respondents based on cluster, the undergraduate students are grouped into two clusters, namely as pure science and social science clusters. Table 4 shows that majority of the students in social science cluster preferred an Aural (A) learning style (92.6%). Contrary, students in pure science cluster are more preferred Read/Write (R) learning style. Further, the result of Pearson Chi-Square test in Table 4 shows that there is a significant difference in the preferred learning style between pure science and social science clusters students. This result suggests that preferences of learning styles among students are differ across different streams and courses (Bakon et al., 2016; Demirkan, 2016). Perhaps, the different in learning style preference could be due to individually unique ways of educational activity depending on its own cluster.

Table 4: Crosstabulation of Preferred Learning Style according to Clusters

Learning Style	Clusters		Total	Pearson Chi-Square
	Social Science	Pure Science		
	n (%)	n (%)		
Visual (V)	106 (86.2%)	17 (13.8%)	123	$\mathbf{13.112^{***}}$
Aural (A)	**112 (92.6%)**	9 (7.4%)	121	
Read/Write (R)	42 (72.4%)	**16 (27.6%)**	58	
Kinesthetic (K)	111 (84.7%)	20 (15.3%)	131	
Total	**371**	**62**	**433**	

Note: Pearson Chi-square is significant at *** 1% level, ** 5% level and * 10% level, respectively, using two-tailed tests.

The Relationship between Learning Styles and Students' Academic Performance

This section reports and discusses the findings of the study which relate to the second research objectives, which is to determine the relationship between students' learning styles and their academic performance. The learning styles under consideration of this study are of Visual (V), Aural (A), Read/Write (R), and Kinesthetic (K). Table 5 shows the summary results of the standard multiple regressions analysis on the relationship between students' learning styles and their academic performance in the private university in Selangor.

Table 5: Standard Multiple Regressions on the Relationship between Learning Style and Students' Academic Performance

	Hypotheses	Std. Beta Coefficient	*t*-statistic	*p* value
Intercept			18.622	.000***
Visual (V)	H_{4A}	**0.206**	**2.341**	**.009*** **
Aural (A)	H_{4B}	-0.072	-1.297	.195
Read/Write (R)	H_{4C}	-0.040	-0.716	.474
Kinesthetic (K)	H_{4D}	**0.307**	**4.126**	**.002*** **
Model Summary:				
R^2 value				36.1%
Anova Results:				
F-value				18.839
Sig. value				.000***
Obs.				433

Note: Association is significant at *** 1% level, ** 5% level, respectively, using two-tailed tests.

Table 5 reveals that the regression model ($F(4, 433) = 18.839$, p value $< .05$) is significant at the confidence level of 99% level, and the overall fit of the model is moderate with R^2 value of 36.1% of the variation in the students' academic performance. Approximately, 36.1% of the total variability in the academic performance of students is accounted for by the predictor variables collectively in the model. Based on the results shown in the Table 5 above, only two learning style preference, i.e. Visual (V) and Kinesthetic (K) are positively and significantly influence students' academic performance in the private university in Selangor and both are significant at 1% level. The finding of this study is consistent with a result found by Dobson (2010). He suggested that a solid Kinesthetic (K) learning style had a significant positive relationship with performance in physiology courses among a sample of 64 students. Further, the results show that Aural (A) and Read/Write (R) did not significantly influence students' academic performance.

In predicting the dominant learning style preference in influencing the academic performance of undergraduate students at the private university in Selangor, this study refers to the Beta Value under Standardised Coefficient. Table 5 reveals that Kinesthetic (K) learning style is the most dominant factor as it has the highest influence towards students' academic performance ($\beta = 0.307$) and it is followed by Visual (V) learning style ($\beta = 0.206$). Meanwhile, Aural (A) (β = -0.072) and Read/Write (R) (β = -0.040) learning styles has the least influence on the students' academic performance as both learning style did not significant.

Conclusion

The finding of this study suggests that all undergraduate students were unimodal learners and none of them was a bimodal learner. The learner type with the most number of students was the Kinesthetic (K) type of learning style. Majority of the respondents of high achievers are preferred Kinesthetic (K) learning style while Read/Write (R) learning style are more practiced by students with low achievement. Further, male students are more preferred Kinesthetic (K) learning style, but female students had a higher preference for Visual (V) learning style.

Besides, students in the social science cluster are more preferred an Aural (A) learning style as compared to the students in pure science cluster which are more preferred Read/Write (R) learning style. These results indicate that there is no fixed pattern in the preferred learning styles of students in the private university in Selangor.

This study also reveals that Visual (V) and Kinesthetic (K) learning style preferences are positively and significantly influence students' academic performance in the private university in Selangor. Overall, the findings of this study could be related to the "Meshing Hypothesis." The "Meshing Hypothesis" states that the learning outcomes could be highly achieved if learning was matched with predominant learning style of the learner (Sankey et al., 2012). However, Pashler et al. (2008) argued that the Meshing Theory was not necessarily correct because the undergraduate students were not always exposed to multiple types of learning styles for the same subject. Different subjects required different kinds of learning styles and instructions to optimally potentiate and benefit the students (Pashler et al., 2008).

Findings of this study implicate that in practice, lecturers in the field cannot use a one size-fit-all curriculum for social science and pure science students from different backgrounds. Mixed teaching and learning activities will enhance the learning experience of students from a diverse background, and these activities have to be tailor-made for individual courses and institutions. Given that the majority of students were unimodal learners, it is also indicated that the lecturers may make efforts in the future to encourage a wider variety of learning methods. Multi-sensory learning may help improve information recall.

Limitations & Recommendation of Future Research

Some limitations of this study should be acknowledged and directions for future studies should also be suggested. First, this study is limited to a single university, with a limited, yet diverse student's population. It is unlikely for the results of the statistical analysis to be attributed to chance, but this does not necessarily imply that they are valid outside this university or that they can be generalized to other settings. Hence, to get a better picture for future studies, it can include more universities in the research.

Another limitation of this study, and any study using the VARK questionnaire, is that it does not account for confounding factors such as socioeconomic status, race, culture, etc. However, the relatively homogenous population surveyed in this study is likely to be less affected by these factors. A strong point of the VARK questionnaire is that its questions and options are drawn from real-life situations and respondents identify with the results that they receive–they affirm the face validity of the tool. However, although self-perceptions are not always reliable, these data support the validity of the VARK questionnaire.

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FINANCIAL PERFORMANCE EVALUATION OF GENERAL INSURANCE FIRMS IN MALAYSIA VIA CAPITAL ADEQUACY RATIO (CAR) AND GREY RELATIONAL ANALYSIS (GRA) MEASUREMENTS

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Abstract: *Increasing liberalization in the insurance industry has been a challenge for insurance regulatory authorities to monitor the financial strength of insurance companies in Malaysia. The incompetence faced by the insurance industry is a matter of special concern and the identification of troubled insurer has become the main objective of regulatory research. The use of risk-based capital (RBC) has been made compulsory by Bank Negara Malaysia (BNM) on the insurance industry with the objective to provide as an early warning system on the deterioration in capital adequacy level to ensure the continuous solvency and smooth running of the insurer's business operations. BNM has set a method for measuring RBC known as the capital adequacy ratio (CAR) that must be adopted by each insurance company. CAR measures the adequacy of the capital available in the insurance and shareholders' funds of the insurer to support the total capital required. Grey relational analysis (GRA) theory is useful to provide solution in a system where the information is incomplete and data is not normally distributed. GRA is suitable for evaluating company's financial performance. This study evaluates the financial performance and capital adequacy ratio of the general insurance firms in Malaysia from the period 2011-2015. Results of this study show that a firm is categorized as solvent if the solvency margin results using the CAR method indicate that the financial position of the company is in stable state. Firm that is categorized as solvent is also presenting a financially sound performance.*

Keywords: *capital adequacy ratio, grey relational analysis, financial ratios, performance, risk-based capital, solvency*

Introduction

In Malaysia, the insurance sector is under the purview of Bank Negara Malaysia (BNM). BNM has adopted a risk-based supervision approach on insurers to maintain the stability and financial soundness of the insurance industry, hence promote insurers' financial strength and safeguard the interests of policyholders. The nature and level of supervisory activity are conducted by profiling risk and assessment of risk management. By focusing on risks, BNM can detect potential risks that may jeopardize the stability of the financial system. The solvency requirement enforced by the regulatory body protects the availability of the promised insurance protection to an acceptable degree of certainty. Solvency of an insurer is closely related to the condition of its balance sheet. Capital is the excess of assets over obligations, representing the equity of the company, or shareholders' stake. Under the Generally Accepted Accounting Principles (GAAP) capital is known as equity while under Statutory Accounting Principles (SAP) capital is called surplus.

Bodie et al. (2014) define risk as the potential for divergence between the actual outcome and what is expected. In insurance, risk is the uncertainty regarding loss. Management is always faced with the dilemma on what premiums to charge, or how much to reserve, or what investment return will be made. Both the variability and the uncertainty are important in understanding risk (Hooker et al. 1996). The risk-based capital (RBC) development process began in 2002 in Malaysia. The RBC framework was developed and concluded with the issuance of two draft papers in 2004 and 2005. The RBC framework was finally released by BNM in April 2007 (Bank Negara Malaysia 2013). Since 2009, BNM has directed the RBC system to be applied in the insurance industry. The role of the RBC system is to test the solvency of the insurance company. Solvency margin is a measure of the financial position of an insurance company. The Capital Adequacy Ratio (CAR) measures the adequacy of the capital available of the insurer in two respective funds, insurance and shareholders, in supporting the total capital required. BNM has set a supervisory target capital adequacy rate of 130% for an insurance company to be considered solvent in terms of financial position else BNM will intervene at earliest stages of financial difficulties faced by the insurer.

Various performance measurement methods have been used in order to correctly evaluate companies' financial healthiness to ensure the sustainability and continued growth of the company. The most commonly used method is financial ratio analysis which focuses on financial statements and comprises four main categories: liquidity, activity, debt structure and profitability (Abhang and Hameedullah 2012). Studies that relate factors to performance commonly employ the traditional statistical methods. Such studies demand huge amount of data with assumptions of normality. In practice this is not the norm. In cases where data is limited and problematic, with data not fitting the assumptions of normal, grey relational analysis developed by Deng (1982), would be the method of choice. The aim of this study is to investigate the financial performances of non-life insurance companies in Malaysia via the grey relational analysis method and determine its solvency stability through the capital adequacy ratio measurement.

This paper unfolds as follows. Section II reviews the related literature. Section III details the data and methods. Section IV presents the performance measurement results and, finally, Section V sets forth conclusions.

Related Literature

The insurance industry in Malaysia can be classified into life insurance, general insurance and takaful. There are two categories of general insurance products, more products in the commercial lines offered to businesses which include liability insurance, marine, aviation, engineering, burglary, and fidelity guarantee insurance. The personal category designed specifically for the public include medical and health insurance, personal accident, travel, and motor insurance. By international standard, the insurance industry in Malaysia is relatively small, the general insurance industry registering a growth of 1.5% in 2018 is growing at a slow rate (PIAM 2019).

The solvency regulation composes of restrictions on investments and capital also requirements related to reserves and other financial matters. Among these, capital requirement receives significant attention as solvency concerns the minimum capital requirement. The Risk Based Capital is a method developed by the National Association of Insurance Commissioners (NAIC) in 1992 to measure the minimum amount of capital that an insurance firm needs to support its overall business operations. The RBC requirements help regulators to identify weak insurers and encourage prompt action through intervention when reported capital falls below specified risk-based capital levels. The risk-based capital model has proven to be the most popular method in identifying insolvency cases by using the risk-based capital ratio (Cummins et al., 1995; Cheng & Weiss, 2012).

In Malaysia, the Risk-Based Capital framework for conventional insurer was adopted in 2009. Traditionally, the capital adequacy requirement, formerly known as the margin of solvency, came into effect in 2006. Margin of solvency is a fixed minimum amount of capital or better known as "one-size-fits-all" approach. Initially the RBC framework adopted by BNM concentrated on financial risks such as credit, market, underwriting and concentration risk. In 2011, BNM introduced the modified RBC framework with broad risks to be managed, the revised RBC focuses on four risk classifications; credit risks (assets default and failure of counter-party), market risks (reduction in assets market value and nonparallel in asset-liability), liability risk (insurance liabilities underestimation and adverse claims experience) and operational risk (failed system and human capital process) (BNM 2013).

Studies on insurer insolvency in Malaysia are sparse. Jaaman et al. (2007) and Lazam et al. (2012) discussed the elements of Total Capital Available (TCA), TCA is the excess of assets and liabilities and assets represent the size of a firm, they concluded that measurement of solvency target large insurance firms. Chiet et al. (2009) created an early warning system for solvency prediction by applying Artificial Neural Network and found that the model could be used to predict insolvency. Yakob et al. (2012) measured the soundness of conventional and Takaful operators using Risk-Based Capital, margin of solvency and claim paying ability of Rating Agency Malaysia and concluded that insolvency was not a major problem for life insurers. According to Ismail (2013), solvency margin has a significant negative effect on the performance of general insurer and Takaful operators. Aida et al. (2016) analyzed the Malaysian RBC framework against seven objectives set by Cummins, Harrington, and Niehaus (1993) and four additional objectives developed by Holzmüller (2009). They concluded that Malaysian RBC fully fulfill four objectives and partially fulfill three objectives. Findings of all these studies show that Risk-Based Capital framework is effective at preventing Malaysian insurers from becoming insolvent.

Traditional statistical methods applied to measure firms' performance often require a large number of data with normal distribution assumptions (Kung et al., 2006; Yan & Kung, 2011). In reality, data is scarce and hard to acquire and typically do not fulfill the assumptions of normality. According to Kung and Cheng (2004), Wen (2004) and Kung et al. (2006) in cases where limited amount of data and that data are not normally distributed, the grey system theory initiated by Deng (1982) can be a preferred alternative. In the grey system theory, the "grey" level of knowledge represents the information that is partially known and partially unknown (Liu & Lin, 2006). This information may be poor, incomplete, or uncertain. GRA is useful for determining the significant factors in a system with limited amount of data, GRA is thus suitable for the evaluation of firm's financial performance (Kung & Wen, 2007).

Studies where the performance of insurance firms was measured using financial ratios and utilizing GRA method include by Kung et al. (2006), Yan and Kung (2011), where both studies assess the performance of Taiwanese insurers. Kaya (2016) studied on financial performance of six non-life insurers in Turkey using four types of financial ratios category and employing GRA method while Özdağoğlu et al. (2017) evaluate performance of manufacturing firms listed on the Istanbul exchange. All these studies indicate that GRA can be a powerful method to measure the performance of firms based on the financial statements data.

Data and Methods

Data

Generally, the coverage period for general insurance policies and plans is for one year with premiums paid on a one-time basis. There are twenty-one licensed general insurance companies in Malaysia in 2015. For this study, data of nine general insurance companies that have not been taken over or merged that are operational through the years 2011 to 2015 are collected. General insurance companies' data is collected from the Annual Financial Report. Table 1 presents the general insurers and the code given to each insurer for the purpose of this study.

Table 1. List of General Insurance Companies

Firm Name	Code
AIG Malaysia Insurance Bhd	Firm1
Allianz General Insurance Bhd	Firm2
Liberty Insurance Bhd	Firm3
Lonpac Insurance Bhd	Firm4
QBE Insurance (Malaysia) Bhd	Firm5
Pacific Insurance Bhd	Firm6
Progressive Insurance Bhd	Firm7
Tokio Marine Insurans Bhd	Firm8
Tune Insurance Malaysia Bhd	Firm9

The financial performance of general insurance companies is reviewed based on four financial ratio groups which are the capital adequacy ratio, liquidity ratio, operating ratio, and profitability ratio. Table 2 lists the financial ratio analyzed in this study.

Table 2. Financial Ratios

Ratios		Code	Target
Capital adequacy ratios	Gross Written Premiums/Equity Capital	Car1	Smaller the better
	Net Written Premiums/Equity Capital	Car2	Smaller the better
	Equity Capital/Total Assets	Car3	Larger the better
Liquidity ratios	Current Ratio	Lr1	Larger the better
	Liquidity Ratio	Lr2	Larger the better
	Liquid Assets/Total Assets	Lr3	Larger the better
Operating Ratios	Net Written Premiums/Gross Written Premiums	Or1	Larger the better
Profitability Ratios	Claims Incurred/Net Written Premiums	Pr1	Smaller the better
	Return on Assets	Pr2	Larger the better
	Return on Equity	Pr3	Larger the better

The capital adequacy ratios indicate the financial strength of the insurance companies to fulfill their obligations to policyholders which is a very important element to insurance companies. The amount of equity capital is an important indicator to measure the financial strength of an insurance firm. Liquidity ratios show the relationship of a firm's cash and other current assets to its current liabilities (Brigham & Houston, 2001). Operating ratios measure the efficiency of firm's management at keeping costs low to generate larger revenue. Profitability ratios evaluate the ability of a firm to generate income. Two most common measures of profitability are the ROA and ROE, and an insurer naturally prefers a high ROA and a high ROE.

Capital Adequacy Ratio (CAR)

The Risk-Based Capital (RBC) Framework set forth by Bank Negara Malaysia (2013) aims to ensure that each insurer maintains a capital adequacy level that is commensurate with its risk profile at all times. RBC system in Malaysia employs the capital adequacy ratio (CAR) to measure the adequacy of the capital available in the insurance and shareholders' funds of the insurer to support the total capital required. The CAR is expressed as:

$$\text{CAR}= \frac{\text{Total Capital Available (TCA)}}{\text{Total Capital Required (TCR)}} \text{ x } 100\% \tag{1}$$

The CAR is used to assess the financial strength of the insurer with BNM imposing a minimum supervisory target capital level of 130%. The risk-based capital adequacy ratio consists of Total Capital Available (TCA) and Total Capital Required (TCR). The TCA consists of total equity while the TCR is the sum of credit risk capital charges, market risk capital charges, insurance liability risk capital charges and operational risk capital charges. This total capital required is the aggregate of the total capital charges for each insurance fund and the aggregate capital charges for all assets in the shareholders' fund. Requirements pertinent to each insurer to determine the adequacy of the capital available in its insurance and shareholders' funds to support the total capital required. TCR serves as a key indicator of the insurer's financial resilience and is used as input to determine supervisory interventions by BNM.

There are four capital charges under TCR as shown below.

$$\text{TCR}=\sum \begin{bmatrix} \text{Credit risk capital charges} \\ + \quad \text{Market risk capital charges} \\ + \quad \text{Liablity risk capital charges} \\ + \text{ Operational risk capital charges} \end{bmatrix} \tag{2}$$

Credit Risk Capital Charges (CRCC) focuses to mitigate risk of losses resulting from assets default and related loss of income, and the inability or unwillingness of a counter-party to fully meet its contractual financial obligations. Market Risk Capital Charges (MRCC) focuses to mitigate risks of financial losses arising from the reduction of market value of assets and the non-parallel movement between the value of liabilities and the value of assets backing the liabilities due to interest rate movement. Liabilities Risk Capital Charges (LRCC) focuses to address risks of under-estimation of the insurance liabilities and adverse claims experience developing over and above the amount reserves already provided related to claims or unexpired risks. Currently the actuarial computation is set at the 75% level of confidence (BNM 2013). The Operational Risk Capital Charges (ORCC) focuses to mitigate the risk of losses arising from inadequate or failed internal processes, people and systems (Aida et al. 2016).

Grey Relational Analysis

The grey relational analysis has been developed to solve multi-criteria decision making problems in which decision maker needs to consider interrelationships among multiple variables and factors. The major role of GRA is to evaluate the performance of all alternatives by comparatively ordering them with respect to the factors or criteria (Kuo et al., 2008; Wang et al., 2016) . GRA is a useful method for capturing the correlations between the reference factor and other factors which can be compared within a system (Wu et al., 2010). In this study, grey relational analysis (GRA) method is employed to analyze the financial performance of general insurance firms. The application steps of the GRA method is shown in Figure 1.

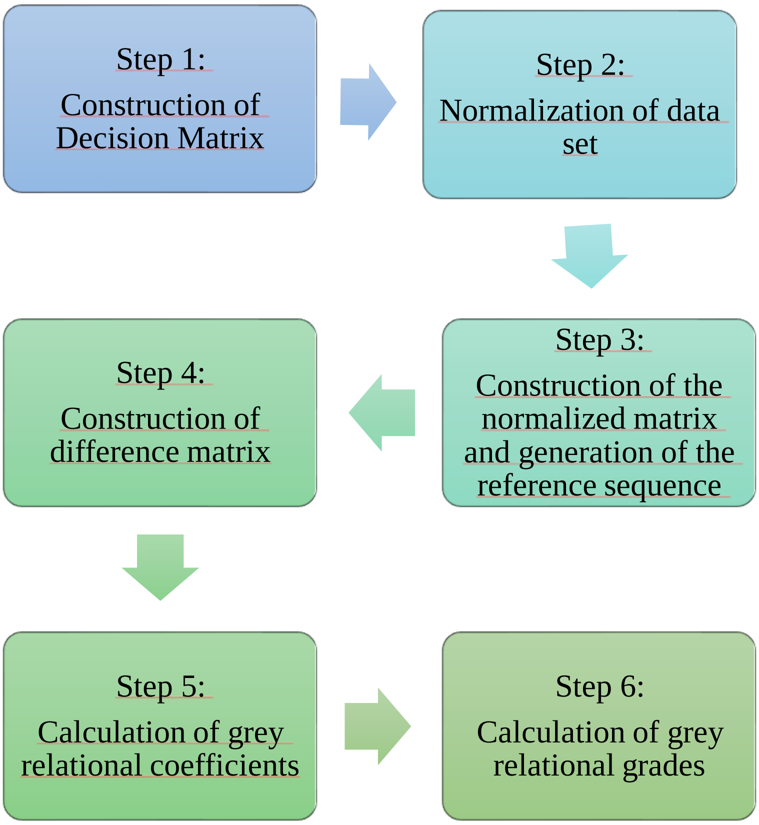

Figure 1. Application Steps of Grey Relational Analysis

As shown in Figure 1 the first step is to form a matrix of data sequence characterized by the number of criteria. In this study there are nine general insurance firms (Firm1 to Firm9) and 10 financial ratios (Car1 to Pr3). To obtain a comparable scales, according to Feng and Wang (2000) the data set needs to be normalized (step 2 & step 3). Normalization should be performed for constructing comparable series. The data can be normalized by one of the three regimes: larger the better, smaller the better, and nominal the best. In step 4, the absolute differences between the normalized decision matrix values and the standard series values is constructed to obtain the concluding matrix. Calculation of grey relational coefficients (step 5) to obtain the value of coefficient of coherent relationships is given by the formula below.

$$\gamma_{01}(j) = \frac{min_i^n min_j^m \Delta_{0i}(j) + \zeta x maks_i^n maks_j^m \Delta_{0i}(j)}{\Delta_{0i}(j) + \zeta x maks_i^n maks_j^m \Delta_{0i}(j)} \quad (3)$$

where $\gamma_{01}(j)$ is the grey relational coefficient of the jth financial ratio and ζ is the distinguishing coefficient. This coefficient is a value between 0 and 1. ζ usually ranges between 0.1 and 0.5 and reduces the effect of extremely large $maks_i^n maks_j^m \Delta_{0i}(j)$ in cases where data variation is large (Chang and Lin 1999). Finally, in step 6 the grey relational grade is calculated as follows.

$$\Gamma_{0i} = \Sigma_{j=1}^{m}[w(j) \times \gamma_{01}(j)], \qquad \Sigma_{j=1}^{m} w(j) = 1, \quad (4)$$

where Γ_{0i} is the grey relational grade and *w(j)* is the weight of the *j*th financial ratio. The performance of the general insurance firms can be ranked according to the grey relational grades, the higher the grade indicates better financial performance.

Performance Measurement Results

Capital Adequacy Ratio (CAR)

Four risk components under total risk required of the Risk Based Capital framework imposed by Bank Negara Malaysia are credit risk, market risk, liability risk and operational risk as shown in Figure 2.

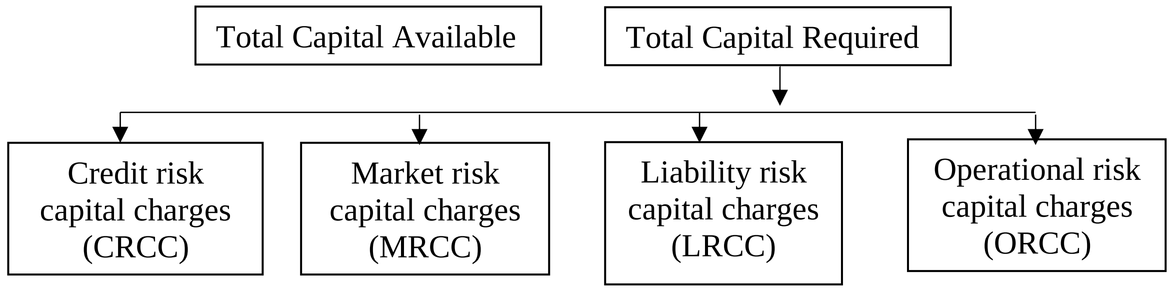

Figure 2. Malaysian Risk Based Capital

Credit risk relates to losses resulting from asset defaults and loss of income due to the inability of the other party to fulfill its contractual financial obligations (BNM 2013). The market risk is the that insurance firms will need to deal in its investment. In CAR measurement, market risk capital charges aim to mitigate risks of financial losses that arise from reduction of market value of assets, mismatch of interest rate, and exposure in certain asset classes. Liability risks refer to the risk of bodily injury or third-party property damage. The general insurance risk capital charges aim to address risks of adverse claims experience and under-estimation of insurance liabilities over and above the amount of reserves already provided for at the 75% level of confidence (BNM 2013). Finally, the operational risk is the risk of losses due to failure or weakness of the internal, people, and systems.

The capital adequacy ratio (CAR) of nine general insurers observed in this study is measured using equation (3) above. Table 3 provides the CAR result.

Table 3. Capital Adequacy Ratio (CAR) of General Insurance Firms

General Insurance Firms	Code	Year 2011	2012	2013	2014	2015	Average
Progressive	Firm5	**169.24**	**173.63**	**154.19**	**173.8**	**169.03**	**167.978**
Lonpac	Firm4	**170.92**	**159.41**	**151.85**	**146.43**	**147.69**	**155.26**
Liberty	Firm3	**131.2**	**136.55**	**165.13**	**156.82**	**167.88**	**151.516**
AIG	Firm1	**153.06**	**143.04**	**148.92**	**136.23**	**154.96**	**147.242**
Tokio Marine	Firm8	**140.33**	109.99	124.12	**132.71**	104.28	122.286
Pacific	Firm7	94.15	97.15	119.9	113.04	116.39	108.126
QBE	Firm6	114.95	111.63	101.13	96.35	90.99	103.01
Tune	Firm9	79.55	92.27	102.92	99.71	94.91	93.872
Alliaz	Firm2	118.38	77.7	73.14	81.24	85.13	87.118

To facilitate interpretation, firm that recorded CAR result above BNM’s supervisory target level of 130% is highlighted in bold. Out of nine firms observed from the years 2011 to 2015, four firms consistently registered CAR above 130%, they are Progressive Insurance Bhd, Lonpac Insurance Bhd, Liberty Insurance Bhd, and AIG Malaysia Insurance Bhd. These firms managed to maintain the adequacy of the capital available in the insurance and shareholders’ funds in order to support the total capital required which is the sum of credit risk capital charges, market risk capital charges, insurance liability risk capital charges and operational risk capital charges. The capital adequacy ratio of five general insurers; Allianz General Insurance Bhd, Tune Insurance Malaysia Bhd, QBE Insurance Bhd, and Tokio Marine Insurance Bhd, violate BNM's supervisory target level may face stricter supervisory action, which may include business restriction and requirement for restructuring.

Grey Relational Analysis Results

This study evaluates the financial performance of nine general insurers in Malaysia by applying the GRA with ten financial ratios. The financial ratios were calculated for each of the nine general insurance firms for the period from 2011 to 2015. Then, 5-year averages of the financial ratios for each firm were taken. Table 4 presents the grey relational coefficients, the weight value used is based on Chang and Lin (1999).

Table 4. Grey Relational Analysis Grade Coefficient Value

	Car1	Car2	Car3	Lr1	Lr2	Lr3	Or1	Pr1	Pr2	Pr3
Weight	0.072	0.072	0.096	0.096	0.096	0.096	0.096	0.155	0.096	0.124
Firm1	0.85	0.71	1.00	1.00	0.37	0.85	0.53	0.80	0.53	0.36
Firm2	0.36	0.33	0.35	0.34	0.33	0.36	0.55	0.60	0.53	0.66
Firm3	0.37	0.38	0.35	0.35	0.54	0.37	0.44	0.55	0.54	0.61
Firm4	0.33	0.40	0.38	0.41	1.00	0.33	0.37	1.00	1.00	1.00
Firm5	1.00	1.00	0.63	0.36	0.57	1.00	0.34	0.47	0.40	0.34
Firm6	0.86	0.70	0.81	0.35	0.78	0.86	0.61	0.85	0.48	0.35
Firm7	0.81	0.77	0.63	0.35	0.61	0.81	0.41	0.56	0.39	0.33
Firm8	0.67	0.56	0.49	0.36	0.55	0.67	0.63	0.61	0.57	0.42
Firm9	0.55	0.67	0.41	0.35	0.62	0.55	0.33	0.53	0.43	0.39

The final stage of the analysis is to calculate the grey relational grades for each general insurance firm. The grey relational grade of each firm is calculated by multiplying the grey relational coefficient by the weight of each financial ratio and by summing the result. After the calculation of these grades, the general insurance firms are ranked according to their grey relational grades. The grey relational grades for the firms and its ranking are presented in Table 5.

Table 5. Ranking of General Insurers Based on Grey Relational Analysis Grade

Code	General Insurance Firms	Grey Relational Grade	Position
Firm1	AIG Malaysia Insurance Bhd	0.693	1
Firm4	Lonpac Insurance Bhd	0.667	2
Firm6	QBE Insurance Bhd	0.661	3
Firm5	Progressive Insurance Bhd	0.574	4
Firm8	Tokio Marine Insurance Bhd	0.551	5
Firm7	Pacific Insurance Bhd	0.549	6
Firm9	Tune Insurance Malaysia Bhd	0.477	7
Firm3	Liberty Insurance Bhd	0.463	8
Firm2	Allianz General Insurance Bhd	0.461	9

Higher grey relational grade shows better financial performance. The GRA financial performance results of the general insurance firms observed in this study based on ten financial ratios provides that AIG Malaysia Insurance Bhd has the highest relational grade at the 1st position, followed by Lonpac Insurance Bhd, QBE Insurance Bhd in the third position and Progressive Insurance Bhd in the fourth position. Results show that Allianz General Insurance Bhd, Liberty Insurance Bhd, and Tune Insurance Malaysia Bhd to be low in terms of financial performance.

Table 6 compares the results of the rankings provided by the capital adequacy ratio and grey relational analysis measurements. The Capital Adequacy Ratio (CAR) measures the adequacy of the capital available of the insurer to support the total capital required. CAR indicate the financial strength of the insurance firms to fulfill their obligations to policyholders. BNM has set a supervisory target CAR of 130% for an insurance firm to be considered solvent. The most commonly used tool to measure financial performance is the financial ratio analysis. Strong overall financial performance indicates firms' financial healthiness, this ensure the sustainability and continued growth of the firm.

Table 6. General Insurance Firms' Ranking Based on CAR and GRA

Code	General Insurance Firms	CAR Position	GRA Position
Firm1	AIG Malaysia Insurance Bhd	4	1
Firm2	Allianz General Insurance Bhd	9	9
Firm3	Liberty Insurance Bhd	3	8
Firm4	Lonpac Insurance Bhd	2	2
Firm5	Progressive Insurance Bhd	1	4
Firm6	QBE Insurance Bhd	7	3
Firm7	Pacific Insurance Bhd	6	6
Firm8	Tokio Marine Insurans Bhd	5	5
Firm9	Tune Insurance Malaysia Bhd	8	7

As shown in Table 6, firms that exceed BNM's CAR supervisory target level are also considered to be financially sound. Progressive Insurance Berhad which has highest average CAR value is ranked fourth in terms of financial performance while Lonpac Insurance Bhd are placed in the second position for both CAR and GRA measurements. AIG Malaysia Insurance Bhd which is has the highest financial performance is ranked fourth in fulfilling solvency requirement set by BNM. Allianz General Insurance Bhd appears at the lowest concerning both capital adequacy ratio and grey relational analysis. This confirms that the firm is not producing good results in its financial statements nor able to satisfy BNM's capital requirement. This indicate the inability of the firm to oblige to its contractual financial obligations.

Conclusion

As a reflection of general industry performance of the country, the financial performance of the general insurers can be considered as an indicator. Financial healthiness of these firms are frequently subject to analysis by regulators, policy holders, financial institutions, investors and mangers. Policyholders can make more precise choices in choosing potential efficient general insurer by evaluating firm's solvency requirement based on CAR measure and its financial performance ranking based on GRA method. An insurer is trusted to be solvent and financially stable if it presents good performance for both CAR and GRA measurements.

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THE ESSENCE OF CONTEMPORARY ISLAMIC PHILOSOPHY OF EDUCATION: SOLVING THE PROBLEMS OF UMMAH AND HUMANITY

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Abstract: *Education is a mean to develop human resources. To understand its nature is important to direct the process of education. This study aims to know the trend of thought of contemporary Islamic philosophy of education, especially in formulating the nature of education, compered with the classical trend. Studying documents of four outstanding Muslim philosophers' thought of education in the 20th century, it can be known that their thoughts on education are rather different from those of the classical Muslim philosophers. If the classical ones tended to see education as a process of developing personality or actualizing the potentials and faculties of human being, the contemporary ones tend to see education as a process of developing Muslims who could be exist in the problem of ummah as well as the problem of humanity. Facing the problem of ignorance and proverty of umma as well as their dichotomy of knowledge and education, according to Muhammad Iqbal, education is a process of training of human will in which the will to love God becomes the supreme overriding will to other ones, and according to Ismail Raja Al-Faruqi, education is a process of Islamization of knowledge. Meanwhile, to Muhammad Naquib Al-Attas, education is a process of training man of adab who knows his position and relation with the Creator and His creatures. Finally, facing the problem of humanity, especially the global crisis of unsustainability, Seyyed Hossein Nasr provides an alternative world-view, that is a sacred cosmology: a religious view of the order of nature in environmental education.*

Keywords: *Training of Human Will, Man of Adab, Islamization of Knowledge, Sacred Cosmology*

Introduction

In the current era dominated by materialism and hedonism, to review the nature of education is very important, because the goals of education—as a mean of human resources development—become pragmatic, just training good citizens and/or training manpower needed by industry or market (Al-Attas, 1980). Although such pragmatic goals of education are not so bad, but humanity face some unsustainability problems or environmental crisis (Beringer, 2006), such as global warming. Meanwhile, the majority of Muslims in the world are still facing many problems of malaise (such as, ignorance and poverty), the dualistic educational systems, and the failure of the traditional Islamic methodology to confront the modern reality (Hashim and Rossidy, 2000). To discuss the nature and goal of education, and its function for social transformation is the duty of the philosophy, especially the philosophy of education.

According to George R. Knight, the philosophy is a basic framework for the practice of education (Knight, 2007), and it is undebatably that education has close relation with life for both are two sides of one coin. Then, the formulation of nature and goal of education—as two main objects of the philosophy of education as a discipline (Santoso, 2018; Sultana, 2012)—must have an impact to the good life and better environment of human beings as well as to the development of human resources as individuals. Have the contemporary Muslim philosophers formulated the nature and goal of education, paying attention to solving the problems of umma and/or humanity as well as to developing human resources? Are their formulations same as those of classical philosophers? Are there social contexts influencing their formulations? This study tries to respon to such intellectual problems.

Literature Review

Philosophy in the Present-Day Islamic World

Beginning in the 3 th/9th century, Islam was heir to the philosophical heritage of both the Mediterranean world and the Indian sub-continent. It transformed this heritage within the world-view of Islam and according to the spirit and letter of the Quran, and brought into being a vast array of intellectual and philosophical schools. This tradition has produced such famous intellectual figures as Al-Farabi, Ibn Sina, Al-Gazzali, Suhrawardi, Ibn Rushd, Ibn Arabi, Mir Damad, dan Mulla Sadra (Nasr, 1987).

After the 6th/12th century, philosophy as a distinct discipline disappeared and became drowned in the two seas of gnosis (sufism) and theology in the Arab world. But, in Persia, the Turkish part of the Ottoman world and Indian subcontinent, in addition to gnosis and theology, philosophy as such continued and in fact has survived in many of those regions to our own day. When the Islamic world first encountered the West in the 19th century, the existing intellectual tradition in each region reacted according to local conditions but within the general context of the universal intellectual tradition of Islam. Such figures as Sayyid Al-Afghani, Muhammad Abduh, Rashid Rida, Sir Ahmad Khan, and Muhammad Iqbal encountered Western thought in different ways and were influenced by it to varying degrees (Nasr, 1987).

The influence of Western Philosophy in each part of Islamic world depended upon the form of colonialism which dominated it. Modernized groups in the Indian subcontinent, for example, became dominated by the English philosophy of the Victorian period. On the other hand, modernized circles in Iran who were attracted to French language and culture—in order to escape Russian and British influences from the North and South—became infatuated with Descartes and later Cartesian philosophy and also with the Comtian positivism of the 19th century. Modernized Turks were attracted to German philosophy. Meanwhile, modernized Egyptians and North Africans were attracted to both the English and French schools depending on the experience of various individual philosophers and thinkers (Nasr, 1987).

After the Second World War until the past few decades, the various forms of modern philosophy, including Marxism especially in lands struggling for independence, have penetrated further into the intellectual life of the Islamic world. In the same time, a revival of traditional Islamic thought in its various modes (as a moral puritanism of Wahhabi and Salafiyyah movements) has also been observable in most Islamic countries. Consequently, an intense discourse (dialogue or even battle) is being waged between these two trends (Nasr, 1987).

The Contemporary Islamic Philosophy of Education: the Three Approaches

The intense discourse also happens between Islam and philosophy of education in discussing contemporary Islamic philosophy of education. Khosrow BagheriNoaparast has described such discourse and found three approaches: (1) inference from Muslim philosophical system; (2) a purely religious view; and (3) philosophy as method and procedure. In the first approach, philosophy is taken to be compatible with Islam as a religion and, thus, it is held that ‘Islamic philosophy of education’ can be sought properly under this rubric. According to the second approach, there is a basic difference between Islamic views and those of the ancient Greek philosophers as well as mysticism. Consequently, ‘philosophy’ and famous philosophers’ thoughts are explicitly avoided and, instead, a full and exclusive embrace to Islamic scriptures is taken as the key entrance to Islamic educational views. Moreover, in the third approach, philosophical methods and procedures are used in order to formulate the educational thought introduced in Islamic scriptures (BagheriNoaparast, 2016). Because of fundamental differences between Islam and philosophy, for the second approach, it is not suitable to use the term "Islamic philosophy of education". Instead, it is better to use the term "Islamic way of education".

According to the first approach, there is a harmony between religion and philosophy because philosophy is trying to use rationality to reach the same truths that religion has introduced by revelation. In this approach, Muslim philosophers' systems of thought are used as a basis for deducing educational points of view. In what follows, in explaining this approach, first an example of a philosophical system is introduced and then its educational implications are articulated. Muslim philosophers since the beginning of philosophical endeavours in the Islamic civilization have introduced different philosophical systems or schools (BagheriNoaparast, 2016). According to Seyyed Hossein Nasr, there are four classical Islamic philosophical systems or schools: (1) *Peripatetic* (*Mashshā'ī*), (2) *Hermetic Phytagorean* (*Ismā'īlī*), (3) *Illuminationist* (*Ishrāqī*), and (4) *Transcendent Theosophy* (*al-Hikmah al-Muta'āliyah*) (Nasr, 1987). In this paper, the essence of contemporary Islamic philosophy of education should be compared with that of classical one. But, before discussing the essence of classical Islamic philosophy of education, it should be reviewed some recent studies on Islamic philosophy of education.

Recent Studies on Islamic Philosophy of Education

Aminuddin Hassan, Asmawati Suhid, Norhasni Zainal Abiddin, Habsah Ismail, and Haziyah Hussin constructed the philosophy of Islamic education from the perspectives of Islam (its basis and vision) and philosophy, as pragmatism (correlation of knowledge, belief and practice, and integration of acquired knowledge and revealed knowledge), metaphysic (integration and relation of human, God, and environment), and axiology (integration of knowledge and moral) (Hassan, et.al., 2010). Qazi Nusrat Sultana constructed philosophy of education from Islamic perspective, defining the meaning of education, nature of man, man's mission, aim of education, nature of knowledge, curriculum, and methodology, based on Al-Quran and Hadith (Sultana, 2012). Sobhi Rayan constructed Islamic philosophy of education from the perspective of axiology, explaining the role of philosophy of education in the Islamic culture. According to him, Islamic philosophy and education encouraged critical thinking and personal independence, by relying on the Islamic history of philosophy and science which mentioned the importance of the Islamic scholars' criticism to the scientific and philosophical theories, and their creative contributions in scientific methodology and sciences in general (Rayan, 2012). Moreover, Raudlotul Firdaus and Mohd. Shah Jani reconstructed the philosophy of Islamic education recommended by the First World Conference on Muslim Education held in Jedda-Mecca, 1977, delivering the aim of education, the concept of knowledge, and the concept of education (integration of *tarbiyah, ta'līm* and *ta'dīb*) (Firdaus and Jani, 2013).

If the concept of three approaches of BagheriNoaparast in formulation Islamic philosophy of education is applied as an analysis framework, the formulation constructed by Aminuddin Hassan, et.al, and Sobhi Rayan can be categorized as third approach in which philosophy is used as methods and procedures. Aminuddin Hassan, et.al, used pragmatism, metaphysic and axiology as well as Sobhi Rayan used axiology as methods to construct educational thought introduced in Islamic scriptures. Meanwhile, the formulation constructed by Qazi Nusrat Sultana, as well as Raudlotul Firdaus and Mohd. Shah Jani can be categorized as second approach because they avoided famous philosophers' thoughts and, instead, took Islamic scriptures as the key entrance to Islamic educational views. The first approach, then, is not taken yet in constructing Islamic philosophy of education. This paper tries to construct it by applying the first approach in which Muslim philosophers' thought on nature of human is used as a basis for deducing educational points of view (such as the nature and goal of education) and then its educational implications (such as common strategy) are articulated.

The Essence of Classical Islamic Philosophy of Education

The essence here means the primary objects of philosophy of education, they are the nature of human being, the nature and/or goal of education, and the common strategy (as the educational implications). Moreover, the classical Islamic Philosophy of education here includes educational thoughts from four philosophers: Ibn Sinā, Ikhwān al-Ṣafā', Suhrawardī and Mullā Ṣadrā, representing four schools as categorized by Seyyed Hossein Nasr: (1) *Peripatetic* (*Mashshā'ī*), (2) *Hermetic Phytagorean* (*Ismā'īlī*), (3) *Illuminationist* (*Ishrāqī*), and (4) *Transcendent Theosophy* (*al-Hikmah al-Muta'āliyah*).

In Ibn Sinā's view, the human being consists of both body and soul, and the nature of human being is his soul. The soul is immaterial, and is quite different from the substance of the body. It is not pre-existent, coming into being together with the body; but it survives and does not perish when the human being dies (Al-Naqib, 1993). The human soul possesses three hierarchical faculties: vegetal, animal, and human/intellect. The vegetal faculties (*al-quwwah al-nabātiyah*) include feeding, growth and reproduction, all concerned with the survival of the human being. The animal faculties (*al-quwwah al-hayawāniyyah*) include motion and comprehension/perception. These faculties make animals superior to plants, and are shared by human beings and animals. The intellect faculties (*al-quwwah al-nātiqah*) which distinguish the human being from the animal, include an active faculty or a practical intellect (*al-quwwah 'āmilah*) directing the human's practical conduct, and a cognitive faculty or a theoretical intellect (*al-quwwah al-'ālimah*) directing his intellectual conduct (Nasr, 1987; Al-Naqib, 1993). Then, the nature of human being more specifically is his intellect faculties. Besides, the human being, as created by God, is not able to live in isolation but needs society for his survival, his growth and his education (Al-Naqib, 1993).

Based on his thought on the nature of human being, Ibn Sinā viewed education as the overall growth of the individual: physical, mental and moral; followed by preparation of this individual to live in society through a chosen profession according to his aptitudes, and to contribute to the social structure, because society, in Ibn Sinā's view, is built entirely on 'co-operation', on the specialization of each individual in a craft or profession and on the mutual exchange of services between its individuals (Al-Naqib, 1993). The implication of his view on the strategy of education is his classification of educational stages: (1) home stage, including infant stage (from birth until the second year) and child stage (from third to fifth year), under the care of a parent; (2) school (*maktab*) stage, under the care of a teacher; (3) specialized education stage (Al-Naqib, 1993).

For the infant stage, Ibn Sinā was greatly concerned with everything connected with this stage: sleep, bathing, suckling, exercise suitable to the infant's age. For the child stage, he concentrated on three educational concerns: (i) the child's morals, being given discipline and being build up character, but keeping him away from any harmful influences which might affect his soul and his morals; (ii) the development of the body and movement whereby the child acquires various physical and motor skills through many games while he also learns how to live in a group and benefit from that life; (iii) the development of taste and behavior through listening to music, and bringing the child pleasure as well as encouraging him to appreciate virtue (Al-Naqib, 1993).

For the school stage (general primary teaching), Ibn Sinā was concerned with teaching literacy, correct thinking and learning a craft as well as strengthening of faith, building good character and learn 'the principles of Islamic culture', from the Qur'an and Arabic poetry, calligraphy, and Islamic rules of good conduct. Meanwhile, for the specialized education stage, he was concerned with the independence of learner either to continue in the field of education or to learn a craft and earn a living. The young person defines for himself the type of study or the type of vocational work that appeals to him during the specialized or higher stage (Al-Naqib, 1993). Whatever type of study or vocational work, the specialized or higher education, in Ibn Sinā's view, is in fact nothing other than the process of actualization and perfection of the faculties of the theoretical and practical intellect (Nasr, 1987).

Later, Ikhwān al-Ṣafā', representing *Hermetic Phytagorean* (*Ismā'īlī*) school, viewed that the nature of human being was his soul. According to them, being different from Ibn Sinā, the soul is 'spiritual, celestial, luminous, living and knowing substance potentially and active by nature. The nature/goal of education, then, is to enable the soul to actualize these potential possibilities, thereby perfecting it and preparing it for eternal life. The actualization of what is potential in the soul is existence its self, the mode of existence which does not perish with death. As an implication, the process of education is composed of stages: *tahẑīb* (refinement), *taṭhīr* (purification), *tatmīm* (completion) and *takmīl* (perfection) (Nasr, 1987).

Meanwhile, Suhrawardī, representing *Illuminationist* (*Ishrāqī*) school, viewed that the nature of everything is light and dark, each has its rank. The Divine light (*al-nūr al-ilāhī*) is in the top rank of the order of reality, then God is the Light of Lights (*Nūr al-anwār*). He is not moving from His position, and is eternal therein all the time, but continuously illuminate to the whole universe. In human being, the nature of his light is the intellect (*al-nafs/al-quwwah al-nātiqah*) which leads other faculties of the soul. The intellect should be happy if it is illuminated or enlightened by God, the Light of Lights (Abdullah, 2002). In the illumination process, according to Suhrawardī, angel plays a particularly central role, as Gabriel, who—as the instrument of the Qur'anic revelation—'taught' the Prophet the Word of God. Therefore, education, for Suhrawardī, is inseparable from the spiritual life, from the illumination of the soul by the angel and the guidance provided by the angelic substance which illuminate the soul with veritable knowledge that is itself light—according to the *ḥadīth*, "knowledge is light" (*al-'ilm nūr*) (Nasr, 1987).

The final goal of education, then, is the attainment of illumination—its keyword is knowledge, which in turn requires the perfection of all faculties of human being, both mental and psychological, involving both the rational element and the soul in all its aspects and dimensions. As an implication, the education is oriented toward the attainment of knowledge through four stages: (1) the need for seeking knowledge, the seeker is called *ṭālib*; (2) the development of the mental faculties or those of reason, the seeker is called *ṭālib al-baḥth* (seeker of discursive tought); (3) the disciplining of the passions and purifying of the soul, the person is called *ṭālib al-ta'alluh* (seeker of theosis, the state of becoming God-like); and (4) the development of theosopher, a seeker of both discursive knowledge and theosis (*al-ḥakīm al-ilāhī*) (Nasr, 1987).

Finally, Mullā Ṣadrā, representing the *Transcendent Theosophy* (*al-H̱ikmah al-Muta'āliyah*) school, viewed as Ibn Sinā that the nature of human being in general is his soul and specifically is his intellect. But, Mullā Ṣadrā added the hierarchical states of the human soul, from three to six: mineral, plant, animal, human, angelic, and Divine proximity). Being different from the previous philosophers—following Aristotle—who admitted the motion of existence in four categories: quantity, quality, position, and place, Mullā Ṣadrā introduced trans-substantial motion. In relation to existences, substance plays the role of the cause for the effect. It is impossible for the cause to be separated from the effect, if the effect is moving, so the cause is. For Mullā, through trans-substantial motion, human is transformed, from the mineral state to the plant, from plant to animal, from animal to the ordinary state of human, from this state to angelic, and finally from angelic to Divine proximity. The trans-substantial motion from mineral state to the ordinary state of human is carried out by both the angels and the forces of nature as God's agents in this world. But from this stage onward—actualization of the potentialities of the soul and its faculties, the trans-substantial motion is carried out by education (Nasr, 1987).

The nature of human being, in Ṣadra's view, using the traditional philosophical term, is 'rational soul' (*al-nafs al-nātiqah*)—in broder meaning, not merely the reason as Cartesianism and empiricism define, but also *nous, intelectus,* intuition. The nature of education, then, is the perfection of the soul (*istikmāl al-nafs*), and the goal of education is the actualization and perfection of these faculties with the aim of fulfilling the purpose for which human was created. The implication of such view to the stages of education is as following: (1) the perfection of the practical faculties (*al-quwwah 'āmilah*), based faithfully on the Islamic Divine Law (*al-sharī'ah al-muḥammadiyyah*); (2) the transformation from the material intellect (*al-'aql al-hayūlānī*) to the intellect *en habitus* (*al-'aql bi al-malakah*); (3) the transformation from the intellect *en habitus* to the intellect in act (*al-'aql bi al-fi'l*); and (4) the transformation from the intellect in act to the active intellect (*al-'aql al-fa'āll*). The three process of transformation are carried out through philosophical discourse and ṭarīqah experiences (Nasr, 1987).

From the above elaboration, it shows that the classical Muslim philosophers from different schools met in general views on the nature of human being and the nature or goal of education. For them, the nature of human is his soul, specifically his rational soul, one of faculties of the soul. The philosophers are different in understanding of the rational soul. Ibn Sinā views more as reason and others view more as both reason and intuition. As an implication, they tend to view education as the development of personality of student through the actualization and perfection of the faculties of soul. Their view to education, then, is internal outlook for the sake of development of human being.

The Essence of Contemporary Islamic Philosophy of Education

The distinguishing factor of contemporary Islamic Philosophy from classical one is its encounter with the Western philosophy and the influence of the later to the former. The contemporary Muslim philosophers chosen in this study are qualified. They are philosophy doctors from Western well-known universities. Although influenced by Western Philosophy they studied, they responded it as a challenge to be anticipated and solved through education. They are also representing a vast area of Muslim world: Muhammad Iqbal (representing Indian subcontinent), Ismail R. al-Faruqi (born in Palestine, representing Mediterranian world), S.M. Naquib al-Attas (representing the Malay-Indonesian world) and S. Hossein Nasr (born in Iran, representing Persian-Turkish world). Moreover, their thoughts, however, have influences in the contemporary Muslim world.

Muhammad Iqbal is different from classical Muslim philosophers in view of the nature of human being. According to him, the nature of human is not intellect, but his will. Human being has many wills as he has many needs. Each of the wills is an energy or force. Human personality can, therefore, be conceived as a combination of these forces which admit of various arrangements which hold wills together by a unity of directive purposes. These various arrangements of the wills are referred to the term *shākilah* in the Quran (17:84) which determines the value of human's actions. A good human personality is who is able to arrange various wills in such a manner that the will to love God becomes the supreme overriding will and all other wills are governed and disciplined by it (The Quran, 59:19). When the will to love God—it is also called God-consciousness—becomes the illuminating centre of human's personality or self, he realises his real position in the universe as one of the greatest energies of nature—another meaning of *khalīfah*—called upon by God to remake and refashion the universe by conquering the natural environment and bringing an ideal social order into being character (Hussain, 1982).

Consequently, for Iqbal, the nature of education is training human will. It is, therefore, not difficult to understand Iqbal's dissatisfaction with the educational system in his country which restrict their function to mere intellectual development of the human self. The intellectual self is only one aspect of the activity of human total self. The implication of Iqbal's views on the nature of human and the nature of education is his suggestion of three strategies of education: (1) neo-mysticism of science, giving a spiritual interpretation of the universe—science is important for two reasons: (i) it bestows power on human which enables him to capture the material world, and (ii) it sharpens his insight for a closer and better appreciation of God; (2) individual's spiritual emancipation, making The *Sīrah* of Prophet of Islam as a central place in the educational system so that the students develop an emotional and intellectual attachment with this great personality and practically follows him as model of ideal teacher throughout their lives; and (3) spiritual democracy, developing a new social order through an ideal system of education which lets human develop all the possibilities of his nature by allowing him as much freedom as practicable—three Islamic values of equality (*musāwah*), fraternity (*ukhuwwah*) and freedom (*ḥurriyah*) should be taught and inculcated in the students (Hussain, 1982).

Later, Ismail R. Al-Faruqi, continued Iqbal's concept of neo-mysticism of science by the idea of Islamization of knowledge. After struggling for independence in the middle of the 20th century, according to Al-Faruqi, the *ummah* in the Muslim world who are still in the ignorance and proverty encounter dualistic educational systems as well as 'cultural neo-imperialism' bringing about three consequences: (1) stagnation of Islamic learning; (2) lack of excellence in modern education; and (3) Muslim dependence on foreign ideas. These three together describe what Al-Faruqi called 'a threateningly dangerous malaise' (Ba-Yunus, 1988; Hashim and Rossidy, 2000). A solution to this problem of *ummah* is Islamization of knowledge. The social sciences, the humanities and the natural sciences must be reconceived and rebuilt, given a new Islamic base and assigned new purposes consistent with Islam. Briefly, for Al-Faruqi, Islamization of knowledge is the union of the two system, bringing Islamic knowledge to the secular and modern knowledge to the Islamic system (Ba-Yunus, 1988). For the sake of Islamization of knowledge, has laid down fundamental principles of the Islamic worldview as the framework of Islamic thought, stated as 'the five unity'. They are the unity of Allah, the unity of creation, the unity of truth and the unity of knowledge, the unity of life, and the unity of humanity (Hashim and Rossidy, 2000). The concept of the five unity, however, is a new understanding of *tawḥīd* which anticipate the problem of *ummah*.

From this Islamic worldview, can be derived the nature of human being, that is the integration of his body and soul, the integration of his knowledge and value, the integration of his acquired and revealed knowledge, the integration of his thought and action, the integration of humanity, and the integration of human and universe. Consequently, the nature of education is developing integrated human being through the program of Islamization of knowledge, starting from bottom up, in order to produce social transformation and build good environment. Meanwhile, the goal of education is formulated into five objectives, as follow: (1) to master the modern disciplines; (2) to master the Islamic legacy; (3) to establish the specific relevance of Islam to each area of modern knowledge; (4) to seek ways for creative synthesis between the legacy and modern knowledge; (5) to launch Islamic thought on the trajectory which leads it to fulfilment of the divine pattern of Allah (Hashim and Rossidy, 2000).

To achieve the objectives of Islamization of knowledge and the goal of education, Al-Faruqi further outlined twelve steps as the strategy of education. They are: (1) mastery of the modern disciplines; (2) discipline survey; (3) mastery of the anthology of Islamic legacy; (4) mastery of the analysis of Islamic legacy; (5) establishment of the specific relevance of Islam to the disciplines; (6) critical assessment of the modern discipline; (7) critical assessment of the Islamic legacy; (8) survey of the *ummah*'s major problem; (9) survey of the problems of humankind; (10) creative analysis and synthesis; (11) recasting the disciplines under the framework of Islam: the textbook; and (12) dissemination of Islamized knowledge (Ba-Yunus, 1988; Hashim and Rossidy, 2000).

Meanwhile, S.M. Naquib Al-Attas develops the meaning of 'rational' in the classical philosophical concept of human being that he is a rational animal. Rational means an attribute of (1) the spiritual substance which recognizes and distinguishes truth from falsehood; (2) the capacity of understanding speech; and (3) the power responsible for the formulation of meaning which, based on the concept of *ma'nā*, is the recognition of the place of anything in a system. From this understanding, Al-Attas introduces the term *adab*. For him, the nature of human being is his *adab* which is the recognition and acknowledgement of the reality that knowledge and being are ordered hierarchically according to their various levels (*marātib*) and deegres (*darajāt*). The word 'recognition' implicitly means knowledge (*'ilm*), and the word 'acknowledgement' implicitly means action (*'amal*). *Adab* is taken from the word *addaba* in the *ḥadīth:* أدّبني ربّي فأحسن تأديبي. ("My Lord educated me, and so made my education most excellent"), and the infinite noun of *addaba* is *ta'dīb.* Therefore, *adab*, in other words, is the recognition and acknowledgement of the right and proper place of things that leads to the recognition and acknowledgement of the proper place of God in the order of being and existence (Al-Attas, 1980).

As an implication, the nature of education, in Al-Attas's view, is *ta'dīb,* instilling into human progressively the recognition and acknowledgement of the proper place of things in the order of creation, such that it leads to the recognition and acknowledgement of the proper place of God in the order of being and existence. The goal of education is to produce a good human or a man of *adab*. The man of *adab* is an individual who is fully aware of his self, and is aware of his proper relationship with his self, his God, his society, and the universe, both tangible and intangible. The implication of *ta'dīb* to the strategy of education is (1) looking for quality and good attribute of soul and thought; (2) looking for right behaviors and actions (opponent to wrong ones); (3) discipline of body, mind and soul; (4) application of method of knowledge, actualizing the right and proper place of things; and (5) transmission of knowledge, saving human from mistake in decision-making (Al-Attas, 1980).

Finally, S. Hossein Nasr, before the Al-Attas's idea of *adab,* calls human to be aware to his proper role and relationship with other beings, including environment and universe. Nasr warns about the impending global predicament, as environmental crisis and global warming, based on his analysis of the human condition in modern era, in particular the loss of spiritual-religious dimensions of cultural and individual life—including understandings of nature. He, then, explores a "religious understanding of nature" in a concept called "sacred cosmology" (Beringer, 2006). The nature of human described here, then, is in the context of sacred cosmology. According to Nasr's sacred cosmology, the material-physical world is only one world among others. This 'other' worlds are known as the spiritual world/s, and can be appropriated by non-sensual, equally valid and authentic ways of knowing, in particular intuition. Material-physical worlds originate from spiritual worlds, and are sustained by these. The material-physical world exist only and because of the spiritual world. The Divine Reality is the creator of cosmos (material-physical plus spiritual world), the cosmos is sustained by the Divine Reality. Where is the human? Human is the intermediary between material-physical and spiritual worlds; one of the human's task is to uphold the cosmic order. Human beings have a soul—the organ with which humans may know the Divine (the Secred). It is through the human soul that the Divine can enter into the human form, and can be transmitted into the physical realms. The human and natural orders are intertwined in a bi-unity—their destinies and laws are interrelated, not totally distinct. The earth is human's teacher and human can learn from the order of nature not only quantitatively but also morally, intellectually and spiritually (Beringer, 2006).

The nature of human, then, is his soul, and he, therefore, becomes the intermediary between material-physical and spiritual worlds as well as the upholder of the cosmic order. Consequently, the nature of education is actualization of soul faculties of human to be a good intermediary between material-physical and spiritual worlds and a good upholder of the cosmic order. Practical implications for curriculum development and teaching have been identified as follow: (1) for training the intellect and the intuition; (2) for studying scholarly, exoteric and esoteric teachings; (3) for deciphering the language and order of nature through scientific and spiritual methods; and (4) balancing indoor and outdoor experiences toward a meaningful life guided by natural laws and in harmony with nature as revealed and understood from the Divine Reality (Beringer, 2006).

Studying four outstanding Muslim philosophers' thought of education in the 20th century, it has be known that facing the problem of ignorance and proverty of ummah as well as their dichotomy of knowledge and education, according to Muhammad Iqbal, education is a process of training of human will in which the will to love God becomes the supreme overriding will to other ones, realizing his real position in the universe as one of the greatest energies of nature—another meaning of khalīfah—to remake and refashion the universe by conquering the natural environment and bringing an ideal social order into being character—in the case of Indian subcontinent by getting independence from British colonialism. For Ismail R. Al-Faruqi, education is a process of developing integrated human being through the program of Islamization of knowledge, starting from bottom up, in order to produce social transformation and build good environment. Meanwhile, in S.M. Naquib Al-Attas's view, education is a process of training man of *adab* who knows his position and relation with the Creator and His creatures. Finally, facing the problem of humanity, especially the global crisis of unsustainability, S. Hossein Nasr provides an alternative world-view, that is a sacred cosmology: a religious view of the order of nature in environmental education. From this perspective, the nature of education is actualization of soul faculties of human to be a good intermediary between material-physical and spiritual worlds and a good upholder of the cosmic order. These contemporary Muslim philosophers, therefore, tend to see the essence of education as a process of developing Muslims who could be exist in the problem of ummah as well as the problem of humanity.

Conclusion

The Muslim philosophers' thoughts are absolutely interrelated with their historical context. In the classical era when the Muslim civilization was dominant over other civilizations and was not in a threateningly dangerous malaise, their thoughts on the essence of education—from Ibn Sinā and Ikhwān al-Ṣafā' to Suhrawardī and Mullā Ṣadrā—tended to be inward looking, just focused to the sake of students, that was a process of developing personality or actualizing the potentials and faculties of human being. But, in the contemporary era when the Muslim world encounter the newer dominant Western civilization, including Western secular philosophy of education, and the problems of *ummah*, such as ignorance and proverty as well as their dichotomy of knowledge and education, the Muslim philosophers—from Muhammad Iqbal and Ismail R. Al-Faruqi to S.M. Naquib Al-Attas and S. Hossein Nasr, although graduated from well-known Western universities—tend to view education in forward looking, not merely for the sake of developing of individual but also for the sake of transformation of *ummah* and humanity. According to them, the essence of education is a process of developing Muslims who could be exist in the problem of ummah as well as the problem of humanity.

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CONCEPTIONS OF DEVELOPING 21ST CENTURY FOREIGN LANGUAGE ACADEMIC LITERACY IN THE GRADUATE CONTEXT: AN EMPIRICAL STUDY

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Abstract: *This study aims to disseminate academic literacy learning practices in English as a foreign language, which set the basis for the development of the multi-faceted 21st century literacy, mainly: psychological and cognitive skills. This study sought to examine how well matched are EFL students in terms of personal attitudes and cognitive skills , third, social practices, and fourth, macro-societal structures perceptions of academic literacy in an EFL Master program? To answer these questions, quantitative analysis of survey results was conducted. Statistical evidence of students' current level of academic literacy awareness as seen in their responses suggests that multiple aspects beyond mere cognitive processes of reading and writing contribute to academic literacy development. Although the study was not of a long duration to identify significant changes in students' levels, preliminary evidence suggests that some factors indeed influence what students view as critical in developing academic literacy skills. The findings indicate that investigating students' perceptions helps instructors reframe academic literacy assignments for EFL reading and writing courses and their assistance for sophisticated L2 literacy skills.*

Keywords: *academic literacy, foreign language development, cognitive literacy processes, social literacy skills, macro-societal structures*

Introduction

This study aims to find out how EFL students perceive the key aspects and factors associated with developing with academic literacy. The data regarding this question have been gathered using the academic literacy perceptions questionnaire ALPQ which is based on the premise that to truly understand the construct of academic literacy, we must step outside the purely cognitive issues and address affective and attitudinal factors that influence L2 learning in general (D¨ornyei and Skehan, 2003; D¨ornyei 2009a, 2009c). Mainly, based on the review of D¨ornyei's work (2000, 2001, 2003a, 2005) and several related studies (Gardner, 1985; Masgoret and Gardner, 2003; D¨ornyei and Ushioda, 2013; Dörnyei and Tseng, 2009; D¨ornyei and Murphey, 2003; Cumming, 1989; Sasaki and Hirose, 1996; Ryan and Deci, 2000), affective, attitudinal, and cognitive variables are selected for this study to examine students' motives and opinions towards academic literacy 'personal attitudes' dimension.

One of the central aims of this study is to determine how well prepared students in the Master program were to respond to academic literacy assignments on the basis of their level of awareness. After the pilot study and checking the reliability of the instrument, a final expert's opinion was needed for the construction of the last version of the academic literacy perceptions questionnaire. No further tuning was needed and the final version of the questionnaire measuring students' perceptions was based on a 5-point instead of a 6-point Likert scale is used to facilitate questionnaire completion. The sections included two sets of items, each headed by a different prompt. Specifically, a set of items makes reference to students' opinions while another set concerns skills involved in comprehension, production, and developing overall academic literacy intended to elicit the perceived importance of problem-solving behaviors when carrying out reading and writing tasks in English. These areas provided the organizational structure for the arrangement of the items in the questionnaire. The variables and items included in the final draft of the ALPQ were validated through exploratory and confirmatory factor analyses and reliability analysis of the pilot study data.

The final survey data would enable gaining insights into the attitudinal and behavioral characteristics that define academic literacy perceptions among EFL learners. Its first sections cover aspects of motivation, reading and writing strategies, views towards interactive learning, outside class activities … etc. For the third and fourth sections, students are asked to indicate their perceptions of the strategies they view as effective and their perceived needs.

Methods

Data Collection Instrument

The data collection instrument includes three different sections with 39 items in total. The number of items in all of the section is as follows: 6 items in personal attitudes, 10 items for cognitive skills, 8 items for social practices and 12 items in macro-societal structures. Additionally, these four categories are distributed over three sections. In addition to the demographic information section, students are instructed to rate the items in the two sections by ticking in the appropriate box. The second section about participants' opinions is rated on a 5-point Likert scale from "strongly agree", "agree", "neutral", "disagree", "strongly disagree". The weight for every answer changes between 5 and 1 in the direction from most positive to most negative. For this section, students are instructed to rate each item on a 5-point Likert type scale from "very important" to "very unimportant". The weight for every response varies between 5 and 1, in the direction from most positive to most negative. The table below indicates 5-point likert scale weights.

Table 1. 5-Point Likert Scale Weight Intervals (Abdulfattah, 2008)

Mean	Level (Section2)	Level (Section3)
From 1 to 1.79	Strongly disagree	Very unimportant
From 1.80 to 2.59	Disagree	Unimportant
From 2.60 to 3.39	Neutral	Average
From 3.40 to 4.19	Agree	Important
From 4.20 to 5	Strongly agree	Very important

To determine the overall attitudes direction based on response means, the weight intervals indicated in the table above are considered. Since there has to be five intervals limited by the five weights from 1 to 5, the interval used in 5-point Likert scales is (4/5) which equals 0.80.

The instrument is originally written in English, which is the language of instruction for the target population, graduate English-major students. Students are asked to answer all questionnaire items according to the written instructions provided. Prior to completing the questionnaire, they are told that the survey is not a test and that the obtained responses would be handled with confidentiality. Instructions with an example response item illustrating proper use of the scale are also provided and students are allowed to ask questions or clarifications to comprehend specific items in the survey.

Data Collection Procedures

The final draft of academic literacy perceptions questionnaire was administered to English major Master students at Biskra University. Out of 300 copies, 217 were fully filled and returned. Prior to the use of the data collection instrument, the permission of the Head of Biskra University School of English Language and Literature was taken via a phone call and a meeting to discuss the proposal of the study, which included the aim of the study, the method to be followed during the study with the sample instrument and the contributions of the study for Biskra University.

This research was conducted in regularly scheduled class sessions. To minimize disruption to classes, students were given an oral advance notice by their teachers and the survey was designed to be completed in 25 minutes. Students were told that the purpose of the study is to collect data on student academic literacy perceptions. Students were informed that their participation in the study was voluntary and that the survey responses were anonymous. In addition, the instructions contained statements which were read aloud by the researcher and the students were encouraged to ask for clarifications. Most students took 15 to 25 minutes to complete the questionnaire. Data collection conditions as well as instructions were the same for all participants in first and second year classes.

Participants in the actual study are 217 full-time graduate students who were native Arabic speakers learning English as a foreign language. The sample consists of 182 female (83.9 %) and 35 male (16.1 %) students. All of them are majoring in English Civilization and Literature or Linguistics and have at least 9 years of experience learning English in middle school, secondary school, and undergraduate level in Algeria. The participants share similar educational and cultural backgrounds, so that these intervening variables are controlled in the study. Respondents are not asked to rate their English self-efficacy level. All respondents completed the questionnaire in English.

Finally, reliability of the questionnaire is calculated. Reliability refers the stability of the scale and its non-contradiction with itself; that is, the research instrument would give the same results if re-applied to the same sample. Alpha Cronbach coefficient is used to test the stability of the questionnaire, which takes values ranging from zero to one. The closer the value of the reliability coefficient to one, the more stable it is and the closer it is to zero, the lower its stability would be. Validity refers to the extent to which a test's results are useful. The validity issues of the ALPQ are discussed in previous sections. The following table shows the reliability coefficients of each of the questionnaire scales.

Table2. Reliability Coefficients of the Research Instrument

Questionnaire dimension	N of items	Reliability coefficient
1. Personal attitudes	6	.925
2. Cognitive skills	10	.958
3. Social practices	8	.952
4. Macro-societal structures	12	.950
Total	36	.949

Table 2. shows that reliability coefficients of the questionnaire scales range between 0.925 and 0.958 while the reliability coefficient of the instrument is 0.949. These values suggest that the questionnaire is valid and reliable and that the results from the sample can be generalized to the population.

Data Analysis Procedures

The questionnaire consists of two large subsets of perceptions (psychological and social). Using reliability analyses as well as exploratory and confirmatory factor analyses, this section has described the process used to establish convergent and divergent validity for the ALPQ. In other words, the item-level analyses allow the examination of the factorial structures of academic literacy, as measured by the perceptions questionnaire. Although EFAs has provided information of construct dimensionality, CFAs has been used to determine whether a hypothesized factor model fits or does not fit the sample data. From these factor analyses, ten perception variables (Motivation, Language Switching, Interactive Learning, Reading, Writing, Rhetoric, Source Use, Autonomy, Human Resources and Material Resources) are hypothesized to measure four perception-dimension variables: Personal Attitudes, Cognitive Skills, Social Practices and Macro-Societal Structures.

Table 3. The Statistical Data Analysis Procedures Used For Piloting The Research Instrument

Data Preparation Inputting data, checking for missing values ↓
Descriptive Statistics Checking for normality assumptions ↓
Exploratory Factor Analysis (EFA) Examining item clusters, forming composite variables, outlier analysis ↓
Confirmatory Factor Analysis (CFA) Proposing measurement models ↓
Reliability Analyses Examining the internal consistency reliability

Table 3 shows the statistical operations used in validating the questionnaire in preparation for its actual use and subsequent data analysis.

Analyses for the present research are conducted in two phases: 1) data preparation 2) descriptive analyses. First, data preparation involves entering data into the computer, checking the data for accuracy and checking for missing data. Survey responses were first hand-coded in an Excel sheet and data were examined for data entry errors. The accuracy of data entry was checked and examined for missing values. Before analyzing the data, responses missing items were excluded from the study. Based on the results of data screening, 83 students' responses were dropped because they did not answer the survey questions thoroughly. Other than the dropped responses, no missing values were detected in the data sets. As a result, 217 cases out of 300 are left to be used in the current study. Finally, Statistical Package for Social Sciences (SPSS) was then used for data descriptive and inferential analyses. The section that follows presents findings related to the research questions that shaped this study.

Results

This section presents the results obtained from the statistical analyses. With the goal of deepening our understanding about EFL students' academic literacy perceptions, in this paper, analysis of the survey, along with the findings are explained. In so doing, all of the items are examined for response frequencies, means, and standard deviations. This analysis provides insights into students' level of academic literacy awareness after the Master program. Attention is then turned to the perceptual relationships students' perceptions point to.

In the survey, Questions 1 to 3 are designed to elicit students' self-reports of their gender, age, and academic level. Questions 4 to 9 are designed to shed light on students' opinions. As compared to Questions 10 to 19 which are designed to learn about students' self-reported cognitive skills perceptions, Questions 20 to 27 are designed to tap into their social practices when interacting with the reading materials used in writing or with potential readers. Finally, questions from 28 to 39 address students' self-dependent activities or activities involving the interaction with other persons and with environmental resources. In what follows, the percentages, frequencies, means and standard deviations of the variables included in the study are illustrated. In sum, the paper begins with a presentation of the data for each question, and then follows with demonstrating the interconnectedness among academic literacy dimensions.

Findings Regarding Perceptions of Personal Attitudes

The first research question aimed to investigate the attitudes of EFL students at Biskra University. The data concerning this question are collected by Section 2 which consists of 6 items on five-point Likert scale in the questionnaire. Descriptive statistics are used to present the percentages, frequencies, means and standard deviations of the items (Table 4) with percentages across question items illustrated in figures 1, 2, and 3.

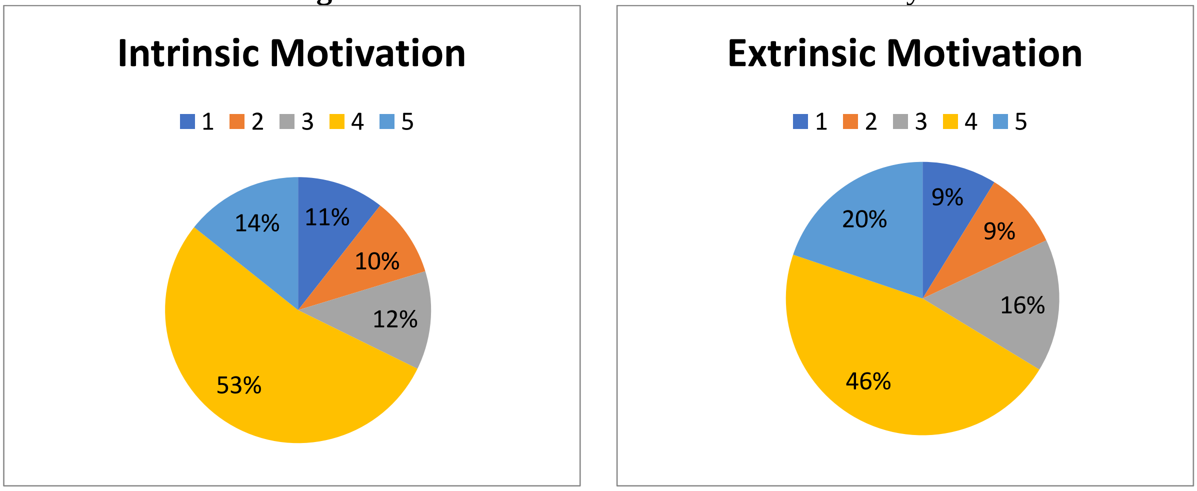
Table 4. Personal Attitudes Perceptions of the Respondents

Item	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean	Stand dev.
	F	%	F	%	F	%	F	%	F	%	M	SD
4. Reading and writing English is enjoyable for me	23	10.6	21	9.7	26	12	116	53.5	31	14.3	3.51	1.17
5. If I develop my English reading and writing skills, I will do better in my future exams and study courses	19	8.8	20	9.2	34	15.7	101	46.5	43	19.8	3.59	1.16
6. When I do reading and writing activities, I think and plan in Arabic and write in English	19	8.8	29	13.4	36	16.6	112	51.6	21	9.7	3.4	1.11
7. When I do reading and writing activities, I translate from Arabic to find the words and structures I need to express my ideas	13	6	26	12	36	16.6	94	43.3	48	22.1	3.63	1.13
8. I like working in pairs and groups on reading and writing activities	20	9.2	20	9.2	32	14.7	119	54.8	26	12	3.51	1.11
9. I view learning reading and writing as collaborative experience between the teacher and student	16	7.4	14	6.5	30	13.8	82	37.8	75	34.6	3.86	1.18
Personal Attitudes (PA)											3.58	0.97

Table 4 displays the percentages, frequencies, means and standard deviations of subjects' responses to various aspects of personal attitudes towards English reading and writing.

As can be drawn from the data, the majority of the subjects (n=147) clearly indicate their enjoyment in reading and writing (Item 4) whereas 18% to 21 % report their disagreement to intrinsic (n=44) and extrinsic (n=39) motivation items. These results are shown in Figure 1.

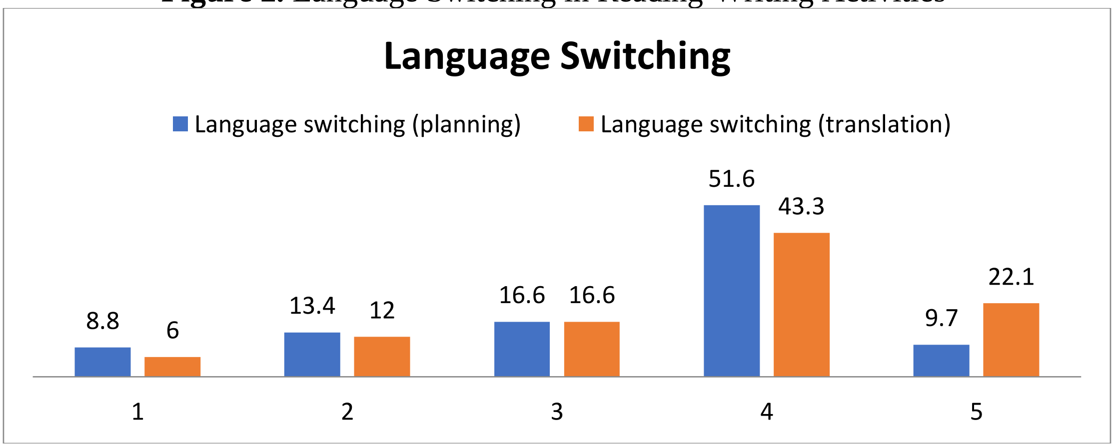
Figure 1. Motivation towards Academic Literacy



Drawn from the responses of 'strongly agree' and 'agree', half of the respondents are likely to be ready to invest their motivation in developing their academic literacy skills. In fact, subjects' responses to items 4 and 5 reflect relatively high levels of motivation which should be maintained and can be invested in future academic literacy courses at Biskra University. Additionally, although the results show that the students have almost equally strong intrinsic motivation (Item 4) and extrinsic motivation (Item 5), 67% view that exams and course requirements are not the sole reasons for developing academic literacy. However, a marginally larger than one third of the students (33% to 34%) showed their negative or unsure attitudes towards enjoying literacy courses and improving literacy skills.

Figure 2. shows students' responses to items 6 and 7 which concern academic literacy in the first and second languages. The data show that the majority of students use their first language in planning (61.3%). It is almost certain that generating ideas is easier when exploiting one's background knowledge according to nearly two thirds of the respondents (n=133) who agreed or strongly agreed with the item: "When I do reading and writing activities, I think and plan in Arabic and write in English".

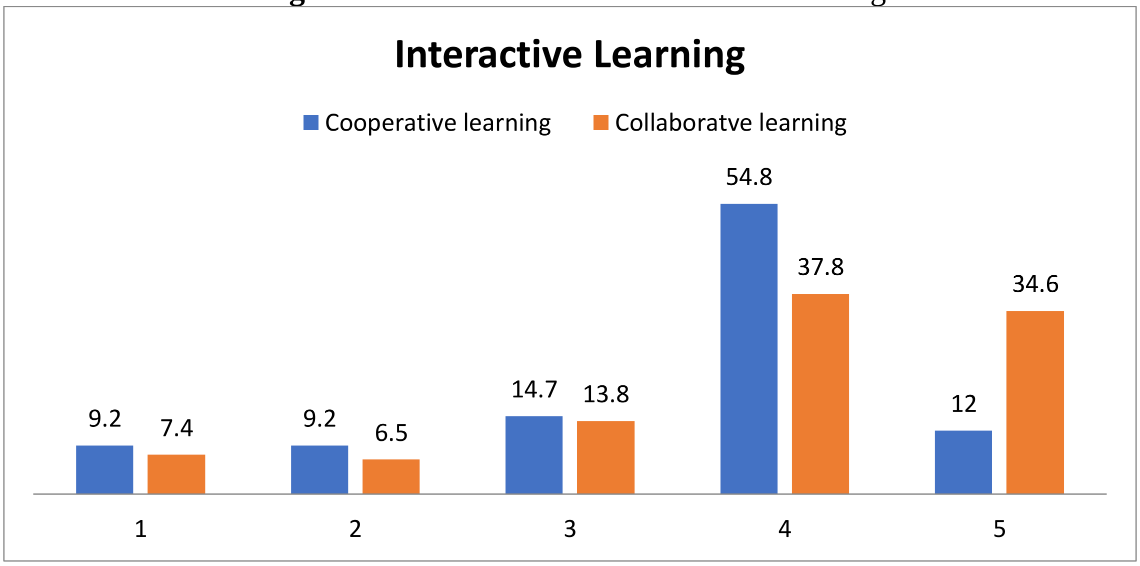
Figure 2. Language Switching in Reading-Writing Activities



As can be seen from the data, respondents seem to consider translating from L1 to L2. Interestingly, 142 out of 217 subjects indicate 'agree' or 'strongly agree' to item "When I do reading and writing activities, I translate from Arabic to find the words and structures I need to express my ideas". Finally, while over one third of the respondents (n=84) disagree or strongly disagree or are undecided with regard to the idea of planning in the first language and prefer to think, plan and write in English, approximately one third of students (n=75) indicate their indecisiveness or disagreement for needing to translate from Arabic to express their ideas in English.

Moreover, responses to the items 8 and 9 reflect highly positive attitudes towards interactive learning in dealing with reading and writing activities. For instance, more than two thirds of the respondents believe in the usefulness of cooperative and collaborative learning.

Figure 3. Attitudes towards Interactive Learning



As for cooperative learning, the majority of students appear to be fond of pair work and group work activities (with the mean of 3.51) and more than two thirds of the subjects value working with a teacher or mentor on reading and writing activities. In other words, slightly over half of the respondents (n=145) agree with the idea of the efficiency of group activities by indicating 'strongly agree' and 'agree' for the item 8. Additionally, nearly three fourths (n=157) indicate certain agreements (overall responses of strongly agree and agree) towards collaborative learning. Responses to Item 9 clearly show that the majority of the respondents perceive the teacher's role as a helper creating opportunities for them to involve in several literacy tasks as represented by their agreement to share the responsibility with their teacher to stimulate their interest in developing their reading and writing skills. On the other hand, slightly smaller than one third of the students report their disagreement with cooperative and collaborative learning .i.e., about 27.7 % to 33.1% of the subjects stated their disagreement or hesitation towards having to work in pairs and groups or with the teacher on academic literacy tasks.

Findings Regarding Perceptions of Cognitive Skills

The second research question aims to explore EFL students' perceptions of the cognitive skills they view as important in dealing with reading and writing activities. The data concerned with this question are gathered by items 10 to 19 in Section 3 which consists of 30 items in the questionnaire. With the help of descriptive statistics, the percentages, frequencies, means, and standard deviations of the items are presented in Table 5.

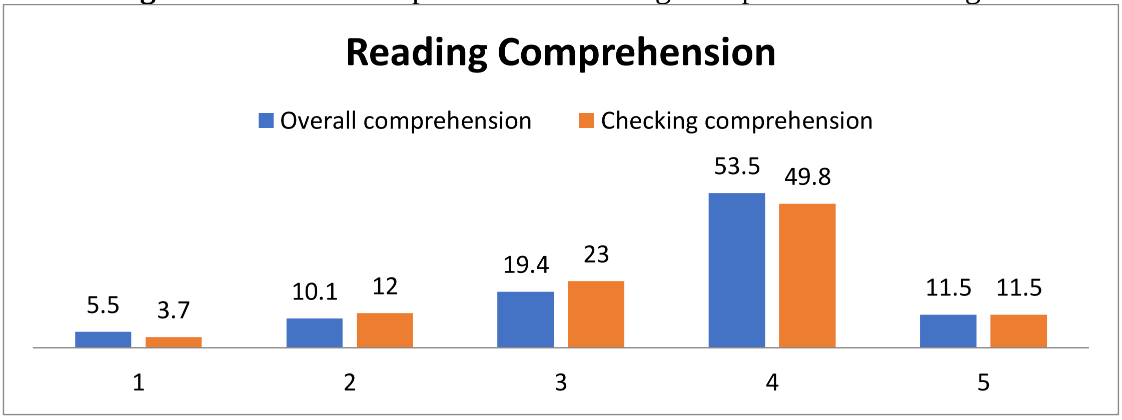
Table 5. Respondents' Perceived Cognitive Skills' Usefulness

Item	Very unimportant		Unimportant		Neutral		Important		Very important		Mean	Standard dev.
	F	%	F	%	F	%	F	%	F	%	M	SD
10. As I read, I underline difficult words and phrases while getting a general idea of the whole passage	12	5.5	22	10.1	42	19.4	116	53.5	25	11.5	3.55	1.09
11. As I read, I ask questions to check my understanding	8	3.7	26	12	50	23	108	49.8	25	11.5	3.53	0.97
12. As I read, I make sure I knew what the major ideas in the reading texts are	11	5.1	19	8.8	54	24.9	111	51.2	22	10.1	3.52	0.97
13. As I read, I try to see how information is organized and supported in a text	14	6.5	20	9.2	49	22.6	102	47	32	14.7	3.54	1.06
14. After I read different texts, I compare them	15	6.9	35	16.1	49	22.6	107	49.3	11	5.1	3.25	1.02
15. I make a writing plan before I start to write	3	1.4	35	16.1	38	17.5	109	50.2	32	14.7	3.61	0.97
16. As I write, I make sure I wrote an introduction, a body with several paragraphs and a conclusion	3	1.4	34	15.7	43	19.8	104	47.9	33	15.2	3.60	0.97
17. As I write, I make sure I organized the body paragraphs around an argument	4	1.8	31	14.3	44	20.3	101	46.5	37	17.1	3.63	0.99
18. As I write, I make sure I used a thesis statement and topic sentences	3	1.4	32	14.7	41	18.9	108	49.8	33	15.2	3.63	0.96
19. I rewrite and revise my text at least once	13	6	17	7.8	48	22.1	112	51.6	27	12.4	3.57	1.01
Cognitive Skills (CS)											3.55	0.85

Table 5 reveals the percentages and frequencies of students' responses to the perceptions of reading-writing cognitive skills strategies.

To start with, the first two items regarding the receptive literacy skill perceptions concern the aspects of reading that cover underlying difficult words and looking up new words while getting a general idea of the text (Item10), and asking comprehension questions (Item11).

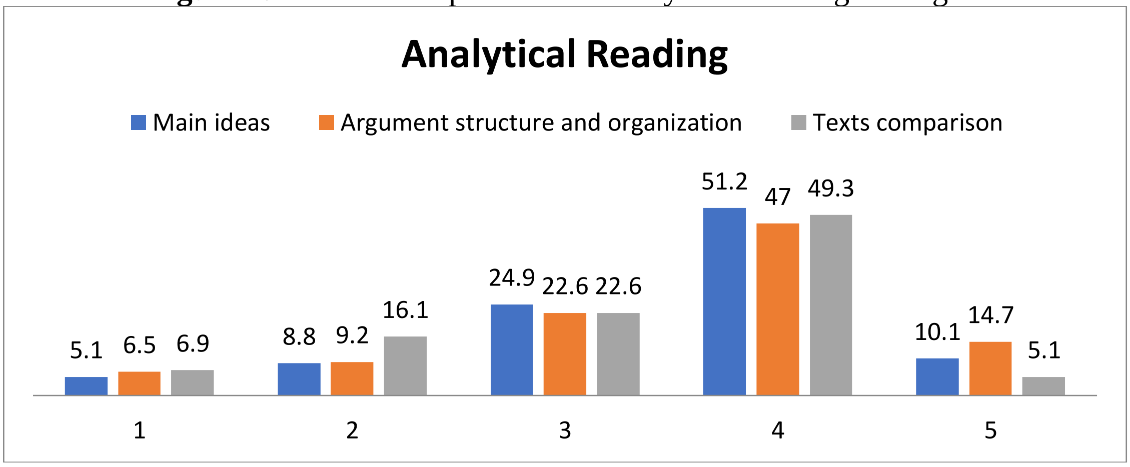
Figure 4. Perceived Importance of Reading Comprehension Strategies



As displayed by the data, the vast majority (65 %) of the respondents tend to read through the passage and underline difficult words and phrases while getting a general idea of the whole passage (n=141). Moreover, 61.3 % of the respondents rate checking comprehension questions as ‘important’ or ‘very important’. Generally speaking, students’ responses to items 10 and 11 reflect significant organization of vocabulary and reading comprehension learning. However, more than one third of the respondents (35% for item10 to 38.7% for item11) seem to doubt the usefulness of spending the effort to comprehend a reading text and asking questions to check comprehension.

Besides, responses to each of the items 12 to14 indicate that approximately 54.4 to 61.7 % of the students’ responses reflect moderate awareness of the importance of analytical reading strategies.

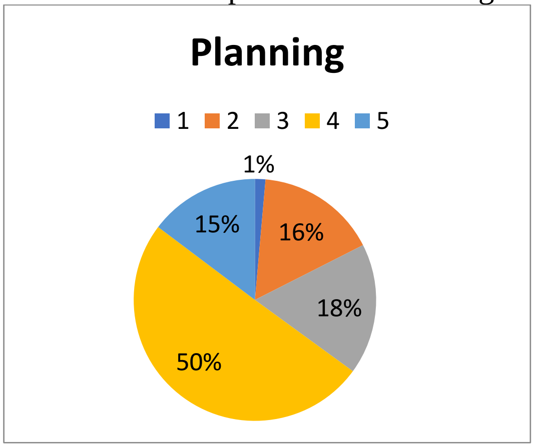
Figure 5. Perceived Importance of Analytical Reading Strategies



As shown in Figure 5, it is almost certain that more than half of the subjects (n=133) indicate their agreement or strong agreement on main idea strategy, analyzing arguments, and comparing different texts in terms of linguistic aspects, voice, and rhetorical style. On the other side, over one third of the subjects show disagreement or uncertainty with regard to the usefulness of analyzing how arguments are supported and organized and how textual features vary across readings. Overall, 38.3% to 45.6 % of the respondents show little awareness of the importance of analytical reading strategies (items 12, 13, and 14).

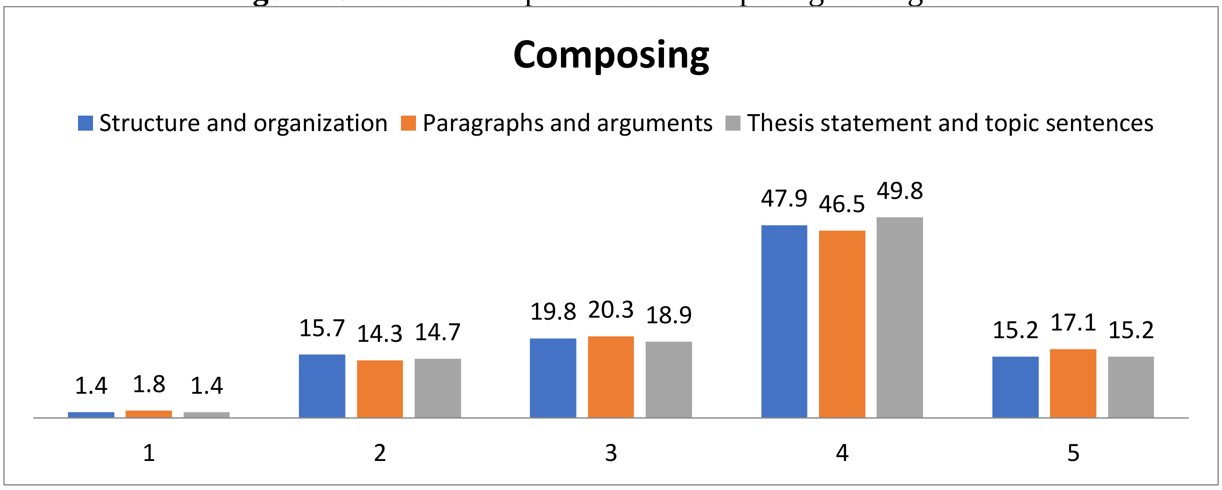
For the first item on the perceptions of the productive cognitive skill of writing, the vast majority of respondents 65 % state important or very important for making a writing plan before starting to write. Surprisingly however, 18% of the respondents seem undecided about the usefulness of the planning stage for their literacy tasks and 17% seem to neglect it, a finding which may ring a bell to academic writing teachers at Biskra University so that they design courses and activities in ways that draw students' attention to the paramount importance of planning (Cumming, 1989).

Figure 6. Perceived Importance of Planning Strategy



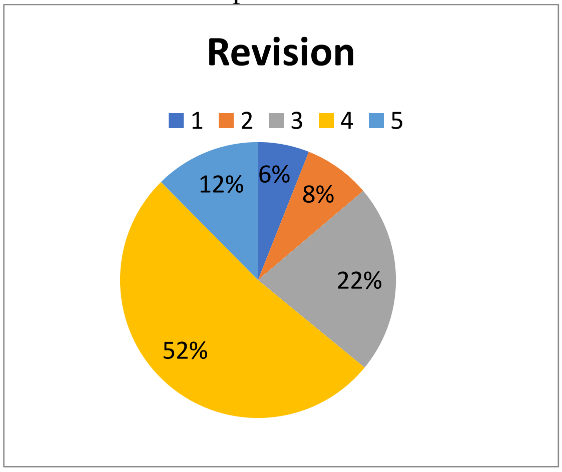
For composing strategies presented in the questionnaire statements, 16, 17, and 18 from general to specific (As I write, I make sure I wrote an introduction, a body with several paragraphs and a conclusion; As I write, I make sure I organized the body paragraphs around an argument; As I write, I make sure I used a thesis statement and topic sentences), more than 63% of the respondents agree or strongly agree with the importance of paying attention to organization, structure, content, and style of their writing.

Figure 7. Perceived Importance of Composing Strategies



As illustrated in Figure 7, approximately two thirds of the respondents (n=139) assign immense importance to revising by stating 'agree' or 'strongly agree' with the item 19 (I revise and rewrite my text at least once).

Figure 8. Perceived Importance of Revision Strategies



On the other hand, slightly over one third of the subjects (n=78) indicate inadequate awareness of the revision skill by expressing disagreement or uncertainty with regard to the effectiveness of revising to enhance their final drafts and rewriting their texts when changes are needed.

Overall, the results with regard to the respondents' perceptions of composing skills reflect the wide implementation of process and genre theories to EFL writing instruction in the context.

Findings Regarding Perceptions of Social Practices

In the third research question stated as: 'How do EFL university students perceive the social practices associated with academic literacy?', the aim is to find out the extent of social practices strategies used by graduate students in learning English reading and writing.

Table 6. illustrates the percentages and frequencies of students' responses to the social practices perceptions associated with carrying out academic literacy activities.

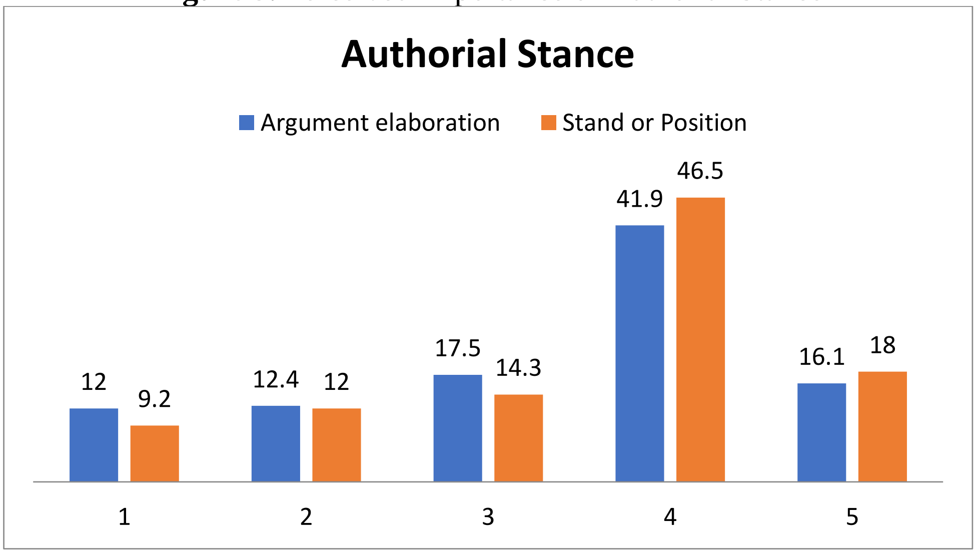
Table 6. Perceived Social Practices Strategies of the Respondents

Item	Very unimportant		Unimportant		Neutral		important		Very important		Mean	Stand dev.
	F	%	F	%	F	%	F	%	F	%	M	SD
20. I formulate my own viewpoint and elaborate my own argument	26	12	27	12.4	38	17.5	91	41.9	35	16.1	3.38	1.24
21. I convey not only ideas, but also my stand or position on the issue	20	9.2	26	12	31	14.3	101	46.5	39	18	3.52	1.19
22. I focus on the readers' expectations	30	13.8	25	11.5	34	15.7	95	43.8	33	15.2	3.35	1.26
23. I make sure there are no errors that result in inaccurate or imprecise presentation of content or interfere with comprehension	17	7.8	36	16.6	28	12.9	102	47	34	15.7	3.46	1.17

24. I use key points and relevant information from the reading texts to support my arguments	20	9.2	33	15.2	30	13.8	96	44.2	38	17.5	3.46	1.21
25. I integrate ideas from the readings with each other and with my own ideas	19	8.8	35	16.1	25	11.5	103	47.5	35	16.1	3.46	1.19
26. I transform the language from the readings using summary, paraphrasing , and quotation techniques	18	8.3	33	15.2	28	12.9	91	41.9	47	21.7	3.53	1.22
27. I make sure the reading texts are accurately and appropriately cited	15	6.9	44	20.3	29	13.4	72	33.2	57	26.3	3.51	1.27
Social Practices (SP)											3.46	1.05

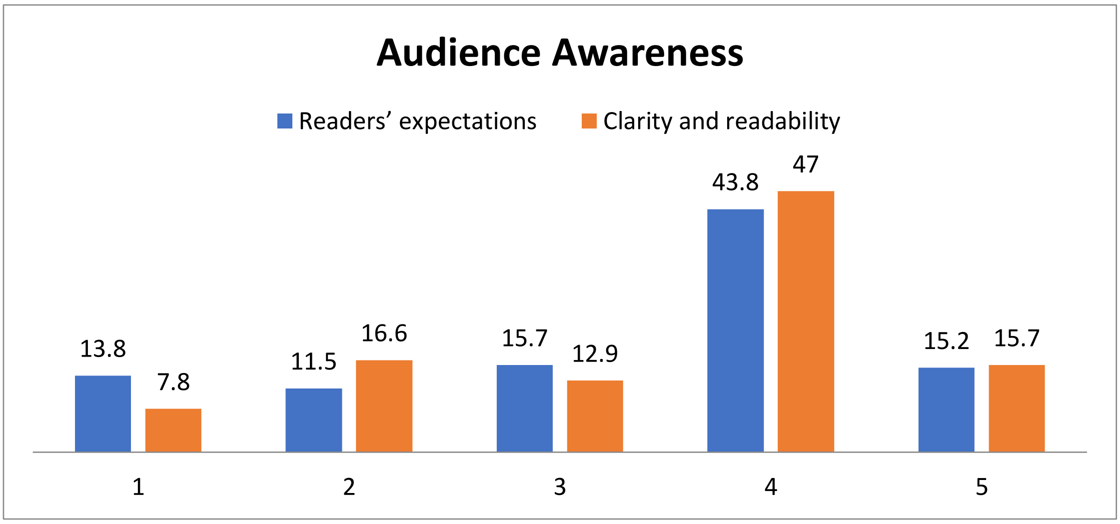
Respondents' perceptions of rhetorical practices are presented in figures 9 and 10. As shown by the data, more than half of the respondents (n=126 for item 20 and n=140 for item 21) rate authorial stance strategies between very important and important. In addition, over one third of the students indicate that they view elaborating their own arguments and expressing their own stand or position as unimportant.

Figure 9. Perceived Importance of Authorial Stance



Additionally, exactly 59% of the subjects claimed that they consider their readers' expectations when writing in English (Item 22) while 62.7% of the respondents view paying attention to the clarity of purpose and readability of content and information as important or very important (Item 23).

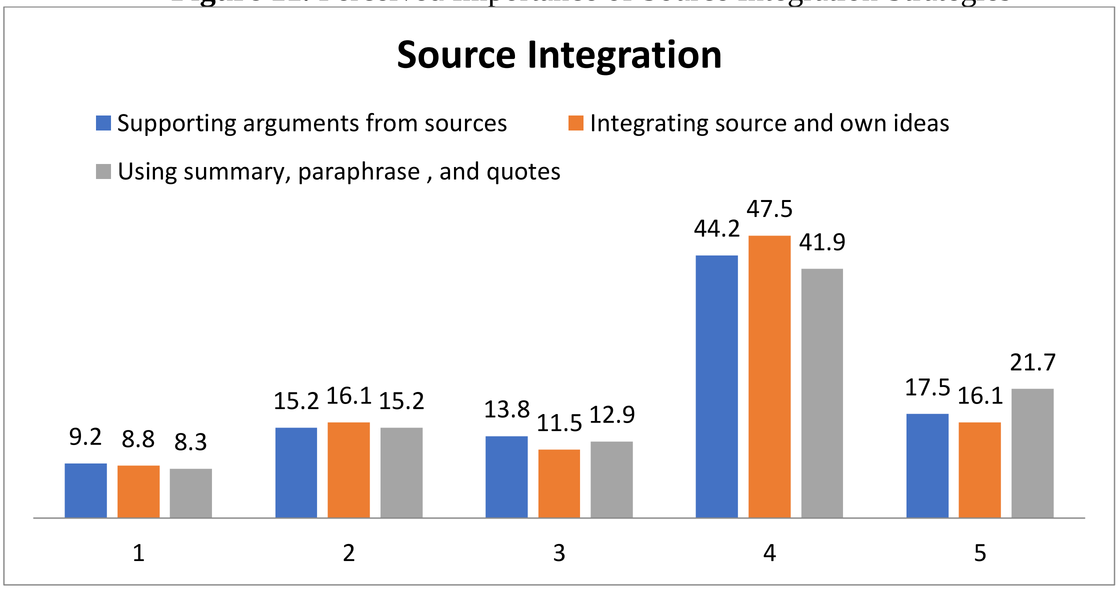
Figure 10. Perceived Importance of Audience Awareness



However around 41% to 37.3% seem undecided or uninformed about the importance of audience awareness.

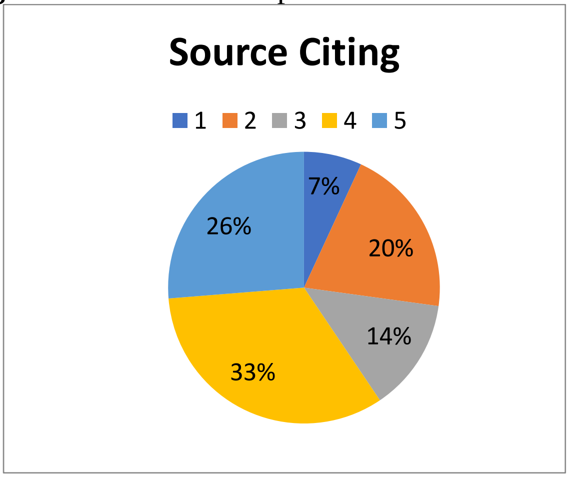
Respondents' reported source use perceptions are presented in figures 11 and 12. Responses to items 24, 25, and 26 indicate that approximately two thirds of the students are aware of the importance of source integration strategies (n=134, n=138, n=138 respectively).

Figure 11. Perceived Importance of Source Integration Strategies



On the other hand, students' responses to these items display that slightly more than one third of the respondents show inadequate awareness of source integration strategies with the percentage of 38.2% for the item 'I use key points and relevant information from the reading texts to support my arguments' and to a lesser extent (36.4%) for the item 'I integrate ideas from the readings with each other and with my own ideas' and likewise for knowledge of source integration techniques i.e., summary, paraphrase, and quotation. Similarly, exactly 59% of the participants are obviously aware of the importance of source citation strategies.

Figure 12. Perceived Importance of Source Citation



Nonetheless, a relatively large percentage of the respondents (41%) stated that they assign little or no importance to citing the reading sources they use (Item 27) probably signaling more frequent focus of instruction on practicing source integration and citation in research methodology and academic writing courses given the discrepancy between items 26 and 27.

Findings Regarding Perceptions of Macro-Societal Structures

The fourth research question concerns perceptions of macro-societal structures. The data regarding this question are gathered by the third part of Section 3, which contained 12 items on a five-point Likert scale, in the questionnaire. Descriptive statistics are used to portray the percentages, frequencies, means and standard deviations of the items. (Table 7)

Table 7. Respondents' Perceptions of Macro-Societal Structures

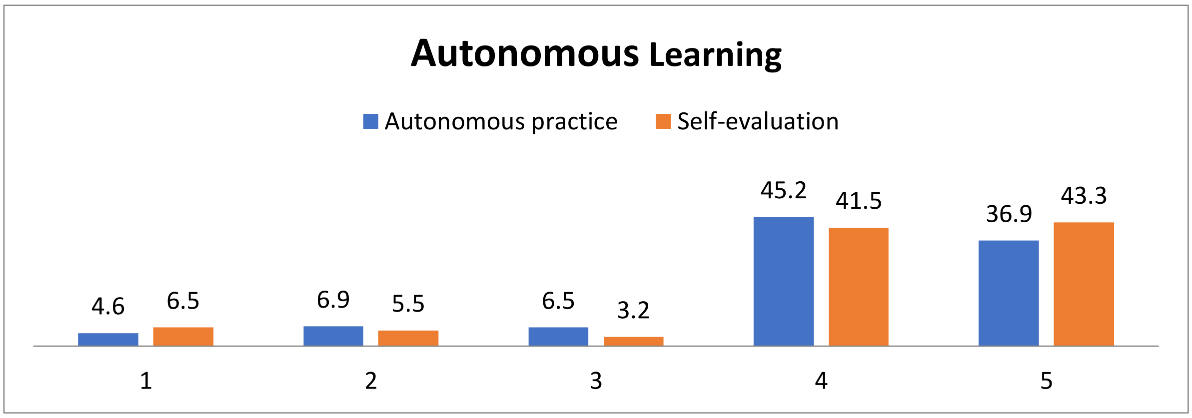
Item	Very Unimportant		Unimportant		Neutral		Important		Very important		Mean	Stand dev.
	F	%	F	%	F	%	F	%	F	%	M	SD
28. I do reading and writing assignments which are not compulsory	10	4.6	15	6.9	14	6.5	98	45.2	80	36.9	4.03	1.06
29. After completing a reading-writing activity, I identify the problem areas and plan for how I will improve for the next time	14	6.5	12	5.5	7	3.2	90	41.5	94	43.3	4.10	1.12
30. When I do reading and writing activities, I ask classmates for comments and suggestions	6	2.8	20	9.2	33	15.2	90	41.5	68	31.3	3.89	1.04
31. When I do reading and writing activities, I ask the teacher for corrections and suggestions	10	4.6	15	6.9	22	10.1	105	48.4	65	30	3.92	1.04
32. To improve my reading and writing	10	4.6	13	6	6	2.8	96	44.2	92	42.4	4.14	1.04

skills, I need a writing course from a teacher on a one-to one basis												
33. To improve my reading and writing skills, I need a writing course from a teacher in a small group	12	5.5	10	4.6	26	12	99	45.6	70	32.3	3.94	1.06
34. To improve my reading and writing skills, I need a teacher whom students can consult about their writing assignments face-to-face individually during class or office hours	9	4.1	9	4.1	10	4.6	102	47	87	40.1	4.15	0.98
35. To improve my reading and writing skills, I need a teacher whom students consult about their writing assignments through the internet	7	3.2	15	6.9	9	4.1	100	46.1	86	39.6	4.12	1.00
36. To improve my reading and writing skills, I need an online writing course through the internet	13	6	12	5.5	8	3.7	107	49.3	77	35.5	4.03	1.07
37. To improve my reading and writing skills, I need a resource centre (e.g., library) that provides guidebooks to effective writing	16	7.4	9	4.1	11	5.1	114	52.5	67	30.9	3.95	1.09
38. To improve my reading and writing skills, I need a website that provides electronic materials such as handouts, guidebooks , and other references	6	2.8	7	3.2	13	6	80	36.9	111	51.2	4.30	0.93
39. To improve my reading and writing skills, I need a journal that publishes students' writing in English	10	4.6	10	4.6	14	6.5	106	48.8	77	35.5	4.06	1.01
Macro-Societal Structures (MSS)											4.05	0.83

Table 7. reveals the percentages and frequencies of students' responses to the perceptions of macro-societal structures. While Items 28 and 29 shed light on students' self-dependent literacy learning, Items 30 to 39 are designed to inspect students' perceptions of the usefulness of the human and material resources in their wider learning context.

First, Items 28 and 29 are designed to elicit information about students' use of practice and self-evaluation as academic literacy strategies. As displayed in Figure 13, the majority of students surveyed (82.1% to 84.8%) view that autonomous practice as well as self-evaluation while doing compulsory or non-compulsory assignments as 'Important' or 'Very important' for the improvement of their literacy skills.

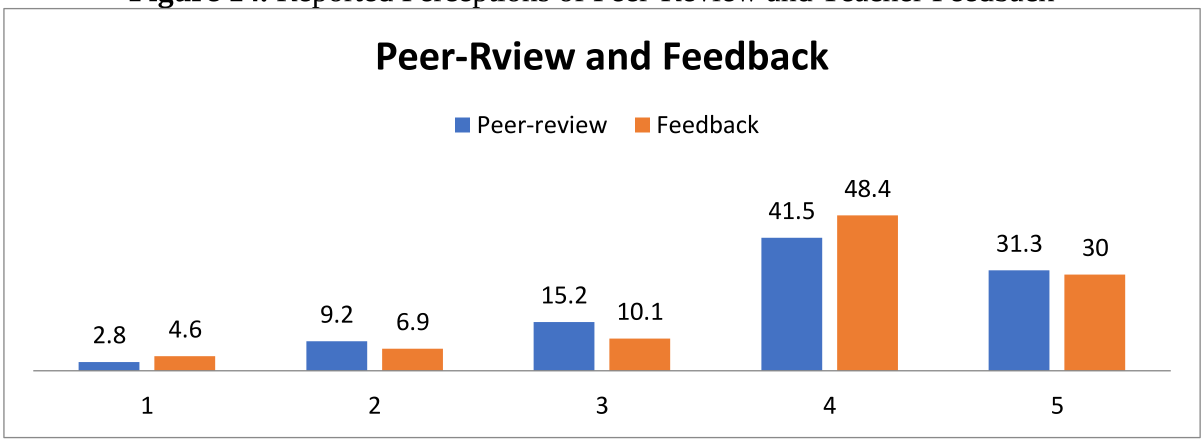
Figure 13. Perceived Importance of Autonomous Learning



Although around three fourths of the respondents positively rate self-evaluation and, to a lesser extent, autonomous practice, roughly one sixth of the participants view self-evaluation and autonomous practice as' unimportant' or 'very unimportant'. All in all, the results reflect willingness to do optional reading and writing tasks or extra exercises outside the class and to regularly check own progress in literacy skills.

Figure 14 shows students' perceptions of the first two items regarding human resources as one aspect of the macro-societal structures associated with academic literacy learning and instruction.

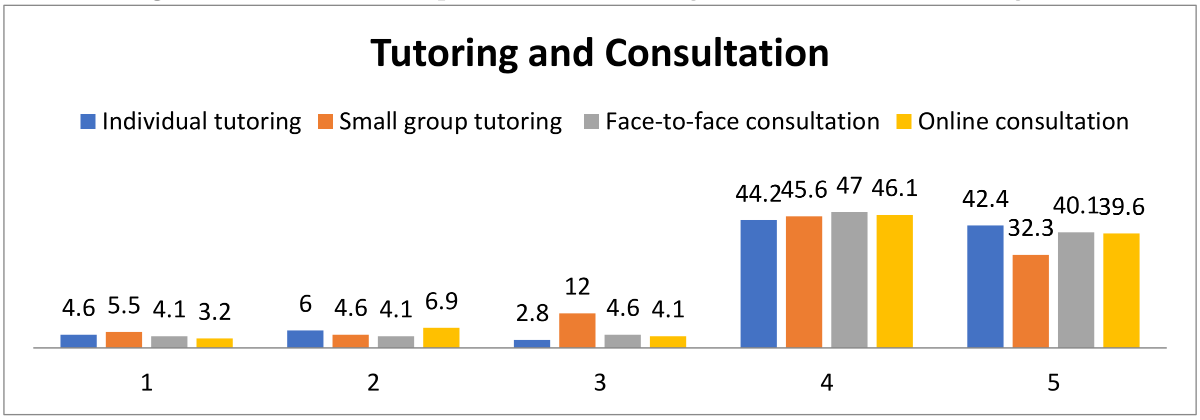
Figure 14. Reported Perceptions of Peer-Review and Teacher Feedback



The data show that although the majority of students preferred feedback, fewer of them reported that they view peer-review as important (n=158 for the item 'I ask classmates for comments and suggestions' and 170 for the item 'I ask the teacher for corrections and suggestions'). On the other hand, slightly less than one fourth of the respondents do not seem to value asking comments and suggestions from classmates and teachers as they view peer-review and feedback as 'neutral', 'unimportant', or 'very unimportant'.

For the items 32 and 33 on tutoring (To improve my reading and writing skills, I need a writing course from a teacher on a one-to one basis; To improve my reading and writing skills, I need a writing course from a teacher in a small group), more than two thirds of the participants (86.6% for individual and 77.9 for small group mode) view tutoring needs as 'important' or 'very important'.

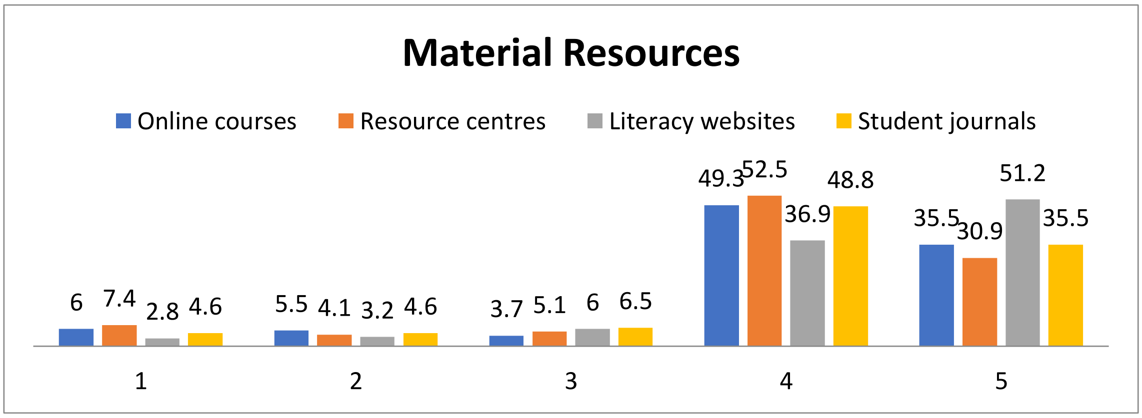
Figure 15. Perceived Importance of Tutoring and Consultation Strategies



Likewise, items 34 and 35 (To improve my reading and writing skills, I need a teacher whom students can consult about their writing assignments face-to-face individually during class or office hours; To improve my reading and writing skills, I need a teacher whom students consult about their writing assignments through the internet) are designed to elicit information on students' perceptions of consultation needs. 87.1% for item 34 and 85.7% for item 35 of the respondents consider consultation as 'important' or 'very important' with a preference towards individual over small-group tutoring and towards face-to-face over online consultation.

Last but not least, in the survey, Items 36 to 39 are designed to prompt students to self-report their use of material resources in order to develop their literacy skills (Figure 16).

Figure 16. Perceived Importance of Material Resources



Overall, the vast majority of the respondents display their need for the indicated resources by stating 'important' or 'very important' for the items: 36, 37, 38, and 39 with the percentages 84.8% for the item 'To improve my reading and writing skills, I need an online writing course through the internet', 83.4% for the item 'To improve my reading and writing skills, I need a resource center (e.g., library) that provides guidebooks to effective writing', 88.1% for the item 'To improve my reading and writing skills, I need a website that provides electronic materials such as handouts, guidebooks , and other references', and 84.3% for the item 'To improve my reading and writing skills, I need a journal that publishes students' writing in English'. Worth noting, the results show respondents' willingness to make use of online courses, resource centers, academic literacy websites, and to larger extent student journals, in order to develop English literacy skills.

Finally, responses to items 30 to 39 indicate that around one sixth of the participants are unfamiliar with or unaware of the usefulness of human and material resources.

As shown in the preceding sections of this paper, the questionnaire covers areas of academic literacy perceptions, which include the subscales of personal attitudes, cognitive skills, social practices, and macro-societal structures. Like Oxford's (1990), 'Strategy Inventory for Language Learning' (SILL), the questionnaire includes several scales. All these subscales are cumulative in the sense that composite subscale scores are formed by computing the means of the individual item scores in a subscale. It is in this way that the fifth and sixth research questions are answered in the sections that follow.

Discussion

The goal of this study is to examine academic literacy with the aim of tailoring EFL reading and writing courses at university. In so doing, four research questions are proposed concerning the academic literacy perceptions of Master students at the English department of Biskra University.

The results of the study support the original hypothesis that academic literacy is a multifaceted and complex construct composed of interdependent subsystems in a way that the whole is more the sum of its parts. The present paper summarizes the study results as they relate to the rationale of this study set out in Paper One. The inferences that are drawn from the results are discussed in the same order as the research questions initially produced for the study.

Research Question 1: *What are EFL students' personal attitudes perceptions with regard to academic literacy?*

First, the majority of the respondents in this study indicate a strong desire not only for enhanced examination performance and better future job career but also for learning English reading and writing simply because of enjoyment. This result can be considered as an important indicator of the subjects' high determination and willingness to develop English academic literacy. Additionally, the respondents scored high on extrinsic motivation as well as on intrinsic motivation items. This might arise from their awareness of the importance of literacy skills for their success at university. Also, competition over the opportunity to get scholarship encourages most students to make effort to be excellent at reading and writing. It is also encouraging not only for teachers but also for curriculum developers to have such an English learner motivational profile since the medium of instruction is English, which sets the basis for higher-order skills since motivation is a key factor that enables learners to attain the academic literacy skills necessary for university success (Matsumoto et al., 2013; Sasaki, 2011). As Ryan and Deci (2000) argue, it is vital to promote student levels of intrinsic motivation since this can lead to a higher quality of work being produced, which in turn constitutes positive benefits, not only for students but also for lecturers and the university as a whole.

Second, the subjects report positive attitudes towards mother-tongue use, both when planning and when searching for words, expressions, and structures (composing) basing on first language literacy when having to read and write in English. However, the findings also show that some students seem to be unaware that using L1 when composing is an effective strategy for determining the selection, relevance, and accuracy of phrases while writing and for reasoning about lexical and syntactic choices and rhetorical organization as well as meta-linguistic knowledge about lexical and rhetorical equivalences. The reason behind this finding is probably that EFL teaching often neglects the assumption that language switching is an important learning and use mechanism (Larsen-Freeman, 2011; Cumming, 2013), meaning that future programs need to pay more attention to this aspect of L2 academic literacy.

Another important finding is the interrelations of views towards language switching while planning and composing in the second language, which revives earlier theoretical accounts of cross-linguistic interdependence of academic skills (Cumming et al., 1989). Specifically, the students' views hint at a stronger tendency to switch to L1 when composing in comparison with planning. The latter finding is in contradiction with previous research showing that L2 learners use more L1 when generating and organizing ideas while rely on L2 for text-generation (Wang and Wen, 2002). It might be explained by different learner populations (L1 Arabic vs. L1 Chinese), differentially L1 use- encouraging/discouraging instructional approaches, or presumed difference between learners' attitudes towards language switching and their actual language switching behavior. While a number of studies have investigated Chinese EFL learners' language switching, research that examines Arab EFL learners' L1 use while writing, whether for generating and organizing ideas or for choices of words and phrases, is scarce, and also goes beyond the scope of the current study.

These findings are in consonance with many previous studies and can be explained as one of characteristics of bilingualism. Nonetheless, they raise the issue that the nature of the integral role L1 plays in L2 performance is a controversy. On one hand, Van Weijen et al. (2009) examined writers' use of their first language (L1 Dutch) while writing in their second language (L2 English). They focused on planning sub-processes by analyzing the occurrence of a number of conceptual activities, including Generating ideas, Planning, and Meta-comments when writing argumentative texts in L1 and in L2. Although the study design has a number of shortcomings including the notion of 'general writing proficiency' which clearly neglects the rhetorical differences between L1 and L2 (Yu, 2008), the findings indicate that all participants used their L1 while writing in their L2 to varied extents across planning sub-processes or what they call as 'conceptual activities'. Van Weijen and colleagues found that L1 use during L2 planning is negatively related to L2 text quality while L2 use appears to be positively related to L2 text quality for Goal setting, Generating ideas, and Structuring.

On the other hand, there seems to be a consensus among L2 academic writing scholars about the strategic use of L1 when composing. For instance, Sasaki and Hirose (1996) found that L1 writing ability is the second chief factor in explaining L2 writing ability variance and a more recent study by Sparks et al. (2012) shows that L1 reading achievement and L1 print exposure contribute to the prediction of L2 writing proficiency. Likewise, Murphy and Roca de Larios (2010) found that advanced Spanish learners of EFL effectively used L1 resources for text-generation when carrying out a narrative and an argumentative essay tasks. Specifically, in their study, L1 is used in order to search for lexical items in the L2 to express their meanings and to compensate for the limited availability and accessibility of relevant linguistic knowledge, thereby, providing preliminary evidence to Cumming's (2013) claim that language switching is "a strategy that is used more frequently and effectively by more skilled than less skilled writers" (p. 134). Overall, the findings suggest that his latter assumption needs further scrutiny in the present study's context where the question whether teachers should refine students' attitudes by encouraging or discouraging L1 use remains unanswered.

Third, a high number of the subjects indicated their enjoyment to do tasks or activities with the teacher and in pairs or group work with obvious preference for collaborating with the teacher. When the responses given to the items regarding active involvement in developing their literacy skills were considered, it is likely to say that participants see the teacher's collaboration in selecting reading materials, writing activities, and encouraging particularly in the activities which require students' participation as vital to academic literacy development. In other words, it can be inferred that respondents tend to view developing academic literacy as a collaborative endeavor rather than individual effort. Similarly, the long hours that the respondents have to spend in the classrooms might cause them to do tasks together in order to enjoy themselves in learning to read and write. This tendency of students might be due to the recent learner-center reform (Badjadi, in press) which assumes shared responsibility for learning. Although the students perceive collaborative academic writing more positively and consider it useful in enhancing their academic literacy, designing communicative literacy tasks in which students work together can be effective in that the students may be used to such kind of learning. According to previous research (D¨ornyei and Tseng, 2009), these attitudes are favorable to advanced reading-writing skills, especially that graduate learners are expected to decrease their dependence on their teachers and take initiative role in many aspects of academic literacy learning.

Interestingly, motivation items interrelate to students' views towards interactive learning. Among the factors that could influence the outcome of L2 learning, motivation has been widely acknowledged as a critical determinant of success in language learning, and this belief is strongly supported by numerous studies on L2 motivation in the past three decades (D¨ornyei, 2009b; Csiz´er and D¨ornyei, 2005; D¨ornyei and Csiz´er, 2002; Gardner, 1985; Gardner and MacIntyre, 1991; Schmidt and Watanabe, 2001; Tremblay and Gardner, 1995). These results are consistent with previous findings indicating that high level of motivation promotes appreciative attitudes towards cooperative and collaborative learning approaches (Badjadi, in press), which, in turn, increase motivation for language development (Dörnyei and Tseng, 2009).

The findings extend previous research by pointing to the perceived interdependence among cooperative and collaborative learning attitudes and with the interconnected intrinsic and extrinsic motivation. Unlike previous studies which focused on students' perceptions and problems encountered when implementing collaborative learning (e.g., Shehadeh, 2011; Lin and Maarof, 2013), the focus of the present study is on the reciprocal relationships between views towards interactive learning and other affective factors, in this study motivation. This is in line with socio-cognitivists' claim that activities, tasks, functions, and understandings do not exist in isolation; they are part of broader systems of relations which "arise out of and are reproduced and developed within social communities, which are in part systems of relations among persons. The person is defined by as well as defines these relations." (Lave and Wenger, 1991, p. 53). The sociocognitive view of SLA takes its cues largely from pedagogically-oriented L1 research on situated cognition, social linguistics, and learning-as-participation viewing inseparability of mind-body-world, adaptation, and alignment (Atkinson, 2002, 2014). For instance, Atkinson et al. (2007, p. 169-170) contend that "Indeed, if thinking, feeling, doing, and learning are all part of a larger ecological circuit … then what goes on between and what goes in cannot be properly be separated". The socio-cognitive approach, they further argue, views "mind, body, and world relationally and in an integrative way, as constituting a continuous ecological circuit." In addition to providing evidence for the complexity of L2 motivational system (D¨ornyei, 2009), the findings support the presumably fruitful integration of complex systems theory and socio-cognitive theory.

To sum up, the present study indicated that majority of the respondents seemed to have high motivation and positive perceptions, which is necessary for the development of academic reading (Yamashita, 2004; Takase, 2007) and writing (Gambrell et al., 2007; Woodrow, 2011). However, they may need awareness-raising training for some areas such as strategic language switching and advanced interactive learning skills such as peer-review.

Research Question 2: *What are EFL students' cognitive skills perceptions associated with academic literacy?*

The second research question is focused on the cognitive skills of academic reading and writing as perceived by the Master students at Biskra University. In response to the aforementioned question, the dimension of cognitive skills perceptions addresses two aspects: reading and writing. Reading consists of reading comprehension and analytical reading sub-aspects while writing consists of planning, drafting, and revision sub-aspects.

Similar to pre-service teachers in other EFL contexts such as Thailand (Vibulphol, 2004), the respondents emphasized the learning of vocabulary while reading to a certain extent despite that their educators seldom include vocabulary teaching as a part of their lesson plans. However, for the reading comprehension and analytical reading sub-aspects, many students seem to be unaware of the importance of analytical reading activities that require consciousness of contextual information and linguistic resources while interpreting a written text. Addressing this need is crucial since the development of good foundational skills in reading is necessary for students' academic literacy success (Mason et al., 2013). In addition, in academia, writing as well as topic/disciplinary knowledge are often constructed by studying source texts (Ackerman, 1990; Proske and Kapp, 2012; Epting et al., 2014), yet the respondents in this study seem not to appreciate reading-and-writing across different texts, probably because of difficulty. As described by Grabe and Zhang (2013, p. 14-15):

This sort of task can involve, for example, a comparison of information or ideas from multiple texts, a set of text-based solutions to address a set of text-based problems, a set of texts that identify multiple aspects of an issue, or a set of texts that require the writer to form an argument. The development of writing skills that allow students to use multiple textual resources to synthesize and interpret text information is a quintessential academic task. It is also a difficult writing task to master, even for many L1 students.

To tackle this issue, Grabe and Zhang (2013) focused on developing Chinese EFL students' ability to combine reading and writing (reading/writing) skills to learn and display content knowledge. They also provide a detailed list of several useful tips to help EAP students succeed in their acquisition of academic literacy including the need for well-developed reading comprehension skills, need a large academic vocabulary, and opportunities to practice reading/writing tasks.

Moreover, the data drawn from the descriptive statistics reveal that the process-focused instructional practices currently in use in EFL academic writing have been successful in raising students' awareness to the importance of several writing sub-processes. This result can also be considered as reflections of classroom practice habits of teachers. For instance, in the context of the present study, Master students are often supported by receiving regular process-oriented materials; the similar contextual conditions which students have been exposed to before can be the indicator of this finding (Badjadi, in press).

For planning, many of the students mentioned having a writing plan or outline before writing. Planning strategies have been found to be significant to skilled student writers (Ridhuan and Abdullah, 2009). More specifically, idea generation, organization, and goal setting are found to affect L2 writing fluency, grammatical complexity, and lexical complexity (Johnson et al., 2012). In fact the majority of students seem to be well informed about the importance of the pre-writing stage. This finding might be a result of instruction which focuses on teaching how to brainstorm to generate ideas and plan by making a well-rounded outline to render the writing process more efficient as students would focus on conveying the intended meaning rather than continuously searching for ideas to continue writing.

Only a few participants reported starting to write without having any plans, a behavior which has been found detrimental to writing quality (Baker and Boonkit, 2004). Although the findings reveal a tendency to focus on the several composing processes, this study does not delve into differences between successful and less successful reader-writers. Expectedly, substantial differences can be found between the two pairs in the perception and use of strategies for planning, organizing, evaluating and resourcing (Victori, 1999). Despite that pre-writing stage has been found problematic to many writers (e.g., Maarof and Murat, 2013; Shin, 2008; Johnson, 2011; Mancho´n and Roca de Larios, 2007; Zaid, 2011; Chen, 2011), the findings of the present study show that it might be amenable to instruction though, at least at the level of awareness raising.

Many students seem to avoid revision which is a crucial writing sub-process that differentiates the skilled students and less skilled students yet it might be challenging to EFL reader-writers (Alhaisoni, 2012; Diab, 2010; Stevenson et al., 2006). This result might arise from the teachers' infrequent use of workbook activities and revision materials because of time constraints or not re-conceptualizing revision in teacher-education programs (Badjadi, 2013). Additionally, the finding that many students are unaware of the significance of revision is consistent with previous studies showing that EFL students pay little attention to revision (Yang, 2013) probably because they do not know how to revise or what to focus on during revision (Faigley and Witte, 1881; Victori, 1999; Hu and Chen, 2007). For instance, Hu and Chen (2007) found that the majority students revised mostly lexical and grammatical elements rather than the discourse structure which reflects a surface writing approach. A relevant explanation proposed by Cumming (2013, p. 138) is stated as: "What may appear to be language infelicities or awkward writing styles arise from students striving to reconcile competing personal goals and aspirations, adopt new language and discourse forms, acquire and display new knowledge, and satisfy perceived expectations of professors and others". Therefore, the findings point to the need for teaching strategies with the aim of developing students` revision skills with explicit information on which techniques to use for which type of reading or aspect of revision.

Moreover, the findings are in consonance with previous studies from the perspective of pointing towards recognition by the majority of students of the connectedness of reading and writing (e.g., Parodi, 2007; Doloughan, 2012). Major relationships have been acknowledged between academic literacy reading and writing in numerous L1 as well as L2 academic literacy studies. The reading-writing connection and the issue of the role and potential benefits of reading in relation to the production of writing is not new and can be traced back to early revision research (Fitzgerald, 1987). Also, As Dawson (2005, 71) points out, the idea of reading from the inside, that is, ''the practice of writing as a means of developing literary appreciation and critical skills'' was already a feature of the New Humanism from which the recent educational reform is driven (Badjadi, in press). McCaw (2011, p. 28) further concludes that ''the benefits of reading for writers depends (sic) on precisely what sort of reading we are actually talking about''. Hence, what is, perhaps, new today is the challenge that faces EFL educators is determining what students need to read and how in order to achieve optimal academic literacy development.

One inference that can be made from the afore-mentioned finding of this study is that EFL students, as in similar EFL learning contexts, seem to perceive the associations among reading and writing activities paving the way for the potential benefits of strategy-based instruction in the context. Actually, many exploratory studies have examined the strategies used by more- and less-proficient L2 reader-writers. For instance, Okamura (2006) distinguished two sets of writing-oriented reading practices. The first set revolves around reading academic texts in one's field (subject knowledge-oriented) to learn typical writing patterns. This practice is found to be more ubiquitous than the second one which involves giving direct attention to mastering English speakers' language use (language-oriented strategies). Likewise, focusing on the effects of reading on writing, Plakans (2009) found that higher scoring writers used more global strategies such as skimming for the main ideas, skimming for the gist, and asking questions together with mining strategies such as scanning the source texts for ideas to use in writing. Meanwhile, the effectiveness of strategy-based integrated academic literacy instruction is still under scrutiny.

Furthermore, the finding that L2 writing is perceived as related to L2 reading is in line with the theoretical assumption argued for by Wolff (2000) who has proposed a 'reading-for-writing' "approach in which second language learners in their reading should be guided to look for features in a text which might be helpful for their own writing" (p. 111). This particular approach might be a promising first-step in EFL academic literacy instruction, especially with the current absence of reading courses. In addition, the fact that the students in this study are, at the same time, pre-service English teachers brings to mind Hirvela's (2004, p. 2-3) insightful comment:

Reading has traditionally been seen as a skill to be taught separately from writing, as well as something students are somehow expected to already know about when they reach the writing course. Teaching reading in a writing course may seem like an odd idea, if not an entirely unnecessary one. It may also be the case that second language writing teachers feel ill prepared to teach reading, especially in connection with writing. How many [teachers] have actually been taught to teach the two skills together?

Nonetheless, answers regarding the teacheability of writing through reading and its efficiency remain inconclusive. In this vein, Grundlach (2003, p. 251), on one side, advocates cultivating positive perceptions and raising students' awareness that "reading from the perspective of a writer and asking what can be learned from what one reads is no less important for a high school junior, a second year law student, or an engineer than for a novelist or a poet". In so doing, he suggests that reading as a writer is an important tool in the armory of the writer and a way of approaching text that invites the reader to take an active part in the learning process and to treat what they read ''as a source of information about how writing works and what writing can do''. On the other side, Gambell (2001, p. 185) points out that despite students' intuitions about the connectedness of reading and writing, they may fail to see the ''discourse relations between assigned readings and assigned writing tasks'', which are not often explicitly inducted by their lecturers into particular discourse communities. Nevertheless, they appear to ''subconsciously glean aspects of discourse features from reading'' (p. 186) which they then attempt to apply in their own writing (Okamura 2006; Plakans 2009). While both Grundlach (2003) and Gambell (2001), among many others, acknowledge the potential benefits of reading for writing, they differ in the extent to which they believe such a connection can be modeled and taught. For Grundlach (2003), instruction does not guarantee learning. For Gambell (2001, p. 188), explicit articulation by instructors of their own reading and writing processes can provide students with the metacognitive knowledge they need to recognize the essentially social nature of writing.

More importantly, with regard to the linkage between reading-writing perceptions, the findings indicate synergic relationships among questioning, textual-analysis, and revision. This finding extends previous research by providing evidence to the theoretical value of revision in L2, especially from with regard to its interconnectedness with reading. In this line of thought, Fahim and Hashtroodi (2012) found that teaching critical thinking to Iranian EFL university students enhanced their academic writing skills in general while Hanaoka and Izumi (2012)'s study showed that the use of model texts and reformulations may play important roles in EFL students' revision processes. Vice-versa, Hebert et al. (2013) meta-analytic review shows that extended writing enhanced reading comprehension better than question answering on measures where comprehension was assessed via an extended writing activity, whereas summary writing enhanced reading comprehension better than question answering on a free recall measure. In an L2 learning context, one study by Hassani and Maasum. (2012) has provided preliminary evidence that summary writing has stronger positive effects on reading comprehension than open-ended questions. The contribution of the findings of the present study lies particularly in the interdependence between reading-to-write (questioning and textual analysis) and writing-to-read (revision).

Research Question 3: *What are Algerian EFL students' social practices perceptions associated with academic literacy?*
In the third research question, the aim is to investigate the extent to which Algerian EFL students are aware of the social practices associated with academic literacy as perceived by Master students in learning English at Biskra University. The dimension of social practices consists of rhetoric and source use perceptions. The data regarding this question are collected in the second part of Section 3of the ALPQ.

To start with, the finding that students' moderate awareness of social practices as compared to their awareness of the overall cognitive skills in the writing process rings a bell with regard to an over-emphasis on process pedagogies instead of the more recent genre approaches (Hyland, 2008a; Tardy, 2006, 2009; Tracy et al., 2009; Purcell-Gates et al., 2007; Olinghouse and Wilson, 2013; Chen and Su, 2012). As suggested by Hyland (2003), "Students not only need help in learning how to write, but also in understanding how texts are shaped by topic, audience, purpose, and cultural norms" (p.14). Empirically speaking, while Hashemnezhad and Hashemnezhad (2012)'s study provides inconclusive evidence for process and post-process approaches, Graham and Sandmel' s (2011) meta-analysis, with English L1 students though, shows that the process approach neither result in a statistically significant improvement of students' motivation nor enhance the quality of struggling writers' compositions. Therefore, the findings of the present study point to a need for the fast integration of approaches that emphasize the social nature of writing as a critical update to EFL academic literacy pedagogy in the Algerian context since, presumably, learners can benefit from exposure to various genres frequently practiced through reading-writing activities.

Moreover, the findings show that the EFL pre-service teacher program examined needs a rework of L2 rhetoric and source-use instruction for better learning outcomes and professional training. This is because teachers "who understand how texts are typically structured, understood, and used is in a better position to intervene successfully in the writing of his or her students, to provide more informed feedback on writing, to make decisions about the teaching methods and materials to use, and to approach current instructional paradigms with a more critical eye" (Hyland 2007, p. 151). This need have been addressed in previous studies from three main perspectives: genre-analysis (McDonald, 2006), meta-cognitive strategy development (Negretti and Kuteeva, 2011), and teacher-guided step-by-step tutoring (Tardy, 2010; Graham et al., 2013). First, with the students' moderate awareness of the social practices associated with academic literacy, it is necessary to draw their attention to the rhetorical aspects of writing through a genre-pedagogy that promotes transferability of writing knowledge to different academic literacy activities as research has shown that students with a solid grasp of rhetorical functions develop an accelerated ability to learn how to learn to write in new discursive situations (McDonalds, 2006). Integrating the reading-writing connection with the genre perspective, Yoshimura (2009) studied the effects of connecting reading and writing using a checklist based on ways of reading which are likely to promote the development of writing ability. The results showed that connecting reading and writing has positive effects on EFL reading. Second, one example of meta-cognitive strategy instruction is Negretti and Kuteeva (2011)'s study where pre-service English teachers at a major Swedish university received meta-cognitive awareness-raising training within ESP genre-based academic reading and writing instruction. This instruction enhanced L2 students' ability to interpret and compose academic texts. However, the researchers found that all study participants developed declarative (what) and procedural (how) metacognitive knowledge of genre-relevant aspects of academic texts, but only a few demonstrated conditional (when and why) knowledge of the genre in their reading analyses and writing assignments. Third, Tardy (2010) and Graham et al. (2013) recommend requiring that students write frequently, creating a supportive classroom where students' writing development is encouraged, and directly teaching reading and writing skills, strategies, and knowledge in integration.

Furthermore, one inference that can be made from the findings of the present study is the interdependence of cognitive skills and social practices subsystems at least at the perceptual level. This reciprocal relationship may lend support to instruction designed at interface of meta-cognitive and meta-pragmatic knowledge. The complex systems theory approach proposed in this study supports raising students' awareness of the language learning processes associated with socialization into new discourse communities. As argued by McCaw (2011, p. 28), it is necessary to bridge: "the gap between functional interpretation and the more expansive forms of textual interpretation that are likely to further students' understanding and appreciation of how writing works and what being a writer means within the context of a wider culture." Thus, the findings of the present study call for a re-consideration of the modes and purposes of reading in relation to the development of academic writing.

Finally, adopting a complex systems theory supports the view of academic writing as involving a range of textual and interpersonal interactions. For example, Green (2013) found that one factor distinguishing more from less successful academic writers is the engagement in textual interactions which provide information about genre, rhetoric, language and the communities of practice within which they write. Other distinguishing factors include stronger authorial identities, sophisticated identification of audience, and rational selection of the key ideas to include from source texts. What appears to be missing in current theoretical accounts of second language academic literacy is attention to the interconnectedness of cognitive and pragmatic knowledge which is more often referred to in speech development. In this vein, Badjadi's (2016) meta-analysis presents evidence that meta-pragmatic discussion about target features' use substantially increases the effectiveness of instruction as it provides scaffolding by bridging the gap between learners' competence and target language pragmatic norms. Although the present study does not experimentally examine the effectiveness of instruction designed according to a particular theoretical perspective, it generates the hypothesis that processing instruction and knowledge representation play significant roles in second language development, including aspects of academic literacy.

Research Question 4: *What are Algerian EFL students' macro-societal structures perceptions associated with academic literacy?*

The findings of this study reveal that EFL students' awareness of the importance of autonomy, human, and material resources that embody the macro-societal structures whereby evaluation and assistance of academic literacy learning occurs. This might be due to the decade-long student-centered reform implemented in Algerian higher education.

To begin with, the majority of the students appeared to like spending time for out-of-class activities to improve their English academic literacy and self-monitoring strategies such as evaluating their progress. Autonomy, in this study, relates to learners' cycles of self-evaluation and autonomous practice (Khodadady and Khodabakhshzade, 2012) though, as in many EFL learning contexts, “Unfortunately, opportunities to learn and practice reading-writing connections seldom happen in L2 settings” (Grabe and Zhang 2013, p. 10). Nevertheless, though such activities are seen as indispensable for developing autonomy in improving academic literacy skills, they require commitment, collaboration, and creativity on the parts of teachers, curriculum developers, and materials writers (Badjadi, 2015).

In addition, the finding that students seem to welcome doing extra-curricular reading-writing tasks while simultaneously identifying problem areas and trying figure out effective ways to enhance their literacy skills can be traced to two main primarily contextual reasons. Initially, it seems that learners’ previous learning experience can have an effect on the developmental level of self-regulating capacity. Subsequently, learners’ awareness of the roles of autonomous practice and self-evaluation in learning to write from textual sources (e.g., integrating complementary sources of information, interpreting conceptually difficult information) leads them to value practice on using textual resources in academic writing activities. Therefore, particularly relevant to the context of the present study is the view of self-regulation as dynamically adapting aptitude with ‘developable’ attributes that change incrementally with experience and instruction on a variety of academic literacy activities.

With regard to the students’ approval of peer-review, the findings are in line with studies on positive attitudes towards collaborative writing (Shehadeh, 2011; Liu et al., 2009; Rienecker and Jörgensen, 2003; Büker, 2003). But they might need peer-review training, especially coupled with assistance through teacher-students conferencing. For instance, Min (2005) found that vague peer feedback and misinterpretation of writers’ intentions on the reviewers’ part are two major reasons why most of their comments are disregarded during writers’ revision in an EFL writing class. The students are then trained to generate more specific comments through clarifying writers’ intentions, identifying problems, explaining the nature of problems, and making specific suggestions. At the same time, individual assistance is provided to each student-reviewer through teacher–student conferences. This kind of training is likely to promote the effectiveness of learner-centered approaches by improving the students’ review skills, building confidence, and developing linguistic knowledge and meta-cognitive strategy.

To a slightly larger extent, respondents seem to deeply appreciate teacher feedback. This suggests students’ benefit from the reform and readiness to further increase it by introducing guided self-regulated strategy development (SRSD), especially for struggling reader-writers. The advantages of teacher feedback can be augmented through SRSD which aims to improve knowledge about writing, strategic writing processes, self-regulation and motivation (Wigglesworth and Storch, 2012; Storch and Wigglesworth, 2010; MacArthur and Philippakos, 2010). Additionally, teacher feedback can be extended beyond the traditional focus on form or meaning dichotomy to address students’ critical thinking essential for academic success. The explicit strategy and self- regulation instruction have been found to support growth in language production through providing students with models for incorporating more advanced vocabulary and complex sentence structures into their writing (Zumbrunn and Bruning, 2013; Guzel-Ozmen, 2009; Worley and Martin, 2005; Yang, 2009). For example, with revision in particular, Song and Ferretti (2012)’s study shows that SRSD revision instruction based on teaching argument schemes and critical questions enriches college students’ written production with counterarguments, alternative standpoints, and rebuttals. Overall, the study’s findings point to the timely incorporation of strategy instruction that increases college EFL students’ sensitivity to alternative perspectives and awareness of the critical standards for sophisticated academic production.

Moreover, the majority of students in this study are likely to be aware of the importance of tutoring and consultation. These results are consistent with those of the research study done by Gopee and Deane (2013) who suggest that perceived lack of tutor support is identified as a major barrier to academic writing. Stressing the importance of mentoring, Belcher (1994, p. 32) notes: "what is crucial for student success, regardless of language and cultural background, is finding, 'a mentor who can inspire enough trust and admiration in students to encourage the risk-taking entailed in challenging and attempting to contribute to the established knowledge of a community". Effective tutoring have been found to improve the reading strategies of students, to familiarize them with the literacy genres pertinent to their field of study, to introduce relevant vocabulary, and to improve students' ability to read, interpret, and respond to academic texts yet uptake of tutor advice is likely to be higher when suggestions are direct and include scaffolding moves by the tutor (e.g., marking of critical features in the text, simplification of the task, goal-orientation, and modeling) and when learners take notes and actively participate in the conversation. From this perspective, Tardy (2010) and Parkinson et al. (2007) provide useful pedagogically-oriented frameworks for tutor role in developing students' academic literacy through scaffolded reading and writing courses where students are supported by means of extensive tutor feedback and step-by-step small-group practice.

When the perceived importance of the self-access centers available in the school library and other material resources was considered, the results revealed that the subjects are actually aware of the support available to them. Students indicated they would welcome the opportunity to enhance their skills as they see a direct correlation between this support and academic success. Unlike Chang's (2009) study which examined students' perceptions of the usefulness of language learning strategies using the Strategy Inventory for Language Learning (SILL) by Oxford (1990), and revealed moderate awareness of the usefulness of macro-societal strategies among EFL students surveyed as compared to ESL students, the findings of the current study indicate increased awareness of the socio-cultural turn among Algerian EFL learners, probably due to the socio-cultural originated reform since 2007. The core idea of the recent educational reform is that learning is inherently social in nature. The nature of the interactions among learners, the tools they use within these interactions, the activity itself, and the social context in which the activity takes place shape learning. Real-world contexts, where there are social relationships and tools make the best learning environments (e.g. Parks and Raymond, 2004; Gao, 2006, Atkinson, 2003; Matsuda, 2003).

While some students favor local resources, others prefer internet resources. One reason is perhaps the mounting use of the audio-visual and social media. This finding provides support to the potential usefulness of web-based learning tools in the Algerian context (Alias et al., 2012; Windsor and Park, 2014; Chang and Tseng, 2011; Lage-Otero, 2007; Hung, 2006; Stapleton, 2010; 2012; Mak and Coniam, 2008). The findings are consistent with previous studies showing that many L2 graduate students realize the usefulness of digital media and software as they carry out a variety of academic literacy activities (Stapleton, 2012; Kessler et al., 2012; Laquintano, 2012; Ritchie and Black, 2012). As pre-service teachers, EFL graduate students in the context of this study can also benefit from training on online course design. Emphasizing collective agency in academic literacy development, Windsor and Park (2014) focused on the experience of designing constructed Wiki tasks to coordinate and formalize the concepts and processes involved in an academic literacy program.

Respondents' interest in student journal signal their readiness for genre-based approaches highlighted in previous studies stressing the importance of encouraging students' production of discourse that is appropriate to the situation or context of use (Belcher, 1995; Askehave and Swales, 2001; Herrington, 1994; Hyland, 2000; Bazerman, 1988, 1994, 2004, 2005, 2009; Kress, 1999; Swales, 1990, 1993, 2004). These researchers argue that sophisticated genre awareness may develop students' ability to make informed linguistic choices, to communicate effectively in society, and to participate in academic disciplines by taking into account the target audience, the communicative purpose of the genre, and the conventions socially constructed by the discourse community. Despite that Araújo (2012) found that students may demonstrate an awareness of genre conventions theoretically but fail to transform their knowledge into effective practice. Therefore, providing students with sufficient real-world practice opportunities such as book review or journal writing is essential to eventually achieve advanced academic literacy skills.

Furthermore, findings with regard to the macro-societal structures dimension are in line with sociocultural models which posit that learning is not purely cognitive, but instead is shaped by the context, culture, and tools in the learning situation. Vygotsky, who based his work on the concept that all human activities take place in a cultural context with many levels of interactions, shared beliefs, values, knowledge, skills, structured relationships, and symbol systems. These interactions and activities are mediated through the use of tools, either technical (machines, computers, calculators) or psychological (language, counting, writing, and strategies for learning), provided by the culture (Vygotsky, 1978, 1999; Donato and McCormick, 1994; Lantolf, 2011). In a sociocultural perspective, academic literacy development is not only the result of students' individual cognitive choices but also of the mediation of particular learning communities whereas a complex systems theory perspective highlights the interaction of mental cognition and social interaction.

Summing up, for the dimension of macro-societal structures, three aspects have been discussed; autonomy, human resources, and material resources. Because many students in the first and second year groups reported appreciation of peer and teacher feedback, they gave importance to consulting teachers for feedback, seeking tutoring advantages, and using peer-review occasions to complete their reading-writing activities. Nonetheless, the challenge that remains for universities and EFL educators to face is redesigning the learning environment so that newcomers can actively participate in authentic social practice in rich and productive ways.

Conclusions

At the level of cognitive skills, many students might be unaware of the importance of analytical reading activities that require consciousness of contextual information and linguistic resources while interpreting a written text. Addressing this need is crucial since the development of good foundational skills in analytical reading and critical thinking is necessary for students' academic literacy success. Also, the findings point to the need for teaching strategies with the aim of developing students` revision skills with explicit information on which techniques to use for which type of reading or aspect of revision.

At the level of social practices, the finding that students' moderate awareness of social practices as compared to their awareness of the overall cognitive skills in the writing process rings a bell with regard to an over-emphasis on process pedagogies instead of the more recent genre approaches. Students' perceptions with regard to the social practices dimension of academic literacy point to a need for the fast integration of approaches that emphasize the social nature of writing as a critical update to EFL academic literacy pedagogy in the study's context. The findings also show that the EFL pre-service teacher program examined needs a rework of L2 rhetoric and source-use instruction for better learning outcomes and professional training.

Fourth, the graduates who took part in this study reported that they are aware of the support they need to receive. While no studies have been conducted to examine students' readiness for implementing the student-centered reform, the findings of this study suggest that they have positive perceptions towards their active role in developing their L2 academic literacy. Hence, the next step is to prepare students to make the most of it in ways that promote their EFL academic literacy development since the early semesters of their university education. In essence, autonomy together with human and material resources are perceived to be among the variables that are perceived to determine students' success with academic writing and lead to various benefits in terms of gaining a university qualification, developing critical analysis skills, and others. To this end, it seems that universities' academic literacy support centers have a very important role to play in terms of both remedial work and proactive enhancement of L2 literacy skills.

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AN ESP-BASED LEARNING DESIGN FOR STUDENTS' ENTREPRENEURIAL ENHANCEMENT

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Abstract: *Entrepreneurship education today plays an important role in supporting Indonesian government program to alleviate poverty and unemployment. As the successor to the nation, high school students are required to have an entrepreneurial skill as a provision for their future lives. Global competitiveness in the entrepreneurship field forces students to master English for becoming good entrepreneurs both nationally and internationally. This research aims at designing an ESP learning design for vocational high school students at SMK PGRI 20 Jakarta to enhance their entrepreneurial skill. The participants of this research were 40 students of the twelfth grade of Automotive 2 class. The research method carried out four key stages in an ESP learning design, namely: needs analysis, course (and syllabus) design, materials selection (and production), as well as teaching and learning evaluation. Contributing to the students' success in learning ESP, a thorough needs analysis was conducted. Questionnaires were distributed to gain information of students' language needs which include three significant aspects, that is, Present Situation Analysis (PSA), Learning Situation Analysis (LSA), and Target Situation Analysis (TSA). The research results revealed that students' entrepreneurial skill can be enhanced through an ESP-based learning design with learner-centered syllabus as its main focus.*

Keywords: *ESP learning design, needs analysis, entrepreneurship education, entrepreneurial skill*

Introduction

The competitiveness of seeking job opportunities nowadays is a challenge for everyone. In Indonesia itself, which has millions people, must face this global issue problem. In line with the fact that this case will lead a bigger problem to the nations' welfare concerning to the unemployment matter that is dominated by vocational high school graduations. Kusuma (2018) explains that in line with the information from the Head of Central Bureau of Statistics (BPS), Suhariyanto, the unemployment level of vocational high school (SMK) graduate is 8,92% which is considered high for it is still the duty of how SMK curriculum could respond to the working needs. As a response, best solution should be as the focus for all parties, particularly for government to overcome. To this challenge fulfillment, high school graduations are expected to be independent to think out their future for them to strengthen the spirit of entrepreneurship as one of the solutions for being employed.

Being a good entrepreneur means having sufficient entrepreneurial skills, and one of which is to have a good communication skill. Hence, increasing the quality of communication skill is a must for maximizing their performance in the entrepreneurship field. As the successor to the nation, high school students, specifically of vocational high school students, are required to have an entrepreneurial skill as a provision for their future lives. Global competitiveness in the entrepreneurship field forces students to master English for becoming good entrepreneurs both nationally and internationally. Therefore, the demand for designing English for Specific Purposes course in this situation takes into account for supporting their professional communication. For frequent times, language instructions in ESP courses have been very limited only to learn specialized lexicon and sentence structures. However, this present research brings about today's competitive learning materials that are deeply related to the professional use in the future.

ESP could be defined as the specific learning and language use that are needed for identified group of learners who have similar interests or occupation. Lantolf, Poehner, and Swain in Kinnear (2018) state that the demand of designing an ESP might be influenced by some factors, such as an increase of global business issues, education field development, and the conceptualization of language use. In the occupational purpose, technology such as software or application would be very helpful as the learning device to teach ESP. Benefitting technologies eases practitioners to record, to collect, to analyze real interactional data, and to generate teaching materials from those actual occupational situations, such as lawyer/client, businessperson/customer, and so forth (Belcher, 2004).

Accordingly, Johns and Dudley-Evans (1991) state that the definition of ESP needs to differentiate four absolute and two variable characteristics. The absolute characteristics comprise of learner's specific needs design, content-related materials, language issues, and is contrast to General English. Meanwhile, variable characteristics show that there is no restriction to the language learning only and there are some claims occurred, such as being focused on the learner's need, wastes no time, is relevant to the learner, is successful in imparting learning and is more cost-effective than General English.

Course designing and providing relevant materials are the most important aspects of ESP teaching (Javid, 2015). It has been argued that a good ESP course design really depends on the ESP practitioner's full involvement. This is supported by Hull (2004) who identifies that the ESP practitioner has a significant role to be as facilitator rather than presenter of content. Designing an ESP course needs a prerequisite phase to analyze the learner or participant situation in learning language. This phase is commonly known as needs analysis or student analysis. Malicka, Guerrero, and Norris (2017) assert that needs analysis typically collects information about the general focus and goals of the task characteristics and outcomes.

Robinson (1991) points out that needs analysis is conducted to not only for determining the objectives of the language teaching, but also for building the formative process and should be repeatedly analyzed. Furthermore, Dudley-Evans and St. John (1998) explain three major notions of ESP needs analysis, namely: Present Situation Analysis (PSA), Learning Situation Analysis (LSA), and Target Situation Analysis (TSA). PSA refers to the learners' strengths and weaknesses in language, skills and learning experiences. Furthermore, LSA is defined as an effective way of learning the skills and language. Lastly, TSA discusses about task and activities of learners in using English for target situation.

Graves (2000) points out that designing a language course should start with a big process of learning a language from the beginning to its implementation as a whole. The organized activities in an ESP course design are the results of needs analysis distributed as the preliminary tool for practitioners to gather learner's information of what to be included and not to be included in their language course (Belcher, 2006). Many studies had brought ESP discussions as Wu, Liao, and DeBacker (2016) in their research found that task-based instruction in ESP courses really fits to meet students' needs in raising their competencies, particularly in speaking and listening, whereas reading competency is not considered to have a significance difference during the learning process. Task-based instruction is proven to induce students' feedback to be their future language instruction. Accordingly, Khoshsima, Saed, and Ghassemi (2014) discussed that the needs analysis and materials evaluation become essential stages for meeting students' specific needs in the curriculum design used at tertiary education. Furthermore, Rahman (2012) asserted that language needs analysis helps undergraduate students increase their reading skill through the exploration of three fundamental elements, that is, Target Situation Analysis, Present Situation Analysis and Learning Situation Analysis.

Outlining to the explained background, the research urgency is that the vocational high school students' English skill levels must be developed since international communication is massively used in the entrepreneurship field. An attempt for English language difficulty problem of students facing the working field issues of their professional, designing ESP course has been arisen to the importance of language learning. This present research is aimed to design an ESP-based learning course to enhance students' entrepreneurial skills with a learner-centered syllabus design to improve and to ease students dealing with the ESP course activities. An increase of English language skills through the design of an ESP-based learning course is the outcome of this research.

Method

This present research was a qualitative research by examining the ESP approach as its data analysis. There were 40 students of the twelfth grade of Automotive 2 class as the participants. This research was carried out at SMK PGRI 20 Jakarta and is aimed to design an ESP-based learning in the Entrepreneurship subject with a learner-centered syllabus as its focus for students' entrepreneurial skill enhancement.

The ESP course is designed in accordance to the key stages of Dudley-Evans and St. John (1998) who define four procedures as the followings:

1. Needs Analysis

   Pointing out the importance of students' situation analysis before conducting the ESP program, questionnaires were distributed to see their strength and weakness which include three primary elements, namely: Present Situation Analysis (PSA), Learning Situation Analysis (LSA) and Target Situation Analysis (TSA).
2. Course (and syllabus) design which comprises of two main learning activities, that is, course activities and course assessment.
3. Materials selection (and production)

   The course materials are selected to fulfill the students' needs during they run the program design.
4. Teaching and learning evaluation

   This evaluation phase was carried out to evaluate the ESP program that students have undergone as the feedback of their learning activities.

Results And Discussion

Needs Analysis

Contributing to the students' success in learning ESP, a thorough needs analysis was conducted. To meet students' language needs, questionnaire was distributed that will then be analyzed. In line with the questionnaire, the students' Present Situation Analysis (PSA) pointed out that most of students have not had undergone English course or training. However, even though only few of them have joined an English course before, but they still need to run an ESP course to master specific English area, that is, ESP in the entrepreneurship learning. Moreover, it is also described that students' writing and speaking skills are weak as they are considered as the most difficult skills to achieve. The listening and reading skills are defined in a satisfactory level. Both the knowledge of grammar and vocabulary are in a good level. To this extent, the writing and speaking skills should be as the students' focus for them to also provide some comprehensible intake of other skills, such as listening, reading, grammar and vocabulary.

With respect to the Learning Situation Analysis (LSA), most of students prefer to learn speaking by practicing the skill with their peers. The learning method they choose is by doing some repetition and drilling of some difficult words to minimize their errors in speaking. Audio-visual aids put as the best devices in increasing their listening skill level. Most of them are likely to do the listening activities by listening English materials on tape recordings and to watch English program on the television. Accordingly, the Target Situation Analysis (TSA) showed that most of the students claimed that English is needed for their future carrier, such as communicating with native and non-native clients and handling some documents or reports. The highest level of their demand to learn English is about job promotion whereas personal development is only as their subsidiary reason of their learning objectives.

The written or printed course materials that are related to students' entrepreneurship learning are more preferred for them dealing with their ESP course. They assume that such written materials will be very helpful to do some project works in assigning their reading and writing tasks in the course. By doing writing-focused exercises related to their entrepreneurship learning such as making reports, writing business plan, handling with some other documents is the best way to improve their writing skill. With respect to the knowledge development about grammar and vocabulary, the students prefer to do grammar and vocabulary-focused exercises that are assigned by the instructors in the course. Hence, they tend to have a long time observation for doing their project work. The instructors are expected to be subject specialists in the course for helping students comprehend a more depth information particular language items used in the entrepreneurship field. The project works are preferable conducted by making a discussion with peers as they could share their thoughts and give the feedback to each other for minimizing their language learning weaknesses.

Course (and Syllabus Design)

The outline of course design is obtained from the students' needs on their learning expectations. Some parameters in the course design need to be investigated, starting off the objective of the course, the course time table, the types of assessments, the course materials, as well as the participants involved in the course.

Course Design

The ESP course in this present research is designed as *short*, *extensive,* and *one-off* course that is run for particular group and are not repeated. The course is conducted during their Entrepreneurship subject time table. This is due to their limitation of their learning time table, so it is designed only one and a half hours from three hours in total of their scheduled time. The length of time is proximately one and half hours per meeting that is considered enough for students to do several activities assigned by the instructors. The students will be treated as participants in the training of ESP course.

The participants are 40 students of the twelfth grade of Automotive 2 class in the Entrepreneurship subject. They are not yet experienced because mostly have not undergone English course. Because of that reason, the researchers conduct the course extensively as it can run in parallel with the subject course and generally remain flexible. The course is a *fixed* course design due to students' learning time table limitation since many course materials have to be covered on time. The focus of the course will be *narrow* in the learning aspects of speaking and writing skill that is identified as the students' lacks in language skills. The students claimed that both speaking and writing skills are the most difficult language areas to cover. Those two skills belong to weak category. The students' performance on speaking skill, writing skill, and other skills will be assessed only once, that is only at the end of the course, called by final test. To this importance, the students are asked to write reports or documents and to give presentation related to the specialized language items which are commonly used in the entrepreneurship field of their target learning. The test is assigned to measure the progress of both students' speaking and writing skills.

Table 1: Course Details

An ESP Course Design for Students' Entrepreneurship Learning		
Course duration	:	8 days
Course length	:	12 hours
Course frequency	:	8 meetings, 1.5 hours/day
Size of group	:	40 students
Resources	:	hands out/copied materials
Participants	:	twelfth grade students of Automotive 2 class
Assessments	:	daily assignments, participations and final test (dealing with documents and presentation)
Course objective	:	to enhance students' entrepreneurial skill through an ESP-based leaning design concerning to their language use importance at their entrepreneurship learning such as dealing with reports, documents or letters that is English as the main language use

Syllabus Design

Syllabus design is composed to be the guideline for course designers to implement teaching activities. The syllabus is arranged based on the students' needs as their reflection to the learning expectations. In line with the reason, the syllabus is considered as learner-centered syllabus which covers all the students' expectations of their learning process.

Table 2: English in Entrepreneurship Learning at SMK PGRI 20 Jakarta Learner-Centered Syllabus Design

Meeting	Language Function and Skill	Grammar	Vocabulary
I, II	**(Reading)** *The Market*	• parts of speech • head and modifiers	consumer, market target, transaction, to sell, to buy, etc.
	Marketing Strategic	• complement clauses • conjunction	sales, margin, benefit, to achieve, etc.
III, IV	**(Listening)** *Business Overview*	• causative verbs • indirect speech	business, opportunity, to gain, to get, etc.
	Packaging	• speech situation	product, to wrap, to send, etc.
V, VI	**(Writing)** *Business Plan*	• main clause	plan, to manage, to calculate, etc.
	Advertisement	• subordinate clauses	ads, sponsor, to persuade, etc.
VII, VIII	**(Speaking)** *Product Knowledge*	• conditional sentence	product specifications, to describe, etc.
	Promotion	• statement of cause and effect	discount, to bargain, to promote, etc.
		Final Test	

Materials Selection (and Production)

The course materials use learning content from students' assigned books as their authentic texts, such as students' worksheet, assigned project works, and so forth. The materials used should meet the students' needs. The materials should not be too easy or too difficult to fulfill students' expectation. The course content will focus on the language used in the entrepreneurship learning. The students are expected to be active in engaging themselves within the course interaction.

Teaching and Learning Evaluation

After attending the course, the students are given evaluation questionnaire concerning to their comments or opinions of language learning process they have been taught throughout the course. It is useful for evaluating students' language learning progress of their own English proficiency. The evaluation questionnaire consists of two sections. In section 1, it provides information of their language improvement aspects while comments or opinions about language learning outcomes described in section 2.

The students claimed that there is a good improvement for listening, reading, grammar and vocabulary skills and only moderate improvement for speaking, writing and cultural issues found in the evaluation questionnaire distributed after they attend the course. They found that drilling and role play among the students are the best activities to increase their speaking skill. Audio-visual devices are really helpful in improving their listening skill easily. Assigning the vocabulary focused, grammar-focused, writing focused and reading-focused exercises become their best solution in digging their competencies to solve such problems relied behind the skills.

Most of students like to do project works by involving directly to the field related to their entrepreneurship learning. The students also expect the instructors to be both subject specialists as well as to be evaluators during the learning process. Also, the students agree that by practicing English skill more often, either formally or informally, directly or indirectly, with natives or with non-natives, with or without guidance, the English proficiency may become better because they assume that the important thing is to practice or to apply English in every context. The students are expected to practice a lot their speaking skill in the course and to develop their knowledge of specific language items used in their relative disciplines. The exercises will be assigned either in the form of grammar-focused exercises, vocabulary-focuses exercises, writing-focused exercises or discussions for reading sessions.

Conclusion

The research results revealed that students' entrepreneurial skill can be enhanced through an ESP-based learning design with learner-centered syllabus as its main focus. With respect to the key stages as the parameters of designing ESP course, the needs analysis consisting of three main elements points out the importance of PSA identifying that most students found themselves weak in four English skills. They still need to run an ESP course to improve their English proficiency to master ESP in the entrepreneurship education primarily on their writing skills. In the TSA, the students agreed that English is needed for their future carrier. Job promotion is taking the highest level of their future goal. Moreover, the LSA shows that most of the participants prefer to learn all of English skills by practicing the skills with their peers. Project works are the best solution for students in assigning their tasks dealing with the four English skills.

In the course (and syllabus design), the course will be designed as *fixed, short, extensive, narrow,* and *one-off* course of which the students' performance will be assessed only once after the course activities are gone through. The syllabus design is considered as learner-centered syllabus which is obtained from students' expectation. In the materials selection (and production), the course uses specific learning content material that is drawn directly from the students' entrepreneurship learning which will focus on the language used in the entrepreneurship learning.

In the teaching and learning evaluation, students claim that there is a good improvement for listening, reading, grammar and vocabulary areas and assume that there is only moderate improvement for speaking and writing. The students agree that by practicing English skills more often, their English proficiency will have a significant improvement. The students also expect the instructors to be subject specialist as well as the evaluators of all ESP course activities they experience. The instructors are also expected to ease them in learning the specific language items used in their entrepreneurship learning.

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‘BEAUTIFUL MOMENTS’: THE JOURNEY OF THE END OF LIFE

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Abstract: *Death is a natural process of human life. Each of us will experience death with a certainty. Although It is relevant and importance, people avoid talking about death. The Faithful yearns to be with God but do not look forward to die anytime. Death is understood as the segregation between the physical and the spiritual part of human body and act as a ‘bridge’ for believers to transcend to spiritual world where they will meet God. This was qualitative phenomenology aimed to describe people’s perception and understanding of a good death and how to prepare it. What need to be done so that the dying can have the moments at end-of-life beautiful and peaceful, even when physical suffering present. Is it possible to have “a good death”, both for the dying and the families left behind. Participants are families of terminally ill patients in private hospital in Indonesia.The finding of this research shows that most participants believe good death can be prepare but ultimately God decides about death and circumstances around it. One of the key issue found that the dying themselves were not aware that of their terminal conditions. Therefore they are unable to prepare themselves mentally and spiritually. Most families in this research become aware of their terminal condition less than 1-2 months before the loved one died. Albeit short, there is time to prepare for the final moments to be beautiful and full of good memory to hold on. Preparation needs to cover not just economically or medically but emphasize on spiritual and mental aspects. When faith is put as foundation, it is easier to accept the physical death as a way to join God. So that more people can have beautiful moments at the end of their life journey.*

Keywords*: death, good death, faith, end-of-life care, terminally ill*

Background

“Nothing can happen more beautiful than death.” - Walt Whitman

Death is a natural process of human life. You and everyone you have ever known, someday will die with a certainty. Although it is relevant and an importance to us, yet it is not pleasant to talk about death and anything related to it. Death is often associated with sadness, loss, pain and sufferings and other negative feelings (Nabe et Corr, 2003). In some cultures, and in many countries, it is still considered taboo to talk about it even worse, to prepare for it (Jong, 2016).

There are many definition, perception and understanding about death. Western societies embrace individualism that promotes the personal autonomy of the dying. IOM defined a “good death” as “one that is free from avoidable suffering for patients.” Suffering is a state of undergoing pain, distress, or hardship. There are 3 types of sufferings: physical, mental, and spiritual. Is it then realistically possible to have a death that is free from suffering?

The faithful believe that men are created in God’s image and breath therefore the creator owns our lives. “The LORD has given, and the LORD has taken away; blessed be the name of the LORD,” Holy Bible Job 1:21. *Inna lillahi wa inna ilayhi raji'un* (Arabic: إِنَّا لِلهِ وَإِنَّا إِلَيْهِ

رَاجِعُونَ) is a part of a verse from the Qur'an which translates to "We belong to God and to Him we shall return." For the Muslims, The Qur'an explicitly states that divinity not only shapes our end, but determines the moment and type of our demise (Qur'an 56: 57–62; Cheraghi et al., 2005). Islam respects the individual's pathway to God and does not wish to intrude on a relationship that is ultimately controlled by divinity. The Qur'an makes it very clear that the afterlife is more important than present life, at least in terms of one's eternal destiny, for one will be judged and rewarded there according to one's deeds in this life. Once death has taken an individual, that person belongs to God and the other world.

Death is a bridge to enter another spiritual life, with God, the creator. Death is understood as the segregation between the physical and the spiritual part of human body. In order to meet God and be with God eternally, they have to 'die', to leave their physical body and this world, to another place, a much better place: to meet their God. Many faithful people who yearn to be with God but still do not wish to die or looking forward to prepare death.

When someone is dying, they face and enter the final moments of their life in this world, inside the physical body. After death took place, their presence in the world will perish and disappear while the physical body returns to the earth, the spiritual one starts the journey to the next life. They will be missed by their families but the love-ones left often left not only with grief but burden in many aspects. What need to be done so that the dying can have their last moment and their end journey beautiful and peaceful, when the physical suffering is present. How can their families have memorable moments and peace? What can we and health care provider do to ease their sufferings? Is it possible for a person to experience "beautiful-dying" and ultimately have a "good death"?. For many people who are terminally ill and their families, death is associated with sadness, great pain, and suffering.

"Even death is not to be feared by one who has lived wisely." – Buddha

"And the dust returns to the earth as it was, and the spirit returns to God who gave it."
Holy Bible , Ecclesiastes 12:7

"Innalilahi wa inna ilayhi rajioon" To Allah we belong and to Him we shall return."
(Quran Surat Al Baqarah 2:156)

Objectives and Methods

This qualitative study with phenomenology approach aims to find people's perception and understandings of a what is "a good death" and whether it can be prepared and how. This paper is part of a bigger case study conducted in type B - private hospital in a city, Java-Indonesia. The subjects were family of terminally ill patients and patients themselves if they were still able and willing to. Based on their experiences they were questioned about death and a good death.

Data triangulation were done with other family members, health care provider and pastoral care staff at the hospital. This is an on going research that began in April and will continue until the end of the year of 2019. So far we have interviewed 10 participants.

Data is analyzed using thematic approach: perception and understanding of death and "a good death"; aspects that influence a death to be categorized "a good death"; can a good death be prepared; preparation for good death; type of support and assistance needed the most and by whom those can be given by. What are the most important for the dying one often are not the same with what other thinks of. Careful consideration need to be thought of before offering support and assistance that best fit each individual who will face the final moments of their life journey so more people are able to have beautiful moments at the-end-of-life journey.

Results

At this stage, we have interviewed 5 (five) women and 5 (five) men, comprised of 10 (ten) family members of 8 (eight) terminally ill patients. Age of participants were range from 37 (thirty seven) years old to 64 (sixty four) years old. They are either sister/brother, daughter/son, spouse, or parent of the patients.

The Hospital Setting

The a private is located hospital in a city in Central Java. This hospital is type B hospital and has 380 beds, from VVIP room to class III rooms. This is one of the hospital that offer Pastoral Care and Spiritual accompaniment. The hospital approach is to offer Holistic healing, not just medical but also the wellness of mind and heart.

Perception and understanding of a good death

Participants shared their experiences in accompanied their loved ones up to the last moments at the end of the life journey, their grief and shock at the unexpected timing of the death. The fact that the illness and its terminal conditions was not known until it was too late due to lack of indication or "sign" of medical condition prior the event, marked the beginning of the dying process. When asked about the signs of death, participants talked about time, responsibility and role, as well as separation of existing life or another life. Clearly, they stated that there is life after death.

Death is the time when God call you. We all are waiting for our turn to be call by God, everyone will go through this. It is not the end of everything because there is something better after death – Mrs. E

Death comes when the person's responsibility and role on earth is finished – Ms. D

Death is the point of end in one's life – Mr. H

Death is the separation between physical and spirit. When the physical body died and one can no longer able to communicate, We (religious people) because of our faith and what we belive in, still can "communicate" in different way because life does not stop there – Fr. AG

Each death is each person's destiny. The moment one was born, the time one will die is already decided by Allah. No matter how sick one is, if it is not yet the time, one will not die and will still continue to breath – Mrs. SI

Death is mystery. You can not prepare for that, like accident , you died on spot and so sudden, family can not be prepared for anything. However for in case such prolong illness or terminal illness like my mother, we family can prepare something because you know what coming next – Mr. D

Death is the final act in life, our goal in life is to meet Jesus, and only when we go through death we can meet Jesus – Mrs. V

A good death is what each man wish to have and the hope of family members of the dying that their loved one will "died well". Death that can be called a good death happens fast, easy and should not troubles the family left behind with burden, such as debt and unresolved conflict.

My mother had a good death because she died easily, in peaceful manner and surrounded by her family members who loved her when she took her last breath. Only few people can have a good death because everyone has weakness and negative side/characters – Mrs. E

A good death that doesn't bring disadvantages to other people – Mr. H

Good death doesn't bring troubles for others – Mrs. D

Husnul Khotimah – Ms. D

A good death is death that happens peacefully and serene, really …really easy, just like …he was slipping away…. – Mrs. V

My son has a very good death, his heart beat slowed down naturally and we the family were reciting prayers. As we finished our last sentence in the prayer so did his breath and his heart beat. Good death, beautiful death – Mr. A

A good death is when the dying accept the fact that they are going to die, and able to face death in peace – Mr. J

Contributing aspects to make a death become a good death

There are many aspects that influence one's understanding of a good death and this bring few major aspects in "good death". Those contributing aspects are: financial, time, social include life style and habits, as well as religion, which is the strongest aspect.

Financial:

A death that will not leave burden, example debt for the family behind – Mrs. E

Time & duration of dying process :

A good death is a death that is easy and fast, good death is when some die without too much pain (easily) and fast – Mrs. E

Social :

The end of journey of a person also depend on person's social standing and how that life journey end. Social standing and living standard of that person and how that person live, like what he/she usually eat, how healthy the life styles was – Mr. H

***Religion** :*

Faith made us able to accept that our mom is going to die – Mrs. E

Religion gives great influence in my perception of good death – Mr. J

I believe that after death there is a better place, and my sister will have no pain anymore, made me able to 'let go' and accept more her death – Ms. D

Emotional and Mental :

We are chosen by God. How many people experience the loss of their child. God has reason to choose us, and He has plan. This help me during grieving and very sad moments – Mr. A

Can 'a good death' be prepared and how to prepare it ?

Opinions are divided in two, one part of participants were sure that a good death can be prepare and the other part of the participants strongly felt that a good death can not be prepared not matter what. However, all participants agreed that while the time of death is unknown because only God knows the end or the time of death for each person. Men can try to prepare a good end by living good conduct while still "living" and prepare whatever can be prepared to make their death easier for them and their family.

Yes. A good death can be prepared by confessing one's sin, to lighten quilty feeling caused by our sins, to conduct ourselves better, pray more to get closer to God – Mrs. E

Good death can not be prepared as the time of death decided by God's alone. We can prepare by conducting ourselves better; do not harm others; do not hurt others; do not cheat and disadvantages others. Even though by conducting ourselves better does not guarantee that we will have a good death, because that is the secret of God – Mr. H

My mother did some preparation by listing her assets at the beginning of her illness. Organize our affair, so it doesn't become trouble to our family – Mrs. E

A good death can not be prepared. All death is only good for the dying one as they will die, but death is not good for the family left behind. The only thing to can do is try to ask forgiveness from friends and relative and resolve conflict, more for the heart of the dying, so their heaviness in their heart lessen after forgiveness – Ms. D

A good death can be prepared by being mentally prepared and accept that you are going to die. The Key thing is accepting that death is coming, that you time to die is coming. By accepting the fact, one can embrace their death in peace – Mr. J

The study findings show some variety of perception and understanding. Education, social background, and religion contribute greatly on their understanding. A good death is a death considered 'easy' , that happens fast with less suffering; mentally prepared; economically well-thought; and spiritually accompanied. Results show that all respondents agreed that death and its timing belongs to God alone, all human will die and no one knows the time and the way one to die. Preparation can be done to make sure that the end of journey of one will be beautiful moments for the dying and memorable for the ones left behind, are possible. This preparation needs to be done early and while we are still living fully.

Discussion

It was clear from our findings that death is an end in men's life on earth that decided by God. Death becomes a transition to the afterlife with God. This time of transition is seen as a sacred event. The godly soul will return to its origin, namely God the divine source (Jaffer, 2016). Institute of Health Metrics and Evaluation (IHME) released data in 2016 on number of death by cause of death. 53 million people died globally in 2016, the biggest cause is cardiovascular diseases at 32.26%, second cause is cancer at 16.32 %. In most cases, the cancer was found at later stage and therefore the death is approaching months away from the diagnosis. But usually there are still few months before the final end of life is there. Thus, it can be prepared in the most suitable ways for the dying ones, that will not only ease them from suffering (physical, emotion and spiritual), pain, and guilt of leaving their loved one but also making them going in their final journey in serenity, peace and to certain extend: joyfulness.

The issue highlighted during this research was that although terminal condition of the patients were known 1-2 months before the patients died, the doctors explained the condition of the patients to the family and not to the patients themselves. The terminally ill patients has no idea that they have only certain time left therefore unable to prepare mentally, emotionally and spiritually for their own death. In most cases, the family and the doctor involved agreed not to tell the patients , “hide” or “lie” to patients about their real condition.

Conclusion

The result of study indicate that when people have religion and put their faith as a foundation to be based their lives on, they accept physical death as a way to join our God in eternal life, another life after the life on earth.

All moeslims hope that they will have *“Husnul Khotimah”* death, *“Allohummakhtim lanaa bil islaam, wakhtim lanaa bil imaan, wakhtim lanaa bihusnil khootimah”* . means: Please God, allow us to have life ended in Islam, allow us to end our life with our faith, and please allow us to have the a closure (of life) well / beautiful. The Christians believe that death is the climax of their terrestrial life. The life of human is limited by time. Death is normal for the human life because his life is not boundless. Only God is limitless and eternal.

Death for Christians leads them to meet the Lord. The mundane life is only temporary. It is not everlasting. They have a great hope in death because they believe that through the death, the Christians will be reunited with the Lord. “We should be cheerful because we would rather leave these bodies and be at home with the Lord (II Corinthians 5:8)” St. Teresa of Avila wrote, “I want to see God and in order to see him, I must die.”

Preparing last moments spiritually become ‘a must to do’ if one is to wish for a good death.With faith it is more possible for men to peacefully facing death, if not joyfully, preparing last moments of the end of life journey and to look forward to meet and join God perpetually. We suggest pastoral and spiritual care being offer for terminally ill patient and their family in hospitals if the it has not exist yet. In few hospital where Spiritual accompaniment exist, we suggest that the staffs giving the service or care placed an importance on the support given not just to the patient but equally a significant time and effort to the family of the patients as they will play role in helping the patient preparing the last moments of one man on earth, a serene and beautiful moments.

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PASTORAL CARE IN END-OF-LIFE: CAN YOU BE HEALED WHEN THERE IS NO CURE?

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Abstract: *When death is coming for sure, the terminally ill patients will be in sorrow. For them who do not have hope of being medically cured, do having joy and feeling serene become a possibility? Can they be healed at some point? This research aims to describe the existential experiences of the terminally illness patients' family receiving a pastoral care. While the patients deteriorate because of illness, what type and kind of care they found most helpful? This research was a qualitative study with a phenomenology method. This paper is part of a bigger case study conducted in a Catholic hospital in Indonesia. The subjects for this research were the families of terminally ill patients. They were interviewed whether they have received pastoral care and the significance of it. The presence of pastoral care staffs and their visits were significant for the families and the patients. They feel strengthened in facing this difficult times. In particular the spirit of the patients uplifted, they no longer feel angry with their condition and are in process of accepting the death coming their way. They found prayers as powerful resources. All the participants agreed that the pastoral care is important part for the patients' healing. Catholic hospitals in Indonesia should be aware to provide a holistic healing. Pastoral care is one of key factors to maintain the spirit of institutions. It is the way to humanize the patients and families in their end-of-life care.*

Keywords: *spiritual accompaniment, pastoral care, end-of-life care, palliative, phenomenology*

Background

At the end of life, the terminally ill patients experience fear, worries, and stress. They are afraid to face death. The terminal illness makes them be dying soon. The term 'terminal' comes from the Latin, '*terminus*.' It means a boundary, a limit, or an end. The terminal illness puts the patients at the end of life. They will die in a short time. The patients will be dead soon because of their terminal illness. He does not have any long expectancy for life (Stevens, 2011).

Because of the death, they will be separated from the loved ones, either their spouses, parents, children, relatives, and friends. They cannot do their activities regularly. Above all, their presence in the world will be perish and disappear. One of the fears that humans should face is to be death. To die means to separate from the loved ones. The terminal illness demolishes physically and also psychosocially.

The fear, worries, and stress are also experienced by their family (Bay et al., 2008). The family of the terminally ill patients will feel and experience the same. The family cannot have their members in life because of death. They cannot see each other again. Also, they cannot have any relationship anymore. Death makes them separated. Not only from the psychosocial side but also the family experiences the economic ones. They have expensed millions of rupiahs to cure the patients. They try to do their best to save the lives of patients.

In the crisis facing by the terminally ill patients and their families, pastoral care in Catholic hospital can give its contributions, assistances, helps and supports. Pastoral care is an effort to help and support the fellowship who is in crisis because of the changing situation (Community Church Hongkong, 2016). In the hospital, pastoral care becomes an integral part of healthcare service in giving moral and spiritual assistance and support for the patients and families. World Health Organization (WHO) acknowledges that a spirituality-which is part of pastoral care- is an important aspect for the patient's quality of life. In facing death, a spiritual carer regards the patients as a human and care for them emotionally (Ando et al., 2010)

Relating to the crisis at the end of life, there is no preference or option to have euthanasia or assisted dying in Indonesia. They are counted as criminal actions. There are Indonesian laws rule about it. The laws-*pasal 344 dan 345 Kitab Undang-Undang Hukum Pidana (KUHP)*- says, "Anyone who takes the life of another person at the request of that person himself, whom he mentions clearly and sincerely, is sentenced to prison for up to 12 years; Anyone who deliberately encourages others to commit suicide, helps him in the act, or gives him the means to do so, is threatened with a maximum sentence of four years if that person commits suicide." The Indonesian doctor should not involve in euthanasia or assisted suicide. The regulation is in *Kode Etik Kedokteran Indonesia Tahun 2012 pasal 11*. It says, "Every doctor is obliged to always remember his obligation to protect human beings."

Objectives and Methods

This research aims to describe the existential experiences of the terminal ill patients receiving care from the pastoral staff. The researchers think that those experiences are very advantageous and profitable to develop the healthcare service at the end of life situation. In the terminal ill condition, the cure is impossible but the care is still possible to be done. While the patients worsen because of illness, what kind of care they found benevolent? For them who do not have a hope of being medically cured, do having joy and feeling serene become a possibility? Can they be healed at some point in a way of pastoral care setting?

This paper is a component of a bigger case study organized in a Catholic hospital in Indonesia. The location is in one of a Catholic hospital in Yogyakarta Province, Indonesia. The research is still on-going. The interview has been conducted with 10 people. There will be more participants interviewed. The hospital has applied pastoral care in their healthcare service. The subjects for this research were the families of terminally ill patients. They were interviewed for the topics of pastoral care received and the impact of it. The interview is useful to explore the individual experience.

To find and interpret the existential experiences of the terminal ill patients, the researchers used phenomenology method to find the meaning and significance of the human experience. The researchers choose the family of the patients because of the vulnerabilities of the patients. They have a problem to communicate, talk, or respond during the interview because of the illness. The patients are vulnerable physically and mentally.

The researchers involved 10 participants in the research. In the phenomenological setting, the sample is purposive and needs a little number. The inclusion criteria are the family and the terminal ill patients (the participants) who have been in the hospital for more than 3 days; the participants who have been out of the hospital and left it less than six months; and the participants who are willing to join the research. The exclusion criteria are the participants who are difficult to communicate, either because of the sickness or the emotional impact of losing the loved ones.

The data were analyzed using thematic analysis. The themes are the pastoral care practices, the acceptance of death, the prayer and rites, and the significant pastoral care for the families.

Results

The study participants comprised of 5 women and 5 men who are family members of 8 patients. The average age was 40, ranging from 37 to 64 years old. All patients could not talk and communicate anymore to the researchers because of the illness. Amid during in the acute situation, the family agreed to be interviewed. The interviews were held at the different rooms so that the patients would not feel disturbed.

The Hospital Setting

The hospital has 6 pastoral care staff. Five of them are laypeople and 1 of them is a religious sister. There are 2 staff who have worked for more than 10 years. Three of them are still below than 5 years. The pastoral care staff are under the nursing division. They have own office in one section of the hospital area. They work for 16 hours service, divided into 2 shifts, morning and afternoon.

The pastoral care service involves the religious leaders who have a connection to the hospital or a part of the state ministry of religious affairs. The non-Catholic patients and families have possibilities to accept the service from their religion, such as Islam, Christian, Hindu, Buddha, and Confucian. The pastoral care staff will be a facilitator to call the Catholic and non-Catholic religious leaders. The hospital offers the possibilities also to the faith groups or activists to give any spiritual or religious service to the patients and families. The service which is provided by the faith groups or activists (and not from the pastoral care staff) should have permission from the hospital management.

The Pastoral Care Practices

Six pastoral care staff do the pastoral care service every day in the hospital. They work as a team. A coordinator becomes a leader for this team. He is responsible for the teamwork and directly under the supervision of the director of the nursing division. There is a daily meeting to make coordination between the pastoral care staff members.

In their service, pastoral care staffs do pray and visit for the patients and families in the patient's room; provide the sacramental service for Catholics such as: baptizing, First Friday Mass, giving the Holy Communion, anointing of the sick, and reconciliation; organize the religious songs and prayers from the central audio of hospital; become an intermediary to the religious leaders.

From the interviews, we found that pastoral care staff from the hospital regularly visited the patient for about 10-20 minutes. They chatted each other between pastoral care staff, patients, and families. Even though pastoral care staff does not know who the patients and families, they were willingly doing the service. One family member who is Moslem even touched by the visit.

The pastoral care staff visited a patient (Mrs. S), about once every 3 days. "[The pastoral care staff visited] *at least, once every 3 days* (Mrs. E, the daughter of the patient)." Each visit took 15-20 minutes. For Mrs. F, the pastoral care staff of the hospital regularly visited around 10 minutes. "*Yes, it is around 10 minutes being there* (Ms. D, the sister of the patient)."

The patients feel strengthened in facing difficult times. Mrs. S felt happy after the pastoral care staff visited her and she was grateful to the staff. During the visit for patients, pastoral care staff offered support by talking to Mrs. F and gave motivation for the patient to get stronger. She motivated the patient for not giving up in facing cancer. "*She felt happy, grateful, and enthusiastic, there was attention, there were many good people around her, that* *is, she was not alone, so there were people who still cared, who wanted to encourage.* (Ms. D, the sister of the patient)"

Pastoral care staff chatted about daily lives and exchanging stories, like old friends. "*Yeah, chatting like friends, friends for a long time* (Ms. D, the sister of the patient)." She (the pastoral care staff) talked about children or chit-chatting light topics to make the patient cheerful and happy.

Mr. H as the husband of the patient felt glad and think that he is being helped greatly by the pastoral care visits. He thinks even though they are not family members, relatives or friend but they care a lot, to visit and pray for his wife. "*Happy, happy, happy, it turns out there are people who want to pray, who want to encourage, even though that means, from someone who has no relation to us, who can still encourage, hope to patients and families facing trials well* (Mr. H)."

The Acceptance of Death

Most of the family members interviewed said that the spirit of the patients uplifted, they no longer feel angry with their condition after the patients did pray. They are in the process of accepting the death coming their way as the pastoral care staff visited them regularly. Family members said that the patient has been calmer and ready to embrace her death; while another patient has been surrendered herself to God. "*….after the prayer, my mom has been calmer and more or less ready to embrace her time* [to death] (Mrs. E, the daughter of the patient)." "*Mom has surrendered herself to God, like that, so maybe what, for the way, more is more, becomes better ...* (Mrs. E, the daughter of the patient)." After the family was informed of Mrs. S condition that is worsening, they told themselves they have to be ready for anything, should she die anytime, even though they believe and hope for a miracle. Towards the end of her last days, her daughters felt Mrs. S perhaps has accepted her faith that she will die soon.

The pastoral care staff prepared the family for the death faced by the patient. The family was ready for death because of the presence and advice from the pastoral care staff. *"I like it, here is a non-Muslim hospital, even though it is Catholic, but they also think, while the patient is not, not Catholic, you know… if the family is ready at the worst point, that's must, sincerely, whatever the conditions may be, the family must be ready…(Mrs. Su)."*

We found that pastoral care staff prepared the patients and families for death. Pastoral care staff indicated death as an immediate fact to the patients and families. They do not hide the fact, but they help the patients and families to accept death either by advice or prayer.

The Prayer and Rites

From the data, pastoral care staff prayed for the patient at the request of the patient even though the patient was from a different faith. The different perspectives of faith did not make any barrier to the patients and pastoral care staff. Mrs. F asked the pastoral care staff to pray for her. "*Mrs. F is a Moslem. Yesterday, Mrs. M (the pastoral care staff) came. Then F asked, Ma'am, why don't you pray for me? After that, she was prayed for* (Mrs. D, the sister of the patient)*."* After prayer, she felt spiritually uplifted and not alone in facing this difficult time. Mrs. S received Holy Communion and the sacrament of anointing for the sick, with the help of pastoral care who called the priest. The service fulfilled the need of the patient. "*Just asking for the anointing for the sick like that, which I did ask the hospital (*Mrs. E, the daughter of the patient*)*."

The data showed that prayer and rites are part of pastoral care service. Prayer and rites were available for all people whatever the religion was. Pastoral care staff would provide the prayer service whenever the patients need.

The Significant Pastoral Care for Families

Most of the families felt satisfied with the pastoral care service. They were advised to keep healthy, felt supported, and had been helped. Even so, there was a fact that one family expressed her discontent. She felt the pastoral care service as a routine and needs to be enhanced. "*Good too, because so that we are also the ones who maintain the health, keep the condition so that we don't feel it, we must be patient in facing and also supporting like that* (Mr. H, the husband of the patient)." "*Yes, he (pastoral care staff) is very familiar, he also greets us, as a family and always greets and pray for our families and those who are sick are also prayed for, who keep praying for us, we are very happy* (Mrs. M, the sister in law of the patient).

One family expected the service from pastoral care staff. The pastoral care service should be improved for the families of patients. Mrs. E expected guidance and support from pastoral care staff during the critical time. "*Like me who is experiencing, hm, I have to decide on something [on operation], I have to convince…* (Mrs. E, the daughter of the patient)." The family had to decide on the operation of Mrs. S, however, she didn't get any support or guidance from pastoral care. She felt pastoral care staff were not sensitive to what the families need because during their visit to the patients the time is too short in time. "*Today there are so many patients, she (the pastoral care staff) visited this patient, this, this, that's all, …I (the daughter) just feel, for example, she visited my mother's room, like that, it seems like that's all, routine there*" (Mrs. E, the daughter of the patient). The routine became a problem. One family saw the pastoral care service as a routine from the staff. Because of the routine, the family did not feel taken care of. The family thought that the pastoral care staff did a "checklist."

Discussion

The finding of this research as well as in other parts of the world have discovered issues about the importance of religious care. The value is so high and crucial for the patients. Ando et al (2010) showed that the patients felt the inner peace when they were in religious care facing cancer illness. They were relieved. These findings are consistent with much of the international literature. Pearce et al (2012) researched the religious service in the hospital for the acute cancer illness. Eighty five percent of the respondents agreed that spirituality and religiosity play a big and important role in their healing.

Our findings show that pastoral care service in one of the Catholic hospitals is not only about prayer and sacramental services, but also chatting and greetings during visits. These simple actions, such as chit-chatting make the patients happy and the short visits make them not feel alone. In his study, Aldridge (2005) found that spiritual services helped the patients to overcome their sufferings. The patients were aware that they were not alone, they were more hopeful, and where having friends beside them.

It was clear from our findings that pastoral care is significant for patients and families. Both of them need accompaniment, guidance, and service from pastoral care during hospitalization. Nevertheless, our study findings point more to the service for the families. The pastoral care staff still put more effort into the patients but not for the families. The pastoral care staff should be aware that the terminal illness impacts the families also. The families need to be accompanied, encouraged, and guided when they are beside the patients. All the burdens and problems must be seen in the context of patients' condition. Rayburn (2008) wrote that the families of patients often have feelings of guilt, sadness, anger, and fear. The feelings arise because they will say goodbye to the loved ones.

Conclusion

Catholic hospitals in Indonesia should be aware to provide holistic healing. The results of this study indicate that healing is not just mainly about physical but also embraces the whole aspect and human needs such as psychosocial and religious. It could be helpful to the patients and families that the hospital management put special attention to the pastoral care service. The pastoral care service is not a routine. The pastoral care is a must to maintain the characteristics of a catholic hospital.

Pastoral care is one of the key factors to maintain the spirit of institutions. It is the way to help and care the patients and families in their end-of-life care. Therefore it is important that care is possible to be given to the terminal ill patients and families. The patients will not be possible to have a cure anymore but they will be taken care of as humans. Moreover, families should be taken care of. The families are part of a terminally ill patient who needs support. Pastoral care service needs to pay attention to the families of the patient. If they cannot handle the problems, pastoral care staff can be an intermediary to the other people, such as social worker.

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PERSPECTIVES OF VISUALLY IMPAIRED INDIVIDUALS ON INCLUSIVE EDUCATION IN MALAYSIA: A CASE STUDY

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Abstract: *Inclusive education is arguably currently one of the most debated topics in the field of education. With more and more families opting for this approach to education for their special needs child, there is a rise in the number of schools adopting this approach. The present study examines the perceptions and experiences of visually impaired individuals towards inclusive education in Malaysia. The impact on their social lives was also investigated. Participants for the study comprised of 4 visually impaired individuals who had previously gone through inclusive education in their secondary school years. A semi-structured interview was conducted in order to generate an in-depth insight of the phenomena. The results of the study have indicated overall positive experiences for the participants. While the majority of the teachers were reported to show positive attitudes towards the participants, there were rare occurrences of teachers being unaware of the appropriate approaches of including the visually impaired students while teaching. Moreover, although there were a few instances of being bullied by peers, this improved once the visually impaired and their sighted peers began to socialize and understand each other. This positive repercussion of socialization was evident in the social development of the participants with regards to their working life and relationships with others. Some suggestions were made by the participants, which have been put forth as practical recommendations. These include more viable education options, and widespread opportunities for attaining stable jobs.*

Keywords: *Inclusive education, visually impaired, teacher's attitude, socialization, work opportunity*

Introduction

Visual impairment is one of the many learning disabilities that is a common occurrence across nations and even exists in many classroom settings. Visually impaired individuals fall under the broad spectrum of children with learning disabilities, children with special needs (CWSN) or persons with disabilities (PWDs), which all allude to the same phenomena (Bigham, 2010; Buford & Caser, 2012; Novak, & Bartelheim, 2010). As an alternative to segregating these children in specialized centers or special schools, which is the common practice in many instances, inclusive education, also known as mainstreaming, allows children with special needs to experience the same learning environment as normal students and to participate equally in classrooms. Nonetheless, limitations to this may exist based on the degree of severity of learning disorder or disability

Formal education for the visually impaired in Malaysia first started in 1926 with the special education programs that catered solely to the needs of visually impaired students

(Supiah, 2006). This paved the way for educational opportunities for individuals with learning disability. Years later, Integrated Special Education Programs (PPKI) were introduced, in which classrooms for children with learning disabilities including the visually impaired took place in a mainstream school (Supiah). Driven by the right to equal opportunity in education for every child (No Child left Behind Act) which has been mandated by governments nationwide, Malaysia itself implemented the Act in 2003 (Ministry of Education, 2008). Failure to enroll one's child in schools, without exceptions, would result in a hefty compound (UNESCO, 2015). The long term aim of introducing all special needs children to formal education systems was not just to provide holistic education but importantly, to promote social integration among peers that would eventually lead to independent living (UNESCO, 2009).While some schools have placed special restrictions as to the criteria for inclusion of special needs students, the Malaysian government has left the decision to the school authorities. The only two official criteria are that children should be able to function or self-manage themselves, and that there should not exist any behavioral problems that might cause disturbance to the normal flow of classroom activity or learning (Ministry of Education, 2008). With the rise in the number of disabled students entering classrooms since the state mandated rule in 2003, efforts have been made to successfully integrate students with special needs in general classrooms. As of the year 2008, 228 visually impaired primary school students were enrolled into integrated classes within mainstream schools as opposed to 147 in the secondary school (UNECSO, 2009). Inclusive education for the visually impaired, however, is still a radical approach in Malaysia, particularly full integration. Documented statistics on the inclusive education experience of individuals with visual impairment is little, if nonexistent. Although inclusive education by itself is not a novel endeavor in Malaysia, it is noted to be an unfavorable approach by special educators within the country (UNESCO). Yet, there are reported cases of successful learning through total inclusion. Unfortunately, however, the ministry and respective departments "have yet to gather data on total inclusive setting (UNESCO, pg. 9)."

Having recently implemented a "Zero Reject Policy" that enables children with special needs to join mainstream classrooms (Ngah, 2019), there is a need for clear-cut policies in order for decision makers in the educational field and school administration to ensure the child successfully adapts to the classroom environment. Thus, a detailed insight into the challenges faced in an inclusive education setting, as well as future repercussions, would go a long way in aiding in the formation of informed decisions.

Objective of the study

The present study is not just unique with respect to its focus on students with visual impairment within the context of inclusive education, but is also idiosyncratic in its portrayal of the voices of the students themselves. Specifically, the objectives of the present study are threefold and aim to answer the following research questions:

1) What are the experiences of visually impaired individuals who have undergone inclusive education?
2) What are the challenges faced by visually impaired individuals in an inclusive education setting?
3) How has inclusive education impacted the social lives of individuals with visual impairment?

Literature Review

Successful integration of CWSN, including the visually impaired, can result in positive outcomes in the form of building effective learning and communication skills (Lamport, Graves

& Wald, 2012; Parvin, 2015), feelings of self-worth and self-confidence (Berg, 2004), and assistance from sighted peers (Dakwa, 2014). Nonetheless, paradoxes do exist as some of the visually impaired students have reportedly experienced less favorable circumstances such as lack of assistance from peers (Human, 2010), stereotyping and even bullying (Mangunsong, 2006; Teoh, Cheong, & Woo, 2008). Dawka (2014) did, however, note that these judgmental attitudes and ill-treatments were later reduced once the sighted peers came into direct contact with their visually impaired classmates for group assignments, arriving at a similar realization as Ali, Mustapha and Jelas (as cited in Chopra, 2008), who claim inclusive education augments social interactions among students.

Though a seemingly positive endeavor, imposing certain expectations on a mainstream teacher can be quite taxing without proper training or suitable class materials as this can pose a perplexing scenario for both the mainstream teacher and the visually impaired students. Among the challenges faced are lack of readiness, which was cited by a number of teachers (Ghani & Ahmad, 2012; Shareefa, 2016; Ahmad, 2018), and scarcity of materials for the visually impaired students (Dakwa, 2014). In fact, Sunardi, Yusuf, Gunarhadi, Priyono and Yeager (2011) identified a marked deficit in the number of schools (a mere 10%) that modified instruction to cater for the needs of CWSN despite the prevalence of inclusive education in the country. Additionally, limited opportunities to socialize was also a key obstacle to those seeking social growth (Mangunsong, 2006; Cheong et al., 2012). Such conditions can greatly impede rather than foster the success of inclusive education. If granted the support required, the visually impaired will attain social success (Villa & Thousand, as cited in Parvin, 2015). This further underscores the importance of providing visually impaired individuals with an environment that facilitates proper socialization with peers.

Methodology

Research paradigm

The underlying research paradigm for the present study is critical research paradigm. A critical research paradigm is generally employed in the study of minority groups with the aim of bringing about certain changes (Myers, 2008). Despite the fact that inclusive education is a robust phenomenon, neglecting important aspects of the education of this special group of individuals may foster negative outcomes for the development of the visually impaired. As such, their perceptions and experiences should be examined thoroughly in order to make the necessary changes, or enhance certain positive practices to bring about its effective implementation.

Participants

The participants for the present study comprised of 4 middle aged males with visual impairment. These ages ranged from 42 to 51. These participants were ideal as they had experienced fully integrated inclusive education, and would be able to provide a comprehensive narration on the needs and challenges faced. Furthermore, selecting participants who can provide insight into the impact of inclusive education is conducive for the purpose of the present study. Both purposive sampling and snowball sampling technique were employed in selecting the participants.

Instrument

A total of eight key open-ended questions were addressed to the participants. While a few of the questions were created by the researcher, the majority of the questions were drawn and adapted from past research on inclusive education of the visually impaired. The first three questions were related to their overall experiences in inclusive education. A sample question would be *"can you briefly describe your experience as a student in an inclusive education classroom?"* Additionally, questions 4, and 5 were meant to tap into data regarding the challenges faced. This included the question *"what were some of the challenges you faced as a student?"* Meanwhile, questions 6, 7 and 8 focused on the social impact of inclusive education and included questions such as *"to what extent has inclusive education impacted your work life?"* and *"to what extent has inclusive education impacted your social life?"*

Procedure

Data collection took place in the form of a focus group, semi-structured interview. The researcher made use of an interview guide in order to follow a certain theme of posing questions. This allowed the researcher to have some control over the flow of the interview, where minimum diversion took place. At the same time, however, the participants' response or further contributions were not restricted in any manner as the open-ended nature of the questions allowed participants to engage with the researcher in a conversational mode, elaborating on statements when necessary. The interview, which took place in a quiet meeting room, lasted for about an hour and was recorded using a digital voice recorder.

Validity study

The questions for the interview were first assessed for face and content validity by presenting them to a panel of specialists from the Department of Educational Psychology at the Institute of Education, International Islamic University Malaysia. This was to check for face validity of the questions. Subsequently, the questions were also posed to a visually impaired individual from the Malaysian Association for the Blind to ensure that the questions were clear and understandable. After the pilot test, there was no amendment made to the questions. As such, all the questions were retained.

Data Analysis

Content analysis was used in interpreting the raw data once it was transcribed. Using this process, the data from all the participants was first examined individually and coded based on similarities and differences to form themes. These emerging themes were then clustered into main themes and sub themes. Each theme was then displayed and supported by the raw data quotes from the participants. As content analysis is an inductive process and the method of collecting the data is through open-ended questions, some of the resulting themes were unpredictable and unanticipated by the researcher.

Results and discussion

Interview questions that reflected the objectives and research questions of the study were posed to four participants, three of whom were totally blind, with the remaining individuals being partially sighted or having low vision. Participant 1 is currently an instructor at the Malaysian Association for the Blind and has been teaching there for over 2 decades. Meanwhile, Participant 3 is also an instructor at the Malaysian Association for the Blind. Participant 2 was a former massage therapist for 15 years, while Participant 4 is a current therapy instructor at the Malaysian Association for the Blind. All the participants had gone through inclusive education throughout their secondary school years.

The first research question

With respect to the first research question regarding the perceptions towards inclusive education in relation to their experience, five themes were identified from the interview. The first theme that came up was academic achievement, followed by teacher's attitude, support, educational materials and student's attitudes.

> "I think in terms of academic, there was no problem because sometimes we get better results than the normal students" [Participant 3].
> "In my class, we were four blind persons. So at that time, number…first, second, third, fourth….were all blind. So, actually, the teachers feel that we are very clever..." [Participant 4].

Though it may be surprising to many that visually impaired students would actually outperform their sighted peers, they had the support of their teachers which might have enhanced their performance:

> "…because we had some teachers who used to have these blind students before so what did they do? They got advise from these other teachers…how do we teach these blind students in our class? So they advised them and gave them some ideas such as making a blind student sit with another normal student…maybe because the sighted friend can help him to learn those things that the teacher wrote on the white board" [Participant 2].

The equal treatment provided by the teachers also led the students to blend in and feel as though they were a welcome addition to the class:

> "In my school, actually all the teachers treat us as normal students. If we do something wrong, they will punish us…we would stand on the chair. It's normal for us. If we come late for school, we have to be punished" [Participant 3].

This provided them with a sense of belongingness instead of feeling like outsiders in class. Nonetheless, this did not apply to all teachers as some were not as positive in their attitudes towards visually impaired students in their classroom:

> "Not all the teachers understand us…some of them feel like there are no blind students in the class! So, sometimes they don't realize that we are there. So when they teach they would say 'this plus this, equals to this.' So, we wouldn't know anything. At those times, we would sleep!" [Participant 3]

Although these cases were reported by the participants to be rare, they still existed and need to be critically examined in order for inclusive education to be effective. Not all schools are free from such obstacles, particularly when a teacher does not possess the required skills, or is inexperienced in dealing with a special needs student. In fact, past studies have supported the assumption that trained teachers tend to have significantly more positive attitudes than untrained teachers (Chopra, 2008; Coelho, Blázquez & Cubo, 2017). Additionally, this unfavorable attitude was reserved for specific types of learning disabilities, which included children with physical impairments such as loss of hearing or sight (Khan, 2011), with lack of training being cited as the main cause (Ghani & Ahmad, 2012).

When describing their relationship with their sighted peers, both favorable and unfavorable responses were elicited.

> [Participant 1]…some of them they think because we are blind, we don't know anything. Sometimes, they will ask us questions like "how do you bathe?", "how do you eat?"
> [Participant 3] Irritating! They would ask us questions like "how does an airplane look like?" and to describe an animal. They think that we don't know how to talk, that our knowledge about the world is very little.

This sort of sentiment and attitude is not something foreign to inclusive education classrooms, particularly for those experiencing such an interaction for the first time. Adults with disability and the parents of children with a disability had expressed concerns regarding the relationship between disabled and non-disabled individuals which they felt was typified with "fear, insecurity and ignorance" (Rutter, as cited in UNESCO, 2009, p. 1). Participant 2 later ruled out the seemingly impolite attitude by non-disabled peers as something of a curiosity from the part of their peers while Participant 4, who was partially sighted, had the advantage of borrowing notes from his peers and pointed out the positive and beneficial bonds of friendship that can be formed:

> "Maybe the first one week will be something strange for them also. So, maybe they will talk to us, discuss…it would take some time. Then they will think "oh, these people also know what is happening around them and have knowledge. Later they realize this." [Participant 2].
> "My relationship with them was good. I would normally borrow their notes. They would help me out. Some of them, our very close friends understood us and they would also take us to the cinema and explain to us the scenes" [Participant 4].

When asked specifically about whom they received support from at this point of time in their study period, it was interestingly not from their parents or guardians:

> "…the resource teacher I would say" [Participant 1].
> "Although we had the resource teacher, we also had some very close friends. It may be one or two, but they were very supportive" [Participant 2].

Apart from the support provided by the special education teacher and peers, it was also reported that some of the sighted students would volunteer to help out the visually impaired in class:

> "Another thing is that we had a voluntary reader" [Participant 3].
> "They come voluntarily. They will register their names to be our volunteer readers" [Participant 2].

These students who would volunteer to read the text for students or help them catch up with the notes in class would have helped greatly, particularly due to the issue of not having Brailled textbooks:

> "Every five years the Ministry of Education will change the books so for us to have new Brailled books, it would take a very long time. We need these volunteers to make the process fast" [Participant 2].

The change in textbooks is usually done as a means of keeping in tandem with the current syllabuses. This is not just practiced in the local front but can be observed as an obstacle in inclusive classrooms overseas as well. In these instances, having someone who can read the text for you is a great help but time consuming and can detract from time that can be spent developing other skills. Fortunately, with the advent of technology, it is now possible for visually impaired students to get their educational resources from online portals in a Brailled version that can also make use of voice recognition and can scan and convert your work in Braille. Inclusive schools with visually impaired students can work towards implementing such software that would make the task of Brailling a book and submitting assignments much easier.

THE SECOND RESEARCH QUESTION

For the second research question regarding the challenges faced in inclusive education, two main themes were identified. The first was the inability to follow some instruction in class and the second was the limited opportunities to further education in a higher institute.

> "…if you say geography, we still need to learn like maps, right? And if mathematics, then we need to learn formulas or graphs or when we learn about cubes. When you come to science, of course it would come to colors. They would say 'okay, when you mix this part with this it would become blue' or maybe yellow. For us, it is difficult. It would be a problem so we will go to our resource teachers as they would know how to explain and handle this" [Participant 2].
>
> "…Arts we have to drop. Drop the subject and the class, because of course *lah* blind cannot do drawings" [Participant 1].

Although the special education teacher is there to help the visually impaired students when certain topics in subjects like Science and Mathematics are beyond their physical abilities to comprehend, subjects like art were not an option for the visually impaired for seemingly obvious reasons. Nonetheless, visually impaired students have been documented to be as animated in arts when given the encouragement and room to express their own minds. Apart from the traditional drawing and painting, they can engage in others aspects of art such as creating experiences or images using stones, seeds, leaves, stick, cotton to express themselves (Kuell, 2007).

Despite the help and support the students received throughout their inclusive education towards fostering good academic achievement, this did not seem to be much help to them in their aspirations of attaining higher educational pursuits:

> "Sometimes, we get good grades but we can't enter a prestigious school. So we are left with no choice…although we have better results than the normal students, they still can't accept us" [Participant 2].
>
> "Usually, they would say there are no facilities" [Participant 4].

When graduating from primary and secondary school, the next obvious step would be to further one's education. Nonetheless, when hindrances are encountered in the form of lack of facilities or preparedness, it becomes disappointing for the individuals involved. Participant 3 was the only participant who had managed to enter a prestigious university which caters to students with visual deficiencies and was more positive about the current opportunities.

> "Actually, the opportunities to study for the blind is much, much better than before..." [Participant 3]

Opportunities to study at any university of choice for the blind are slowly improving as funds are required to set up the appropriate equipment, using the latest technologies. This may very well explain the current scenario faced, whereby the visually impaired encounter greater impediments when applying for higher education than students with other kinds of disability (Cheong et al, 2012).

Another setback encountered by the participants was faced after graduation. Attaining a distinguished university degree almost definitely provides a boost for the job market. When both one's physical abilities and educational training takes a setback, difficulties in employment arise:

> "I guess the ministry and special education department have to work more seriously on the facilities so that when they send students to inclusive education programs, they can think about their future…what they are going to do later. So there should be some job opportunities. There are some who maybe finished their PHD but are still jobless. Even though they go for talks and get paid and do things themselves without any help, they are still jobless. We feel a sense of loss for these kinds of assets who are not being utilized in a better way…" [Participant 2]
> [Participant 3]…job opportunities is still very, very slow. Sometimes, after we complete our studies we don't know where to go. So, we would have wasted our time and money and in the end can't contribute anything to our country. That's a waste. Very sad, actually.

The Malaysian government has acknowledged the hardships faced by persons with disability in maintaining a bright future and functioning as every other individual in the community. Apart from having provided health and travel benefits, the government is working towards providing individuals with disability vocational training and jobs that would enhance their sense of satisfaction and promote socialization with the surrounding community (Kamaruddin, 2007). Although programs organized for this endeavor cater mainly to individuals in special needs schools, an extension can be made to include those in inclusive education classrooms as well.

THE THIRD RESEARCH QUESTION

The third research question for the present study dealt with the social impact of inclusive education on the lives of the visually impaired. This yielded three main themes: better relationship with others, confidence and independence. Participant 2 describes how the nature of his relationship with those around him and in the workplace took a positive change due to inclusive education:

> "When we start to mix with new people around our teenage years, it gives us a very good experience when we come to the working environment. So, we know how to mix around with the public especially our superiors. Maybe they also don't understand much about the blind. When we have this inclusive program, we already faced the problem in the beginning stage so when it comes to the later stage, maybe in the working environment or maybe even in university,

since we already know the situation we will be able to handle it from the beginning" [Participant 2].

The experiences gained from inclusive education with the teachers and students did not just help in enhancing interaction with those around him and in the workplace, but also helped Participant 2 in countering possible barriers in interaction with others. This experience was echoed by the rest of the participants as well. Furthermore, the participants felt more confidence and a sense of independence as a result of their inclusive education:

> "If there was no inclusive education, let's say I'm going out somewhere. Maybe I am going west and maybe I have to look for the right bus for me to take or travel. If I feel so inferior and not ready, it will be quite hard for me to communicate with the people in order for me to get the right bus, with the right number or for me to look for a taxi or to look for the train….Maybe I'll feel inferior or shy so I will never talk. I cannot hope for the people to come to me. I have to go to the people. This is what we actually learnt during this inclusive program; "don't be inferior, don't be shy." So you have to introduce yourself to the public. Don't wait for the public to come to you" [Participant 2].
> "We can handle ourselves now" [Participant 3].

The development of a confident, independent individual with high self-esteem who functions well in a community, as is seen here, has previously been identified as a result of inclusive education (Parvin, 2015).

Conclusion and Recommendation

The study was conducted to examine the experiences of visually impaired individuals within the Malaysian context. The challenges faced and the impacts on social development were also explored. In general, the situations encountered were common across all participants, as were the challenges of being in an inclusive education classroom. Although there were some infrequent unpleasant encounters, they were far outweighed by the positive experiences. The impact of inclusive education on the social development of the participants was arguably the most integral part of the inclusive education experience, with far reaching implications that encompassed almost all aspects of the participants' lives. Nonetheless, this study is not without its limitation. Since the sample for the present study was comprised solely of males, the results may not be as varied or similar to those provided by females who have undergone inclusive education. Hence, additional research is required on the topic of inclusive education within the local context in order to further explore this phenomenon and generate more conclusive findings. Furthermore, polices that cater to the vocational needs of the visually impaired can be investigated by the local respective parties if the end goal of inclusive education is truly to induce independent living, in accordance with UNESCO (2009). This may begin with the enhancement of policies for tertiary education, leading up to the provision of both vocational training and wider opportunities for better job security.

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ANALISIS KEPERLUAN KOMUNIKASI ARAB KERJAYA UNTUK STAF PERPUSTAKAAN

NEEDS ANALYSIS OF COMMUNICATION IN ARABIC LANGUAGE FOR LIBRARY STAFF CAREER

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Abstrak: *Kajian ini bertujuan untuk menganalisis keperluan komunikasi Bahasa Arab untuk tujuan kerjaya sebagai staf perpustakaan di Universiti Sains Islam Malaysia (USIM). Analisis ini dilakukan beradaptasikan teori Analisis Keperluan Bahasa untuk Tujuan Khusus oleh Hutchinson & Waters (1987), terdiri daripada tiga elemen, iaitu: Keperluan (Needs), Kekurangan (Lacks) dan Kehendak (Wants). Berdasarkan teori tersebut, borang kaji selidik dibina dalam dua bahagian, pertama berkaitan latar belakang responden dan kedua berkaitan persoalan situasi-situasi yang perlu (Needs) berkomunikasi Arab, jurang kekurangan (Lacks) kemahiran komunikasi Arab dengan keperluan sebenar, dan kehendak (Wants) responden daripada kursus komunikasi Bahasa Arab. Responden kajian (N 28) terdiri daripada staf perpustakaan USIM yang berkhidmat di dua kaunter utama, iaitu kaunter Penasihat Pengguna dan kaunter Sirkulasi. Dapatan kajian menunjukkan tahap keperluan mereka terhadap kemahiran komunikasi Arab adalah sangat tinggi dan positif, pada empat fungsi utama dalam pelbagai situasi, iaitu pertanyaan, permohonan, penerangan dan perbualan umum. Manakala jurang kekurangan (lacks) kemahiran komunikasi Arab adalah agak ketara. Ini memberi implikasi bahawa penyediaan sesuatu modul kursus komunikasi Arab keperpustakaan perlu mampu merapatkan jurang ini dengan memberi penekanan terhadap apa yang mereka belum kuasai dan perlu kuasai untuk kerjaya mereka. Ini disamping meraikan kehendak (wants) mereka yang menyentuh aspek penyediaan modul dan psikologi peserta melalui pendekatan pengajaran yang mudah dan menarik.*

Kata kunci: *Bahasa Arab Perpustakaan, Analisis Keperluan, Kerjaya, Staf Perpustakaan USIM.*

Abstract: *The purpose of this research is to analyse the needs of communication in Arabic language for the career of library staff at Universiti Sains Islam Malaysia (USIM). This analysis was adapted from the theory of Needs Analysis of Language for Specific Purpose by Hutchinson & Waters (1987), which comprises of three elements: Needs, Lacks and Wants. Based on this theory, a questionnaire is designed into two parts, the first part is related to the respondents' background and the second part is related to the situations in need of Arabic communication, the lack of Arabic communication in a real situation, and what the respondents want from a course in Arabic communication. The survey respondents (N28) consist of USIM library staffs that are serving at two main counters, the Customer Service counter and Circulation counter. The findings show that their level of needs in Arabic Communication skill is very high and positive, with four main functions in various situations, i.e. queries, application, explanations and general conversation. Meanwhile, the lack of Arabic*

Communication skill is quite significant. This implies that the preparation of an Arab Communication course module will be able to narrow the gap by emphasizing what they have yet to master and need to master for their careers. This is also to fulfill their needs in the aspects of module preparation and their psychology by providing an easy and interesting teaching approach.

***Keywords**: Arabic Language, Library, Needs Analysis, Career, USIM Library Staff*

Pengenalan

Pengajaran Bahasa Arab di Malaysia memperlihatkan perkembangan yang sangat signifikan. Ini kerana ia tidak hanya berorientasikan kepada pengajaran atau pembelajaran untuk memahami teks agama (Quran, Hadith, Kitab berbahasa Arab), atau sebagai memenuhi keperluan akademik sama ada di sekolah dan universiti sahaja, tetapi ia juga diketengahkan untuk tujuan kerjaya seperti staf perpustakaan. Maka, Bahasa Arab untuk staf perpustakaan boleh dikategorikan dalam bidang linguistik terapan dalam pengajaran bahasa untuk tujuan khusus (*Language for Specific Purposes*).

Penerokaan bidang Bahasa Arab Perpustakaan berpotensi besar dalam membantu meningkatkan kualiti perkhidmatan dalam kalangan staf perpustakaan. Menurut Chik (1998) setiap perbendaharaan kata, peraturan dan kaedah berbeza mengikut bidang. Kompleks bahasa untuk tujuan khusus bergantung kepada pengkhususan dan keperluan sebenar pelajar. Oleh yang demikian, Chik (1998) menegaskan perlunya para penyelidik mengambil langkah-langkah untuk mengkaji bidang bahasa tertentu dan menunjukkan kerelevanan kajian bahasa Arab untuk keperluan khusus.

Jaffar (2014) telah menyatakan bahawa tiada perbezaan jelas antara Bahasa Arab untuk Tujuan Akademik dan Bahasa Arab untuk Tujuan Kerjaya. Ini bermakna staf perpustakaan boleh bekerja dan belajar secara serentak. Mereka juga boleh mempelajari bahasa dan mengaplikasikannya apabila kembali ke bidang pekerjaan.

Tambahan itu juga, Ta'imah (1989) menggambarkan bahawa sebagai pelajar, pendekatan pengajaran bahasa ini mampu meningkatkan motivasi staf perpustakaan kerana mereka belajar sesuatu yang dapat memenuhi keperluan dan kehendak dalam kehidupan kerjaya mereka.

Kesimpulannya, sebagaimana yang disarankan oleh para pengkaji, pendidikan Bahasa Arab bagi tujuan khas seperti Bahasa Arab Perpustakaan perlu diambil perhatian. Justeru, kajian ini mengetengahkan kepentingan bahasa Arab bagi staf perpustakaan.

Permasalahan Kajian

Penggunaan Bahasa Arab sebagai alat komunikasi kerjaya oleh masyarakat Malaysia sudah menjadi suatu keperluan dalam beberapa bidang seperti pelancongan (Jaffar & Ahmad, 2018), diplomasi (Yusri & Chik, 2016), dan ketenteraan dalam kalangan anggota KAGAT (Najjah, Ahmad & Kaseh, 2015). Ini tidak terkecuali pekerja di sektor awam terutama yang kerap berurusan dengan pelanggan berbangsa Arab seperti staf perpustakaan di universiti-universiti Malaysia yang menempatkan ramai pelajar antarabangsa. Antaranya Universiti Sains Islam Malaysia (USIM) yang menerima pelajar dan staf akademik antarabangsa daripada pelbagai negara Arab seperti Jordan, Oman, Mesir dan Emirate Arab Bersatu.

Walaubagaimanapun, telah menjadi suatu cabaran dan halangan bagi staf perpustakaan untuk berkomunikasi dengan baik bersama pengguna perpustakaan berbangsa Arab disebabkan mereka tidak mempunyai kompetensi komunikasi melainkan dalam bahasa ibunda mereka sahaja. Maka, satu analisis keperluan Bahasa Arab untuk untuk tujuan kerjaya sebagai staf perpustakaan perlu dilakukan sebelum satu modul kursus dibina, kerana sesuatu kursus dan sukatan pelajaran perlu berlandaskan kepada keperluan institusi dan peserta kursus (Posner & Rudnitsky, 2006).

Analisis keperluan yang dijalankan ini cuba menjawab tiga persoalan utama iaitu: apakah situasi-situasi di perpustakaan yang perlu berkomunikasi Bahasa Arab? Sejauh manakah kekangan yang dihadapi oleh staf perpustakaan USIM ketika hendak berkomunikasi Arab dengan pelajar/staf Arab? Apakah kehendak dan harapan staf perpustakaan USIM terhadap modul kursus komunikasi Bahasa Arab yang akan dibangunkan nanti.

Sorotan Kajian Lepas

Bahasa Arab untuk tujuan khusus merupakan satu bidang kajian bahasa yang berpotensi besar untuk dibangunkan di Malaysia. Menurut Ta'imah (1989:276) penerokaan bidang tersebut akan menawarkan manfaat signifikan kepada pelajar bukan penutur jati ketika mengikuti suatu sesi PdP kerana menekankan kandungan dan kemahiran bahasa yang spesifik bagi mencapai hasil pembelajaran yang komprehensif. Melihat kepada potensi ini, sambutan positif dalam kalangan para pengkaji tempatan terhadap bidang tersebut dapat dilihat melalui kerencaman cabang kajian yang telah diterokai dari masa ke semasa.

Antaranya, kajian Jaffar & Ahmad (2018) yang bertajuk Model Analisis Keperluan Bahasa Arab Untuk Pelancongan Islam Selangor. Kajian tersebut bertujuan untuk membina satu model Analisis Keperluan Bahasa Arab Pelancongan Islam melalui integrasi Naqli dan Aqli. Hasil kajian menunjukkan faktor utama tarikan pelancong Arab ke Malaysia ialah makanan yang halal dan perkhidmatan hotel patuh Syariah, walaupun terdapat beberapa kekurangan penggunaan Bahasa Arab. Maka, modul Bahasa Arab Untuk Pelancongan Islam harus mempunyai tajuk-tajuk bersesuaian dan lebih menekankan aspek komunikasi.

Selain itu, Ghani & Daud (2018) di dalam kajiannya 'Bahasa Arab Untuk Pendidikan Awal Kanak-Kanak: Satu Kajian Analisis Keperluan', menumpukan terhadap usaha menerangkan keperluan dan kepentingan bahasa Arab dalam bidang pendidikan awal kanak-kanak. Kajian diskriptif kuantitatif berkenaan menggunakan borang soal selidik sebagai instrumen pengumpulan maklumat yang terdiri daripada soalan terbuka & tertutup. Borang soal selidik tertutup telah diedarkan kepada 80 orang pelajar yang mengikuti kursus diploma dalam pendidikan awal kanak-kanak di Kolej Poly-Tech MARA (KPTM), Kota Bharu, Kelantan, manakala borang soal selidik terbuka telah diedarkan kepada tujuh orang guru prasekolah di Kota Bharu untuk meneroka kepentingan bahasa Arab dalam kalangan pendidik kanak-kanak. Dapatan utama kajian menunjukkan bahawa keupayaan untuk memahami istilah-istilah asas yang berkaitan dengan pendidikan awal kanak-kanak merupakan salah satu keperluan yang penting bagi pelajar pendidikan awal kanak-kanak di Kolej Poly-Tech Mara (KPTM). Keadaan ini berlaku kerana istilah berkenaan digunakan oleh pelajar-pelajar dalam pengajian dan di alam pekerjaan kerana mereka dikehendaki mengajar bahasa Arab di prasekolah. Di samping itu, kemahiran bahasa Arab juga memberikan kelebihan dan nilai tambah kepada mereka kerana dapat meningkatkan kemahiran komunikasi seterusnya dapat mengaplikasikannya dalam pengendalian kelas.

Di samping itu, kajian Mohamed & Seman (2016) menganalisis keperluan jemaah Haji dan Umrah terhadap modul Bahasa Arab untuk tujuan haji dan umrah. Seramai 300 orang responden dalam kalangan jemaah yang pernah menunaikan Haji dan Umrah telah mengisi borang soal selidik. Hasil kajian menunjukkan bahawa majoriti jemaah Haji dan Umrah menginginkan satu modul khas untuk membantu mereka dalam menunaikan Haji dan Umrah melalui penghayatan Bahasa Arab yang juga sebagai medium ibadah dalam Islam.

Manakala Nisaa dan rakan-rakan (2016) menganalisis keperluan Bahasa Arab dalam kalangan staf masjid-masjid utama di Kuala Lumpur. Ia bagi mengetahui tujuan penggunaan

Bahasa Arab dalam kalangan pekerja-pekerja masjid yang terdiri daripada pengawal keselamatan, pegawai tadbir, imam dan bilal. Borang soal selidik telah diedarkan kepada 47 orang pekerja masjid dari tiga buah masjid utama di sekitar Kuala Lumpur iaitu Masjid Negara, Masjid Sultan Salahuddin Abdul Aziz Shah dan Masjid Jamek. Hasil kajian menunjukkan betapa pentingnya bahasa Arab dalam bidang kerjaya mereka, seterusnya menjadi satu keperluan dalam membina modul khusus yang dapat membantu para petugas masjid dalam mempelajari bahasa Arab untuk memudahkan tugas-tugas mereka.

Kajian Ali & Mahamod (2015) pula dilaksanakan untuk mengenal pasti keperluan modul yang sesuai digunakan oleh guru untuk pengajaran dan pembelajaran kemahiran bahasa kanak-kanak prasekolah melalui permainan. Kajian ini menggunakan kaedah temu bual separa struktur ke atas 10 orang guru prasekolah Kementerian Pelajaran Malaysia (KPM) dari sekolah yang berbeza. Analisis dapatan kajian menunjukkan modul pengajaran & pembelajaran bahasa berasaskan pendekatan permainan dalam kalangan kanak-kanak prasekolah berpotensi untuk dibangunkan. Kesimpulan dapatan kajian menyatakan bahawa pendekatan bermain ialah cara yang sesuai untuk aktiviti pengajaran dan pembelajaran kanak-kanak prasekolah. Maka, guru perlu menggunakan sumber dan bahan yang sesuai untuk merangsang pembelajaran bahasa murid, disamping aktiviti pengajaran perlu mempertimbangkan keupayaan bahasa murid.

Razak dan rakan-rakan (2015) pula melakukan kajian 'Analisis Keperluan Bahasa Arab untuk Tugasan Rasmi Anggota Tentera Malaysia di Negara Arab'. Kajian ini bertujuan untuk meneroka perspektif anggota Kor Agama Angkatan Tentera (KAGAT) terhadap penggunaan Bahasa Arab dalam operasi haji, dan menganalisis keperluan bahasa sebagai langkah pertama mewujudkan sukatan pelajaran Bahasa Arab yang bersesuaian. Kajian ini mendapati bahawa anggota KAGAT mengakui kepentingan Bahasa Arab untuk tujuan operasi haji. Kajian ini turut menyenaraikan keperluan bahasa dari perspektif anggota KAGAT bagi tujuan operasi haji yang dapat menjadi panduan awal untuk membina sukatan pelajaran yang bersesuaian.

Dari sudut yang lain, kajian bertajuk Analisis Keperluan Pembelajaran Bahasa Arab Dalam Kalangan Warga Emas oleh Kasran dan rakan-rakan (2015) telah dijalankan untuk mengenal pasti faktor yang mendorong warga emas mempelajari bahasa Arab dan menyenaraikan bahan yang bertepatan dengan keperluan pembelajaran mereka. Kajian ini hanya melibatkan tiga orang responden yang mengikuti kursus pengajian bahasa Arab di bawah program University of Third Age (U3A), Institut Gerontologi, Universiti Putra Malaysia, Serdang. Responden dipilih berdasarkan kaedah pensampelan pelbagai latar belakang atau dikenali sebagai "maximal variation sampling". Memandangkan kajian ini bersifat kualitatif, maka pengkaji menggunakan kaedah temu bual untuk mengutip data. Item temu bual dibina berdasarkan kepada model keperluan yang dirangka oleh Hutchinson dan Waters (1987). Hasil kajian menunjukkan bahawa terdapat tiga tiga faktor utama golongan warga emas mempelajari bahasa Arab iaitu faktor agama, faktor komunikasi dan faktor kemasyarakatan. Berkenaan bahan pembelajaran, golongan warga emas cenderung untuk mempelajari topik yang berkaitan dengan tema agama, tema komunikasi, unsur bahasa seperti fonologi, morfologi, sintaksis, kosa kata serta keindahan bahasa dan unsur kemahiran bahasa iaitu membaca, bercakap, mendengar dan menulis.

Berkaitan itu, Jaffar dan rakan-rakan (2015) melaksanakan satu kajian pengunaan Bahasa Arab untuk Tujuan Agama (BAUTA) di kalangan pelajar Sarjana Muda Bahasa Arab dan Komunikasi di USIM. Kajian ini menggunakan borang soal selidik yang diedarkan kepada 150 orang pelajar tahun dua dan tiga. Hasil kajian menunjukkan betapa pentingnya Bahasa Arab Tujuan Agama dalam akademik dan kerjaya. Majoriti pelajar bersetuju dengan keperluan mempelajari BAUTA terutamanya untuk memahami agama islam dengan lebih tepat dengan merujuk terus sumber utamanya iaitu al-Quran dan as-Sunnah tanpa bergantung kepada terjemahan.

Berdasarkan kajian-kajian di atas, dapat disimpulkan bahawa kajian bahasa untuk tujuan khusus di Malaysia telah berkembang dalam pelbagai bidang yang melibatkan penggunaan bahasa Arab seperti pelancongan Islam, Haji & Umrah, institusi masjid, ketenteraan, hubungan diplomatik dan lain-lain. Kajian terdahulu juga membuktikan reka bentuk modul pengajaran bahasa Arab untuk tujuan khusus perlu berdasarkan analisis keperluan pelajar. Maka analisis seperti ini perlu dilakukan seperti berpandukan teori Huchinson & Waters (1987) dan *Communication Needs Processor* (CNP) oleh Munby (1978). Namun, tiada penyelidikan dilakukan setakat ini membabitkan analisis keperluan komunikasi Bahasa Arab untuk kakitangan perpustakaan di Malaysia, sedangkan keperluan dalam kerjaya mereka terhadap penggunaan Bahasa Arab wujud.

Metodologi Kajian

Kajian ini merupakan kajian tinjauan bertujuan untuk mengenalpasti dan menganalisis keperluan staf perpustakaan USIM terhadap komunikasi Bahasa Arab dalam kerjaya mereka. Maka, pemilihan responden kajian adalah berbentuk persampelan bertujuan (purposive sampling) yang terdiri daripada 30 orang staf perpustakaan USIM yang pernah berkhidmat di dua kaunter utama, iaitu Kaunter Penasihat Pengguna dan Kaunter Sirkulasi, selama 1 hingga 18 tahun. Data kajian dikumpul menggunakan intrumen borang kaji selidik yang terdiri daripada dua bahagian: 1) latar belakang responden (pertanyaan tertutup), dan 2) analisis keperluan (pertanyaan terbuka) bagi mendapatkan pendapat responden berdasarkan pengalaman kerjaya mereka (Omar, 2015). Analisis keperluan ini diadaptasi daripada teori Analisis Keperluan oleh Hutchinson dan Waters (1987), di mana ia terdiri daripada tiga elemen utama, iaitu: Keperluan (Needs), Kekurangan (Lacks) dan Kehendak (Wants). Borang kaji selidik diedar kepada responden menerusi *Google Form* dan dianalis secara deskriptif dengan melihat nilai kekerapan dan juga kandungan.

Analisis Dapatan Kajian

Dapatan kajian tentang analisis keperluan Bahasa Arab untuk Staf Perpustakaan adalah seperti berikut:

Bahagian A:

Bahagian ini merangkumi maklumat umum tentang latar belakang responden seperti jantina, umur, tempoh berkhidmat, dan tahap keperluan kompetensi komunikasi Bahasa Arab.

Jadual 1: Jantina

Jantina	Kekerapan
Lelaki	9 orang (32%)
Perempuan	19 orang (68%)

Sumber: Borang Kaji Selidik

Jadual 1 di atas menjelaskan hanya 28 daripada 30 orang responden sahaja menjawab kaji selidik yang diedarkan, yang mana majoritinya adalah perempuan (68%), manakala bakinya (32%) adalah lelaki.

Jadual 2: Umur

Umur	Kekerapan
25-30	23%
31-36	28%
37-42	35%
43-48	14%

Sumber: Borang Kaji Selidik

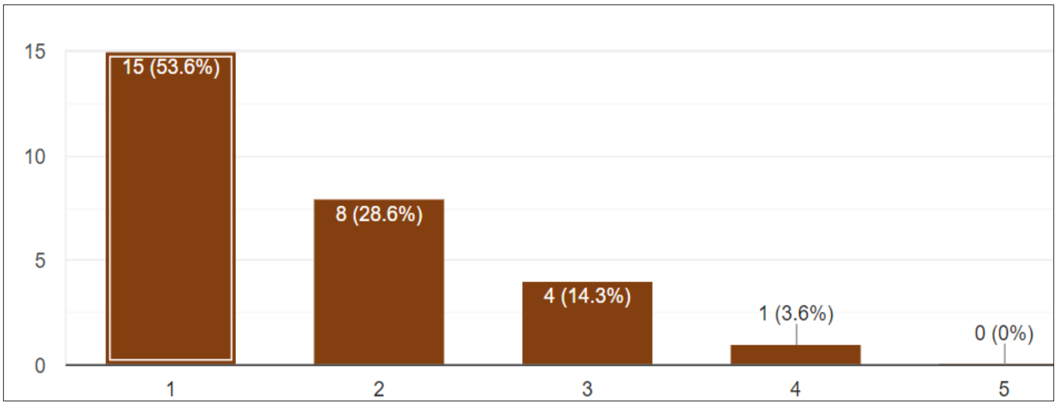
Jadual 2 menunjukkan daripada seramai 28 orang responden, 35% daripadanya berumur di antara 37 hingga 42 tahun, manakala 28% daripada responden berumur diantara 31 hingga 36 tahun. Kumpulan umur yang paling tua dalam kalangan responden mencatatkan kelompok responden paling sedikit (14%), diikuti kelompok termuda (23%) iaitu mereka berumur di antara 25 hingga 30 tahun.

Jadual 3: Mempelajari Bahasa Arab

Pengalaman	Kekerapan
Pernah	82%
Tidak Pernah	18%

Sumber: Borang kaji selidik

Jadual 3 pula menunjukkan majoriti responden, iaitu sebanyak (82%) pernah mempelajari Bahasa Arab, manakala sebahagian kecil sahaja (18%) tidak. Walaubagaimanapun, tahap komunikasi Bahasa Arab mereka masih berada pada tahap lemah dan sangat lemah, sebagaimana ditunjukkan pada rajah di bawah:

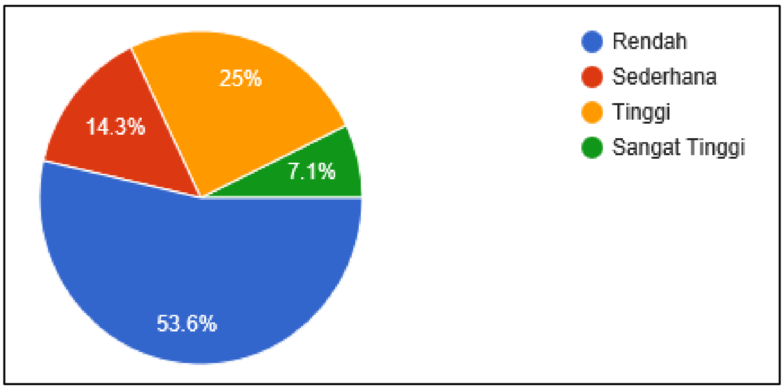


Petunjuk: 1: Sangat Lemah, 2: Lemah, 3: Baik, 4: Baik, 5: Sangat Baik

Rajah 1: Tahap Penguasaan Komunikasi Arab

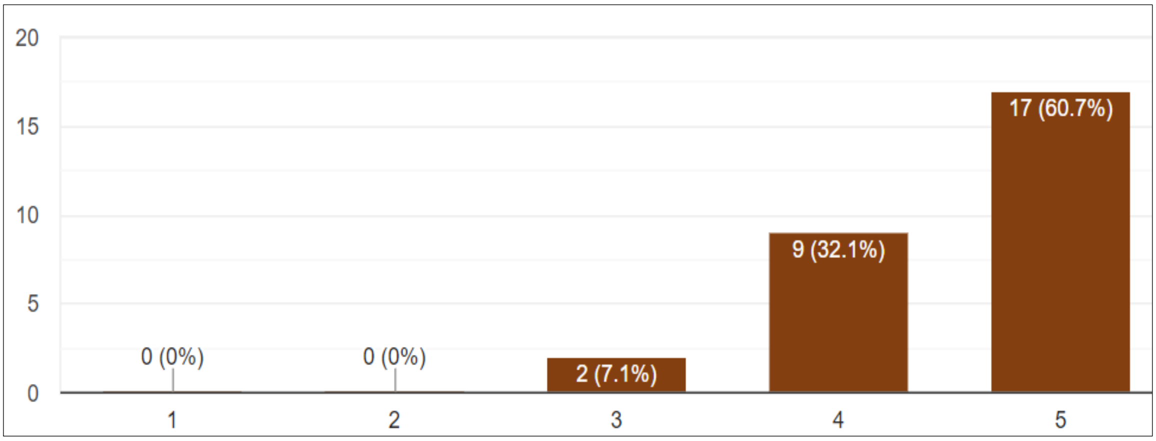
Sumber: Borang Kaji Selidik

Rajah 1 di atas jelas menunjukkan tahap penguasaan komunikasi lisan Bahasa Arab responden, majoritinya adalah sangat lemah (54%) dan lemah (29%). Hanya seorang sahaja pada tahap baik, manakala 4 orang (14%) berada pada tahap sederhana. Ini memberikan indikator bahawa Bahasa Arab yang diperolehi masih belum mampu memenuhi keperluan kerjaya mereka walaupun tahap keperluan untuk berkomunikasi Arab di perpustakaan USIM adalah rendah, sebagaimana dibuktikan dalam rajah berikut:



Rajah 2: Tahap Keperluan Berkomunikasi Arab di Perpustakaan USIM
Sumber: Borang Kaji Selidik

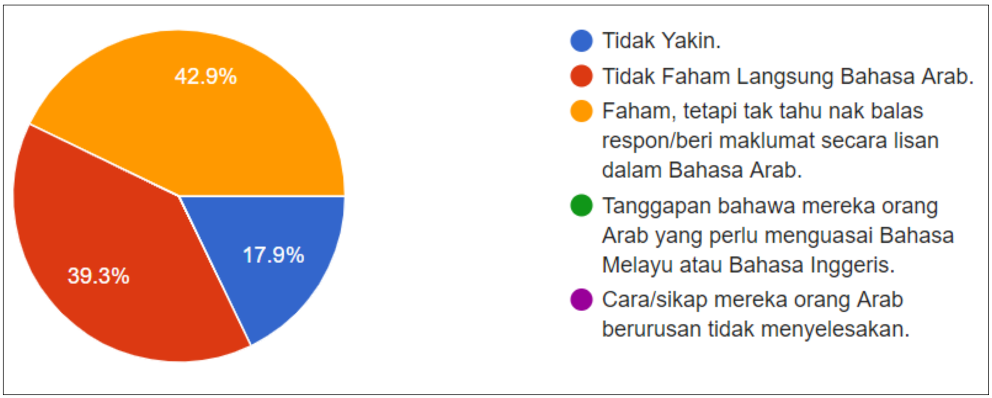
Rajah 2 di atas menunjukkan sebahagian besar responden (54%) mendapati keperluan mereka untuk berkomunikasi Arab dalam kerjaya mereka di perpustakaan USIM adalah rendah, manakala dua orang sahaja (7%) mengatakan sangat tinggi dan (25%) tinggi. Ini mungkin disebabkan kekerapan mereka berhadapan dengan pelanggan Arab adalah sedikit berbanding dengan pelanggan berbangsa lain. Walaupun keperluan ini dikatakan pada tahap rendah, persepsi mereka terhadap keperluan mengikuti kursus Bahasa Arab untuk tujuan komunikasi kerjaya sangat baik seperti ditunjukkan dalam rajah 3 di bawah:



Petunjuk: 1: Sangat Tidak Perlu, 2: Tidak Perlu, 3: Sederhana, 4: Perlu, 5: Sangat Perlu

Rajah 3: Tahap Keperluan Mengikuti Kursus Komunikasi Asas Bahasa Arab untuk Kerjaya
Sumber: Borang Kaji Selidik

Rajah 3 di atas jelas menunjukkan tiada seorang pun responden yang mengatakan tidak perlu mengikuti kursus komunikasi Bahasa Arab untuk tujuan kerjaya mereka, bahkan 93% daripada mereka mengatakan perlu dan sangat perlu. Ini memberikan gambaran bahawa responden mempunyai persepsi positif terhadap keperluan Bahasa Arab dalam kerjaya mereka. Ini mungkin disebabkan tahap penguasaan komunikasi mereka masih berada pada tahap lemah, mempunyai keinginan yang tinggi untuk memahami dan respon perbualan berbahasa Arab, serta tidak beranggapan bahawa orang Arab itulah yang perlu menguasai Bahasa Inggeris atau Bahasa Melayu untuk berurusan dengan mereka. Ini dapat dibuktikan sebagaimana rajah di bawah:



Rajah 4: Bentuk Kekangan Komunikasi Bahasa Arab

Sumber: Borang Kaji Selidik

Berdasarkan rajah 4 di atas, hanya terdapat tiga bentuk kekangan sahaja untuk berkomunikasi Arab oleh staf perpustakaan USIM, iaitu sebanyak 43% daripada responden masih mampu memahami komunikasi Arab, tetapi mereka hanya tidak tahu memberi maklum balas dalam Bahasa Arab. Hampir kebanyakan mereka juga iaitu sebanyak 39% tidak faham langsung Bahasa Arab, dan sebahagin kecil mereka (18%) menghadapi masalah psikologi untuk berkomunikasi Arab iaitu tidak yakin. Walaubagaimanapun, kesemua responden berpendapat tanggapan perlunya orang Arab menguasai Bahasa Inggeris atau Melayu, dan sikap orang Arab berurusan yang tidak menyelesakan bukannya kekangan untuk mereka berkomunikasi Arab.

Bahagian B:

Bahagian ini menganalis keperluan komunikasi Bahasa Arab untuk staf perpustakaan dalam tiga aspek iaitu keperluan, kekurangan dan kehendak. Data yang diambil dalam bahagian ini adalah daripada borang kaji selidik dalam bentuk soalan '*open-ended*'. Ia bagi mendapatkan maklumat spesifik dalam setiap aspek tersebut berdasarkan pengalaman kerja responden sendiri selama 1 hingga 18 tahun, dan bukannya jangkaan pengkaji, disamping tiada kajian lepas berkaitannya.

Aspek 1: Dalam aspek keperluan ini, soalan yang diutarakan adalah bertujuan mengenalpasti situasi-situasi yang perlu berkomunikasi Arab di kaunter perpustakaan USIM. Jawapan responden boleh diklasifikasikan seperti jadual berikut:

Jadual 4: Situasi-situasi staf perpustakaan USIM perlu berkomunikasi Arab

Fungsi	Situasi
Pertanyaan	- Pertanyaan berkaitan pangkalan data dan pencarian bahan berbahasa Arab. - Pertanyaan tentang tesis. - Pertanyaan tentang cara guna mesin fotostat. - Pembayaran denda dan tempoh peminjaman bahan. - Pertanyaan berkaitan koleksi perpustakaan, perkhidmatan dan kemudahan perpustakaan. - Pertanyaan berkaitan program-program yang ditawarkan USIM dan kafe di USIM. - Pencarian bahan rujukan di perpustakaan.

Permohonan	- Permohonan pendaftaran ke sistem/akaun perpustakaan bagi penggunaan bahan-bahan online di perpustakaan. - Permohonan penggunaan bilik karel atau bilik perbincangan. - Permohonan maaf kepada pengguna kerana tidak dapat berkomunikasi dalam Bahasa Arab.
Penerangan	- Penerangan spesifik cara mengakses bahan perpustakaan/jurnal artikel secara online. - Penerangan tentang perkhidmatan dan kemudahan yang disediakan di perpustakaan serta peraturan yang perlu diketahui. - Penerangan cara penulisan *citation*. - Penerangan cara penggunaan *turn it in*. - Penerangan tentang perpustakaan. Pencarian bilik seminar dan bilik mesyuarat.
Perbualan Umum	- Perbualan harian, bertanya nama, asal, khabar, tujuan.

Sumber: Borang Kaji Selidik

Merujuk kepada jadual 4, ia menunjukkan terdapat banyak situasi perbualan yang menuntut staf perpustakaan USIM sama ada di kaunter Penasihat Pengguna ataupun kaunter Sirkulasi, untuk berkomunikasi dalam Bahasa Arab dalam empat fungsi utama, iaitu pertanyaan, permohonan, penerangan dan perbualan umum. Dalam kepelbagaian fungsi dan situasi komunikasi di atas, ia menggambarkan skop komunikasi tersebut boleh dikatakan berkisar tentang maklumat umum berkaitan perpustakaan, perkhidmatan dan kemudahan yang disediakan, disamping persoalan berkaitan semakan tesis menggunakan perisisan *turn it in* dan juga perbualan umum harian. Ini jelas menunjukkan keperluan komunikasi Bahasa Arab mereka adalah bersifat sangat spesifik dan berfungsi.

Aspek 2: Dalam aspek kedua pula, ia bertujuan melihat jurang kekurangan bahasa yang dihadapi oleh responden dalam mereka berkomunikasi Arab dengan pelanggan Arab. Ini boleh ditunjukkan dalam gambar rajah di bawah:

Jadual 5: Jurang kekurangan komunikasi Bahasa Arab bagi staf perpustakaan USIM

Aspek	Struktur Bahasa Komunikasi
Perkatan/Ungkapan Arab Yang Saya Tahu	(Apa khabar?) كَيْفَ حَالك ؟ (Maaf) عَفْوًا (Selamat tinggal) مَعَ السَّلامَة (Saya dalam keadaan baik) أنا بِخَير (Siapa nama kamu?) ما اسمك ؟ (Terima ksih) شكراً (Semoga berjumpa lagi) إلى اللقاء (Selamat datang) أهلاً وسهلاً (Tidak mengapa) لا بأس (kemana) إلى أين ؟ (Dimana) أين ؟ (Daripada mana) من أين ؟ (Sudah) خلص (Saya) أنا

Perkatan/Ungkapan Arab Yang Saya Pernah Guna	كيف حالك ؟ (Apa khabar?) هل أنت بخير؟ (Adakah kamu dalam keadaan baik) ما اسمك ؟ (Siapa nama kamu?) شكرا (Terima ksih) أين تسكن ؟ (Dimana kamu tinggal) من أين ؟ (Daripada mana) خلص (Sudah) أنا لا أعرف العربية (Saya tidak tahu Bahasa Arab) كيف أستطيع لمساعدتك؟ (Bagaimana saya boleh bantu kamu) عفوا، أنا لا أستطيع على الإجابة (Maaf, saya tak dapat menjawab) هذا الكتاب لا موجود في المكتبة (Buku ini tiada di perpustakaan) Boleh saya bantu?
Perkataan/Ungkapan Arab Yang Saya Tidak Tahu Tetapi Sangat Diperlukan Dalam Kerjaya	Terima kasih kerana menggunakan perkhidmatan kami. Adakah anda berpuas hati dengan bantuan/khidmat nasihat yang saya berikan. Boleh saya bantu? Buku apa yang tuan/puan cari? Perkara-perkaran berkaitan capaian internet dan pangkalan data. Ungkapan teknikal berkenaan fasiliti dan perkhidmatan Buku / tesis ini terdapat/tiada di perpustakaan Boleh rujuk meja penasihat pengguna. Tidak boleh pinjam. Boleh pinjam. Tutup pukul 10.

Sumber: Borang Kaji Selidik

Menerusi jadual 5 di atas, ia menunjukkan jurang kekurangan komunikasi Bahasa Arab bagi staf perpustakaan USIM adalah agak besar. Ini dapat dilihat apabila perbandingan dibuat antara struktur Bahasa Arab komunikasi yang dimiliki atau pernah digunakan oleh responden dengan apa yang perlu digunakan dalam kerjaya sebenar mereka. Ini kerana Bahasa Arab yang dimiliki atau pernah diungkapkan adalah dalam jumlah yang sangat minimum, fungsi asas, dan ringkas. Manakala Bahasa Arab yang diperlukan dalam kerjaya sebenar adalah lebih banyak fungsinya, kompleks dan panjang.

Aspek 3: Aspek ketiga adalah untuk mengetahui kehendak (*wants*) atau harapan responden terhadap pembinaan modul kursus komunikasi Bahasa Arab untuk tujuan kerjaya mereka. Antara dapatan utama kajian dalam aspek ini boleh disenaraikan seperti berikut:

Jadual 6: Kehendak Responden Terhadap Kursus Komunikasi Arab Keperpustakaan

Kehendak (*wants*)	- Mengetahui asas Bahasa Arab untuk berkomunikasi. - Meningkatkan kemahiran komunikasi Bahasa Arab. - Mengetahui komunikasi yang sesuai semasa berada di kaunter perkhidmatan dan ayat-ayat yang sering digunakan. - Boleh memahami Bahasa Arab yang asas untuk urusan kaunter. - Dapat menyampaikan maklumat berkaitan urusan di kaunter perpustakaan dengan baik kepada pengguna perpustakaan khususnya pengguna Arab. - Penyediaan modul yang bertepatan dengan keperluan sebenar petugas & boleh diaplikasikan selalu semasa berhadapan dengan pengguna. - Cipta modul secara kaedah perbualan sebenar. - Modul yang mudah diikuti dan difahami. - Modul yang perbanyakkan latihan komunikasi seperti situasi sebenar. - Modul membolehkan berbahasa Arab untuk tujuan pengkatalogan dan memahami isi kandungan buku berbahasa Arab. - Cara pengajaran yang mudah difahami. - Dapat memahami soalan dan kehendak pengguna dalam Bahasa Arab serta dapat memberikan respon sebaiknya. - Dapat mempelajari ayat-ayat yang asas dalam memberi perkhidmatan kepada pengguna. - Dapat menambah keyakinan berkomunikasi dalam bahasa arab.

Sumber: Borang Kaji Selidik

Berdasarkan kenyataan responden di atas, kehendak dan harapan mereka dapat dilihat dalam tiga aspek utama, iaitu: memiliki kompetensi asas dan komunikasi Bahasa Arab, pembinaan modul (berteraskan perbualan, mudah, latihan banyak berdasarkan situasi sebenar), dan cara pengajaran (mudah difahami).

Kesimpulan

Penggunaan Bahasa Arab sebagai alat komunikasi kepada staf perpustakaan di USIM adalah menjadi keperluan sebenar dalam kerjaya mereka, sebagaimana dibuktikan oleh analisis keperluan yang dijalankan ini. Analisis keperluan ini juga menunjukkan tahap keperluan mereka terhadap kemahiran komunikasi Arab adalah sangat tinggi dan positif. Ini demi memberikan perkhidmatan terbaik kepada pelanggan Arab tanpa memberi persepsi bahawa merekalah yang perlu menguasi bahasa yang dikuasai oleh penyedia perkhidmatan seperti Bahasa Melayu atau Bahasa Inggeris.

Analisis keperluan ini mendapati skop kemahiran komunikasi Arab yang diperlukan (*needs*) oleh staf perpustakaan di dua kaunter utama iaitu kaunter Penasihat Pengguna dan kaunter Sirkulasi, berada pada empat fungsi utama dalam pelbagai situasi, iaitu pertanyaan, permohonan, penerangan dan perbualan umum. Ini jelas menunjukkan keperluan komunikasi Bahasa Arab mereka adalah bersifat sangat spesifik dan berfungsi.

Manakala jurang keperluan dan kekurangan (*lacks*) kemahiran komunikasi Arab adalah agak ketara. Ini memberi implikasi bahawa penyediaan sesuatu modul kursus komunikasi Arab kepada staf perpustakaan nanti perlulah berusaha merapatkan jurang ini dengan memberi penekanan lebih terhadap apa yang mereka belum kuasai dan perlu kuasai untuk kerjaya mereka. Ini disamping meraikan kehendak (*wants*) dan harapan mereka, bukan sahaja dalam aspek penyediaan modul (kompetensi bahasa dan komunikasi Arab), bahkan dalam aspek psikologi peserta melalui pendekatan pengajaran yang diambil. Hasil analisis ini juga memberikan satu dimensi baharu dalam wacana pengajaran Bahasa Arab untuk tujuan keperpustakaan dalam konteks Malaysia dan juga di negara-negara bukan penutur Arab. Ia didorongi oleh kemasukan ramai pelajar Arab dan juga staf akademik Arab yang berkhidmat di universiti-universiti awam dan juga swasta yang memerlukan layanan komunikasi dalam bahasa mereka sendiri. Maka, analisis keperluan seperti ini perlu diperluaskan sebagai langkah pertama dan terpenting dalam proses penyediaan kursus pengajaran bahasa untuk tujuan khusus.

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IMEJAN *ZOOMORPHIC* DALAM LUKISAN GUA PRASEJARAH, GUA KAIN HITAM (*PAINTED CAVE*) NIAH, SARAWAK

ZOOMORPHIC IMAGES IN PREHISTORIC CAVE PAINTING OF KAIN HITAM CAVE (PAINTED CAVE) NIAH, SARAWAK

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Abstrak: *Artikel ini membahaskan imej-imej zoomorphic atau imej haiwan yang telah dihasilkan pada dinding gua prasejarah. Gua Kain Hitam (Painted Cave) yang terletak di dalam kompleks Gua Niah merupakan sebuah gua yang dipercayai pernah dihuni oleh masyarakat zaman Neolitik. Di dalam gua ini telah dijumpai pelbagai artifak termasuklah keranda berbentuk perahu, perhiasan yang diperbuat daripada kerang, tulang dan seramik. Di dalam gua ini juga terdapat sebuah lukisan gua yang dihasilkan pada dinding menggunakan bahan hematit yang dicampur dengan bahan campuran tumbuhan. Fokus utama artikel ini adalah untuk merekodkan semua imej-imej haiwan yang terdapat di dalam dinding gua tersebut. Penyelidikan ini juga berusaha untuk mendokumentasikan imej secara digital. Penyelidik menghasilkan imej semula menggunakan perisian digital Adobe Photoshop. Hasil penyelidikan ini dapat mengumpulkan sebuah koleksi imej yang lebih tersusun dan terperinci.*

Kata Kunci: *Painted Cave, zoomorphic, dan lukisan gua.*

Abstract: *This article debates the zoomorphic images or images of animals that have been produced on prehistoric cave walls. Kain Hitam Cave or known as Painted Cave, located within the Niah Cave complex, is a cave which believed have been inhabited by Neolithic peoples. Inside the cave there were a variety of artefacts including boat-shaped coffins, jewellery made of shells, bones and ceramics. Inside the cave there is also a cave painting that is produced on the wall using hematite material mixed with a mixture of plant material. The main focus of this article is to record all the animal images found inside the cave wall. This research also attempted to document images digitally. The researchers produced a re-image using Adobe Photoshop's digital software. The results of this research is to collect a more organized and detailed collection of images.*

Keywords: *Painted Cave, zoomorphic, and cave painting.*

Pengenalan

Gua Niah terletak di daerah Miri di Sarawak, sebahagian dari Taman Negara Niah di Sarawak. Formasi gua yang besar terletak dalam formasi blok kapur yang besar, sekitar satu kilometer panjang, berorientasikan arah utara-selatan dan sekitar setengah kilometer lebar. Gua ini mempunyai tapak-tapak prasejarah penting di mana tinggalan tengkorak manusia yang berusia 40,000 tahun telah ditemui. Tapak ini adalah penempatan tertua manusia tercatat di Malaysia Timur.

Painted Cave atau Gua Kain Hitam, terletak kira-kira 500 meter dari Gua Niah blok hujung timur selatan, mempunyai lukisan gua prasejarah yang dipercayai berusia lebih daripada 3000 tahun yang dihasilkan menggunakan bahan hematit. Penyelidikan pertama dilakukan oleh Tom Harrisson pada tahun 1950. Beliau melaporkan aktiviti lengkap pengebumian manusia terlipat dan duduk yang ditemui di gua ini sejak 20,000BP (Harrisson 1957: 134-136).

Keindahan lukisan prasejarah jelas memperlihatkan kewujudan unsur budaya serta tahap intelektualisme masyarakat primitif pada zaman silam. Keunikannya bukan sekadar terletak pada nilai estetika dan kehalusan imejan tetapi pada falsafah yang tersirat di sebaliknya. Lukisan zaman ini adalah bukti jelas bahawa manusia pada ketika itu sudah mulai hidup bertamadun dan bersosial. Perkara ini jelas didokumentasikan daam lukisan yang dihasilkan. Lantas, lukisan zaman Neolitik adalah satu bukti kukuh gambaran yang wujud 35,000 tahun Sebelum Masihi.

Lukisan prasejarah merupakan suatu fenomena penting dalam dunia seni lukisan moden pada hari ini. Penggiat seni adalah digalakkan untuk memahami sejarah seni dan perkembangannya kerana isu kesedaran terhadap pensejarahan seni yang akan menentukan arah masa depan seni catan moden di Malaysia.

Kajian Literatur

Terdapat deposit sisa cengekerang hidupan laut ditemui di dalam Gua Niah, Lobang Tulang dan Gua Kain Hitam (*Painted Cave*) yang diketuai oleh Barbara Harrisson yang mengulas bahawa, sisa cengkerang merupakan satu-satunya bahan bukti kasual yang tiada kaitan dengan upacara penguburan (B. Harrisson 1959- 60: 171). Walau bagaimanapun, penyelidik berpendapat sisa cengkerang boleh dikaitkan dengan aktiviti pengebumian. Dapatan ini diperkukuh oleh penemuan cengkerang dan siput yang digunakan oleh masyarakat prasejarah sebagai perhiasan. Fox (1970: 72) juga mencatatkan hubungan antara cengkerang dan siput digunakan dalam upacara pengebumian di tapak Tabon Gua Palawan, di utara Borneo di Filipina barat daya.

Artefacts produced for shell are less common than those for bone in the Kain Hitam assemblage, but nevertheless show a range of forms and raw materials. There are 24 shell artefacts, including a perforated Conus sp. spire, two disc beads hewn from Melo sp. shell, two Cypraea annulus shells with the dorsum removed, one Nassarius pullus with the dorsum removed and ground, and two Oliva sp. shells with worn holes at the apex. A collection of three Anadara granosa and 11 Polymesoda erosa valves has hewn holes at the umbo, and technological analysis supports an interpretation of them as shell sinkers from casting nets (Szabó and Yang In preparation). The final 'artefact' is an unmodified Vexillum cf. citrinus which, as an occupant of clean coral sand, is clearly an import from some distance away (Szabo et el, 2008:153).

Beberapa imej haiwan yang boleh dikenal pasti termasuk imej buaya, siput, kura-kura, mamalia berkaki empat, dan figura dengan ciri-ciri burung dan manusia. Perlambangan ini boleh dikatakan bahawa beberapa figura manusia memakai hiasan kepala dan pakaian, namun perlambangan umum kepada figura tersebut berselindung dalam kekaburan sifat manusia atau fizikal haiwan. Seperti yang telah dibuktikan oleh Tom Harrisson (1958), ciri-ciri yang dikenali dari hasil taburan bahan artifak dan peninggalan prasejarah di Gua Kain Hitam (*Painted Cave*) jelas berkaitan rapat dengan simbolisme kematian, dan mempunyai hubung kait dengan lukisan gua yang telah dihasilkan.

Further observations of techniques associated with bone-orm=nament production will be presented elsewhere. Holes drilled through the teeth of cloded leopard, civet cat and dog, as well as those seen in the bead spacers, are absolutely straight, with no evidence of bevelling or counter-sinking. Such perforation morphology is generally indicative of the use of metal-tipped drills. Also worthy of note are four shark vertebrae, one of which has alarge, worn, central perforation and an abraded perimeter (Szabo et el, 2008:152-153).

Secara keseluruhannya, penyelidikan lepas telah mendokumenkan lukisan gua di Gua Kain Hitam (*Painted Cave*), tetapi kurangnya penyelidikan yang terperinci mengenai aspek ikon dan estetika terhadap lukisan gua tersebut. Oleh itu, penyelidikan ini membincangkan aspek ikon dan estetika dalam bidang seni visual dan mengupas setiap motif yang dihasilkan. Seterusnya, penyelidik juga mencadangkan aspek konservasi iaitu pemuliharaan motif ini dalam hasil seni visual. Jelasnya di sini, penyelidikan perlu dijalankan secara berterusan dengan penggunaan teknik atau kaedah yang lebih baik yang dapat menghasilkan dapatan yang lebih objektif dan jitu.

Imej *Zoomorphic* dalam Gua Kain Hitam (*Painted Cave*)

Ciri-ciri yang telah dikenal pasti pada imej menentukan kategori imej *zoomorphic* yang dihasilkan. Sifat-sifat fizikal yang terdapat pada objek sebenar dibandingkan dengan imej *zoomorphic* tersebut. Berikut adalah perbincangan analisis kepada penggunaan ikon dalam imej *zoomorphic*. Daripada keseluruhan dinding gua ini, penyelidik telah mengenal pasti sekitar 10 imej adalah imej haiwan. Ciri-ciri fizikal yang ketara seperti haiwan berkaki empat, anggota anatomi seperti tanduk kepala dan juga bulu pelepah ayam adalah ikon utama yang dikenal pasti. Berikut adalah imej haiwan yang disenaraikan sebagai imej burung.

Foto 1(i) menunjukkan bersebelahan imej ular dan monyet kecil ini adalah sebuah imej haiwan dengan dua kaki. Ciri-ciri yang jelas adalah bulu pelepah pada hagian ekor dan kepala berparuh, jelas menunjukkan haiwan tersebut adalah sejenis burung. Dalam Foto 1(ii) terdiri daripada beberapa imej seperti imej kompleks dengan garisan berduri dan juga imej yang sukar untuk dikenal pasti. Dalam Foto 1(ii) ini jelas menujnukkan ciri-ciri imej ayam dengan bentuk ekor dan kepala yang berparuh.


(i) (ii)

Foto 1: Imej *Zoomorphic* burung.

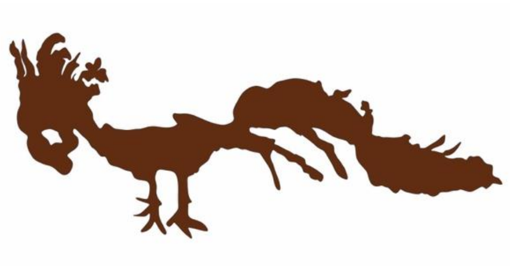
Imej *zoomorphic* dikenal pasti melalui ciri-ciri fizikal yang terdapat ada imej. Sebagai contoh, bentuk tangan dan kaki yang menyerupai haiwan adalah kunci kepada perlambangan yang digunakan oleh pelukis prasejarah. Oleh itu, imej berikut adalah representasi kepada haiwan yang wujud pada zaman Neolitik lagi.

Setelah selesai penyelidikan pada tahun 2001, kumpulan penyelidik diketuai oleh Greame Barker seterusnya menyambung kembali penyelidikan pada 8 April 2002. Penyelidikan ketiga menguatkan lagi bukti kedatangan masyarakat prasejarah ke Lobang Kuala (*West Mouth*) sebelum 43, 000 S.M. Ia juga membawa kepada peningkatan bukti wujudnya sistem penternakan sejak adanya masyarakat moden di Borneo. Di antara objektif penyelidikan itu ialah untuk mengumpul informasi berkaitan pendudukan Pleistocene, mengumpul material yang diperlukan untuk pengebumian, dan untuk mengetahui aktiviti penternakan dan pertanian. Mereka turut menemui banyak tulang haiwan di sekitar Kompleks Gua Niah.

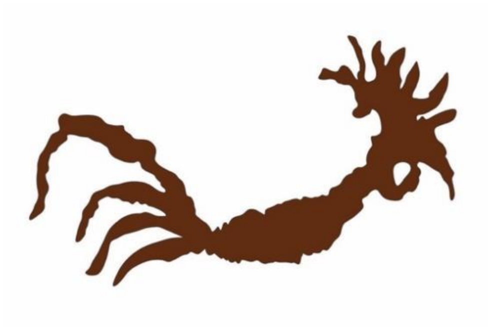
Foto 2 : Lukisan dalam pecahan imej daripada babirusa (*Babyrousa sp.*) dan stensil tangan dari salah satu gua di Sulawesi, Indonesia.

Sumber:https://www.smithsonianmag.com/science-nature/rockart-ages-indonesian-cave-paintings-are-40000-years-old-180952970/

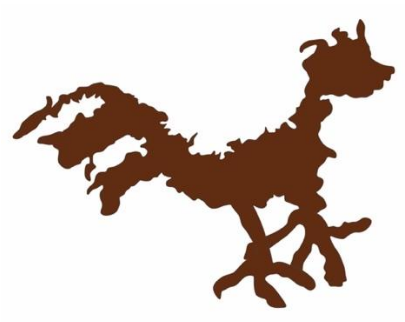
In a cave named Lubang Jeriji Saléh, a trio of round cow-like creatures is sketched on the wall, with the largest standing more than seven feet across. The new dating analysis suggests that these images are at least 40,000 years old, earning them the title of the earliest figurative cave paintings yet found. The work edges out the previous title-holder—a portly babirusa, or "pig deer," in Sulawesi, Indonesia—by just a few thousand years.



(i)



(ii)



(iii)

Foto 3: Imej *Zoomorphic* burung.

Ketiga-tiga imej di atas merupakan imej ayam dengan kepala berparuh dan jambul pada bahagian atas kepala ayam dan gelambir di bawah paruh. Dua daripada imej ini mempunyai dua kaki dengan jari kaki besar. Bentuk bulu ekornya yang jelas menunjukkan ayam imej tersebut adalah ayam jantan. Ikon yang digunakan oleh pelukis prasejarah dalam imej di atas adalah, paruh ayam, jambul, kaki dan jari kaki serta bulu pelepah yang dihasilkan dengan jelas sekali. Haiwan seperti ayam mudah didapati di sekitar kepulauan Borneo. Imej ayam yang dihasilkan ini dipercayai adalah ayam hutan yang mendiami di sekitar hutan Gua Kain Hitam. Ayam ini diburu untuk kegunaan sumber protein dalam kehidupan harian masyarakat prasejarah. Masyarakat prasejarah yang mendiami gua sekitar Kompleks Gua Niah telah mula beradaptasi dan berburu untuk mencari makanan mereka. Aktiviti kelangsungan hidup ini bukti kepada perkembangan intelektual masyarakat ketika itu.

Piktograf dalam lukisan prasejarah ini turut menggambarkan imej labi-labi, ular dalam posisi bulatan dan seekor buaya. Imej ini diambil daripada keseluruhan dinding lukisan gua. Imej ini menggambarkan mitos yang tersebar merentas generasi melalui mulut ke mulut, dengan imejan yang kekal bertujuan memelihara makna agar tidak hilang dalam sejarah. Nick Herrmann dari Universiti Mississippi, Amerika Syarikat berkata, ‘Imej terdahulu sebenarnya menunjukkan komposisi kompleks yang mencirikan seni prasejarah dalam bentuk visual.

Ular dengan patukan berbisa yang menyakitkan nampaknya telah menjadi sebahagian daripada kehidupan asyarakat prasejarah. Di dalam lukisan gua ini, imej ular dalam posisi bulatan telah dinal pasti di beberapa panel dinding gua. Imej buaya ini dilukis tanpa teliti tetapi masih menampakkan ciri-ciri buaya dengan mulut yang runcing dan ekor yang panjang. Piktograf yang dihasilkan menunjukkan bahawa imej haiwan prasejarah mengalami transformasi dengan kepala, badan, dan ekor. Transformasi ini telah digambarkan dalam seni lukis prasejarah.

Penyelidik mendapati bahawa interpretasi lukisan gua ini agak terbuka dan imej digambarkan sebagai sebahagian daripada "perubahan landskap yang teratur," dengan pencipta imej telah memusatkan konseptual alam semesta mereka ke dunia semula jadi di mana mereka hidup. Hal ini berlaku dalam tiga peringkat, dengan bahagian atas (*celestial in nature*), tengah (tumbuh-tumbuhan dan haiwan) dan lebih rendah (kegelapan, kematian dan bahaya) iaitu sebuah dunia akhirat yang sepadan dengan konsep kehidupan di rantau ini.

Kini, kebanyakan orang hanya berfikir terhadap kecanggihan teknologi moden. Mereka jarang mengimbas kembali kepada sejarah dunia, bagaimana tamadun pertama muncul, apa yang terjadi pada zaman purba, bagaimana orang purba tinggal, cara mencari makanan dan sebagainya. Pada masa dahulu, sebelum manusia menggunakan sistem tulisan seperti sekarang, mereka menggunakan beberapa rekod atau beberapa lakaran pada dinding, terutama di dalam gua yang dalam. (Cave Painting and Rock Art, 2002:7). Beberapa ahli arkeologi telah menemui banyak lukisan gua, terutamanya di benua Eropah. Lukisan gua memiliki sejarah yang berbeza, makna, kaedah untuk menghasilkan lukisan-lukisan gua tersebut untuk memburu lebih banyak haiwan bagi mendapatkan makanan dengan mudah.

Begitu juga dengan masyarakat purba yang percaya bahawa dengan menghasilkan lukisan haiwan pada dinding gua, mereka akan menjadikan semangat haiwan tersebut datang kepada mereka dan membawa nasib baik kepada mereka. Sesetengah masyarakat pula percaya bahawa lukisan gua bertujuan menghantar mesej kepada orang lain yang melalui atau tinggal di dalam gua pada masa hadapan. (Maggie, Cave Drawing).

Foto 4 : Sebahagian daripada panel lukisan kuda di Gua Chauvet, Perancis. Karya seni ini berumur kira-kira 36,000 tahun. Pada bulan Jun 2014 UNESCO mengundi untuk meletakkann Gua Chauvet sebagai Tapak Warisan Dunia.

Sumber:https://www.nationalgeographic.com/photography/proof/2015/01/05/shooting-chauvet-photographing-the-worlds-oldest-cave-art/

Menurut beberapa artikel laman sesawang, lukisan gua juga disebut *cave art*, atau *rock art*. (Cave Painting and Rock Art, 2002:1). Orang yang melihat lukisan gua, terutamanya ahli arkeologi, boleh menjelaskan cara masyarakat purba hidup, beberapa peristiwa dalam tempoh masa zaman Paleolitik kerana kebanyakan lukisan gua telah wujud dalam tempoh itu. Lukisan gua dianggap sebagai cara yang paling penting untuk menunjukkan interaksi antara masyarakat purba dan dunia. (Prehistoric Cave Art, online article).

Kesimpulan

Lukisan gua daripada arang merupakan lukisan gua yang paling banyak ditemui di Malaysia. Imej yang digambarkan adalah pelbagai, ada yang berbentuk sangat abstrak sehingga sukar untuk diterjemahkan; ada yang berbentuk geometri, bentuk figura manusia dan haiwan pemburuan serta bentuk yang lebih kontemporari seperti kereta, basikal dan orang yang menunggang kuda. Melalui lukisan gua ini juga kita mengetahui aktiviti yang dilakukan oleh masyarakat prasejarah iaitu aktiviti pemburuan dan aktiviti yang masih dilakukan oleh masyarakat Orang Asli sehingga hari ini.

Setiap bangsa dan masyarakat di seluruh dunia mempunyai budaya lukisan gua purba tersendiri yang boleh menjadi tatapan generasi kini. Ia mencerminkan ekspresi kreatif sesebuah masyarakat purba. Hal ini menunjukkan bahawa aktiviti-aktiviti manusia pada zaman dahulu berlaku secara universal dalam bentuk visual. Penciptaan lukisan gua juga selari dengan sejarah perkembangan kebudayaan manusia dan pengetahuan kita berhubung kebudayaan masyarakat prasejarah.

Secara keseluruhannya, penyelidikan lepas telah mendokumenkan lukisan gua di Gua Kain Hitam (*Painted Cave*), tetapi kurangnya penyelidikan yang terperinci mengenai aspek ikon dan estetika terhadap lukisan gua tersebut. Oleh itu, penyelidikan ini membincangkan aspek ikon dan estetika dalam bidang seni visual dan mengupas setiap motif yang dihasilkan. Seterusnya, penyelidik juga mencadangkan aspek konservasi iaitu pemuliharaan motif ini dalam hasil seni visual. Jelasnya di sini, penyelidikan perlu dijalankan secara berterusan dengan penggunaan teknik atau kaedah yang lebih baik yang dapat menghasilkan dapatan yang lebih objektif dan jitu.

Penghargaan

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EKSPLORASI ZAT WARNA ALAM BATIK DALAM KONTEKS WARNA TRADISI ETNIK DI SABAH

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Abstrak: *Warna tradisi telah wujud melalui beberapa penceritaan mitos berdasarkan peristiwa yang telah berlaku pada zaman dahulu dan diturunkan secara lisan. Pewarnaan alam iaitu bersumberkan alam semula jadi telah dipergiatkan dalam kalangan etnik di Sabah khususnya dalam kraf tangan. Justeru itu, pelbagai metod dan campuran bahan alam diadunkan bagi menghasilkan pelbagai warna mengikut tempat dan etnik yang mendukungnya. Objektif kajian ini tertumpu kepada eksplorasi tumbuh-tumbuhan yang berpontensi dalam penghasilan warna dalam bidang batik di Sabah. Dalam penyelidikan ini, eksperimentasi dilakukan secara sistematik yang melibatkan proses awal sehingga proses akhir untuk mendapatkan eksperimen warna. Bahan-bahan dalam eksperimen ini melibatkan tekstil, bahan alam dan bahan penguncian (pemati) warna. Eksperimen ini melalui tiga tahap iaitu bermula dengan proses mordanting, mengekstrak bahan alam dan penguncian warna (fixing). Penyelidik seterusnya menjalankan ujikaji terhadap zat warna tumbuhan terhadap kesan warna yang terhasil pada tesktil (kain). Bahan penguncian (pemati) warna yang digunakan adalah seperti tawas (Al_2SO_4), tunjung ($FeSO_4$) kapur ($CaCO_3$), sodium silicate, daun betik dan limau nipis.*

Kata kunci : *Warna alam, tekstil, batik, penguncian warna, etnik.*

Abstract: *The color tradition has come through several historical stories based on events that have occurred in ancient times and passed down orally. The natural color from natural resources has been intensified among ethnic groups in Sabah especially in handicrafts. Hence, various methods and mixes of natural resources are blended to produce a variety of colors according to the places and ethnicities that support them. The objective of this study is focused on the exploration of plants that have potential to produce natural color for batik in Sabah. In this research, experiments were performed systematically involving the initial process until the final process for obtaining color experiment. The main materials on this experiment are textiles, natural resources and fixing color. The experiment is conducted through three stages, starting with mordanting process, extracting natural resources and fixing color.The researchers then conducted experiments of natural color on the color effects produced on the textile . The fixing color that have been used such as tawas (Al2SO4), tunjung (FeSO4), kapur (CaCO3), sodium silicate, papaya leaves and lime.*

Keywords: *Natural color, textiles, batik, fixing color, ethnic.*

Pengenalan

Batik merupakan lukisan melalui teknik titik-titik yang membentuk garis di atas kain (Soekamto,1984:9)[2]. Didik Riyanto (1993:5)[3], pula menyatakan bahwa batik berasal dari bahasa Jawa yang disebut "mbatik" atau bermaksud titik-titik. Batik merupakan karya kesenian serta kegiatan melukis pada permukaan sesebuah kain. Motif batik lazimnya dihasilkan dengan menggunakan alat membatik seperti canting dan lilin (Anne Richter, 1994:90)[4].

Para penyelidik dan arkeologi memberi pendapat bahawa istilah batik berasal dari negara-negara sebelah Timur. Konsep asal dalam penghasilan batik adalah berasal dari tamadun besar dunia seperti daripada Mesir. Bagaimanapun beberapa penulis menyatakan bahawa istilah batik itu asalnya dari negeri-negeri kepulauan Melayu seperti Indonesia dan Malaysia. Istilah batik di Semenanjung Tanah Melayu lebih dikenali kerana penghasilan reka corak yang berkaitan dengan tema tumbuhan dan budaya tertentu.

G.P Rouffaer dalam (Asti Musman dan Ambar B. Arini, 2011: 3)[5], berpendapat bahawa teknik penghasilan batik pada abad ke-6 atau ke-7, sebenarnya berasal daripada India ataupun SriLangka. Manakala ahli arkeologi Belanda J.L.A. Brandes dan ahli arkeologi Indonesia iaitu, F.A Sutjipto mempercayai bahawa keaslian batik ini sebenarnya berasal dari daerah Toraja, Flores, Halmahera dan Papua (Nur Hidayat dan Tri Anis Sach Tt :3)[6].

Teori lain pula menyatakan bahawa kesenian batik dipercayai berasal dari Mesir. Selepas itu, dibawa ke selatan seperti Afrika dan ke timur Persia, India, Indonesia dan kepulauan di sekitarnya melalui penghijrahan pedagang dan tamadun terdahulu[7]. Selain itu, ada pula yang menyatakan bahawa batik tertua adalah berasal dari Jepun pada abad ke-8. Bagaimanapun, mereka membuat spekulasi bahawa abad perkembangan batik ini telah didahului di Mesir, Persia dan India[8].

Kesedaran tentang penggunaan alam semula jadi (*back to nature*) dalam dunia batik menunjukkan kesedaran oleh pihak yang berkecimpung untuk mempelbagaikan sumber warna dalam perkembangan industri batik. Sebagai contoh, pemerintah Jerman dan Belanda dilarang menjual produk tekstil yang dikenalpasti menggunakan bahan kimia seperti garam *diazonium* (Sambas dalam Tity Soegiarti: 2002)[9]. Kesan daripada penggunaan warna yang disintesis dengan garam *diazonium* mengakibatkan penyakit kanser dan dianggap sebagai pembunuh senyap.

Tinjauan Penggunaan Warna Tradisi di Sabah

Warna tradisi di Sabah dipergiatkan sejak dahulu yang bersumberkan bahan semula jadi untuk menghasilkan warna. Warna dihasilkan dengan kaedah campuran atau adunan sama ada berasaskan daun, batang, akar, buah atau bunga tumbuhan. Tradisi penghasilan warna tradisi masih diteruskan khususnya dalam pewarnaan kraf tangan masyarakat pedalaman di Sabah. Bahan-bahan alam yang digunakan mudah didapati di

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persekitaran mereka. Sabah yang terkenal dengan kepelbagaian etnik, kaya dengan bahan warna. Begitu juga halnya dengan kepelbagaian dari segi metod atau kaedahnya. Setiap etnik mempunyai cara tertentu mendapatkan zat warna pada sesuatu jenis tumbuhan. Pada umumnya, suku kaum di Sabah amat mementingkan penggunaan warna kerana setiap warna mempunyai maksud tertentu dalam adat dan budaya mereka.

Beberapa etnik di Sabah menunjukkan persamaan dalam menghasilkan warna hitam. Sebagai contoh, etnik Rungus dan Murut merujuk metod dan bahan pembuatan yang hampir sama iaitu, penggunaan arang, daun *tahum* ataupun daun *indalupis*. Etnik Bajau dan Iranun juga mempunyai persamaan iaitu, menggunakan bahan kayu sepang dan kayu bakau untuk menghasilkan warna hitam. Bagaimanapun, etnik Iranun menggunakan variasi kulit manggis, pinang muda dan limau nipis dalam menghasilkan warna hitam. Bahan semula jadi yang digunakan dalam kalangan etnik Dusun pula terdiri daripada daun keladi atau daun keledek untuk menghasilkan warna hitam. Selain itu, bahan lain yang lazim digunakan oleh semua etnik adalah berasaskan arang kayu, asap hitam, daun keledek atau daun keladi untuk mendapatkan warna hitam.

Etnik Rungus di Kudat menggunakan bahan alam semula jadi seperti daun *tahum* sebagai bahan utama dalam menghasilkan warna hitam. Daun *tingav* juga adalah bahan lain yang lazim digunakan. Selain itu, bahan kapur (kalsium hidroksida) dan arang daripada kuali juga turut digunakan. Penggunaan arang kuali dalam konteks masa kini, berbeza pada zaman nenek moyang mereka dahulu iaitu, arang kayu yang dihasilkan melalui pembakaran kayu *tongor*[10]. Fungsi arang kayu daripada *tongor* dan arang daripada kuali bertujuan mengeluarkan serbuk hitam dengan cara menghancurkan arang tersebut. Tujuan penggunaan kapur dalam penghasilan warna hitam adalah untuk mengekalkan warna pada permukaan benang atau kraf tangan. Kapur daripada kulit kerang biasanya dihasilkan secara tradisi melalui pembakaran dan menghancurkan kulit kerang[11].

Itilah *tarung*, *aitom* dan *akagi* adalah merujuk kepada warna hitam dalam etnik Murut di sekitar daerah Nabawan dan Tenom. Mereka menghasilkan warna daripada kulit kayu *ubol* dengan cara menumbuk kulit kayu tersebut agar mendapatkan patinya. Mereka juga menggunakan arang, iaitu bahan utama dalam penghasilan warna hitam. Etnik Murut di sekitar kampung Malinja, Nabawan pula menjurus kepada penggunaan daun *indalupis*, abu kayu, tanah liat dan tebu dalam penghasilan warna. Campuran zat pewarna dari kulit kayu *ubol* dan tebu lazimnya menjadi bahan pewarna dalam seni pembuatan tatu.

Etnik Dusun di sekitar daerah Kota Belud, Ranau dan Keningau terkenal dengan penggunaan asap bagi menghasilkan warna hitam. Mereka memperoleh asap melalui pembakaran minyak tanah. Sebahagian daripada mereka menggunakan asap daripada pembakaran getah *sekarap* (tayar getah). Dalam proses pewarnaan, kesan asap diratakan dengan daun keladi atau daun ubi keledak. Etnik Dusun di Keningau pula menggunakan *tuber* atau arang daun *selingkawang* sebagai bahan yang menggantikan daun keladi dan daun keledek. Lumpur juga turut digunakan melalui proses rendaman ke dalam lumpur bagi mendapatkan warna hitam.

Etnik Bajau di daerah Kota Belud, pula menggunakan kulit pokok bakau dan mempelam. Bahan ini direndam ke dalam air bersama dengan benang selama seminggu atau lebih bagi mendapatkan warna hitam. Kesan rendaman dalam jangka masa lama,

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[10] Utiyas Kunsian (72 Tahun). Kampung Bavanggazo, Kudat.

[11] Sinogihoi Masakup (60 Tahun). Kampung Bavanggazo, Kudat.

bertukar menjadi hitam. Hasil rendaman ke atas benang dalam air tersebut juga didapati warnanya yang lebih tahan berbanding benang yang dibeli dari pasaran. Campuran bahan lain yang digunakan dalam menghasilkan warna hitam adalah kulit buah manggis, pinang muda dan limau nipis. Kesemua bahan tersebut dimasak atau direbus bagi mendapatkan zat warna pada tumbuhan.

Seterusnya, bahan alam seperti kayu sepang, t*ambu kuning* dan daun lada atau daun cili turut digunakan dalam penghasilan warna hijau. Kualiti warna yang dihasilkan melalui kayu sepang lebih baik berbanding dengan penggunaan *tambu kuning*. Dalam kalangan etnik Iranun, terdapat tiga bahan utama dalam menghasilkan warna hijau iaitu, daun pandan, daun cili dan kulit kayu sepang. Proses pengambilan zat warna adalah melalui teknik rebusan. Daun lada ditumbuk bagi mempercepatkan proses mendapatkan warna. Selepas itu, direbus dan dangan daun pandan. Cara lain menghasilkan warna hijau ialah menggunakan *tambu kuning* yang direbus bersama dengan kulit kayu sepang. Selain itu, warna hijau juga diperolehi daripada rebusan daun lada.

Warna kuning pula dihasilkan oleh etnik Rungus, Murut, Iranun, Bajau dan Brunei melalui rebusan bahan *tambu kuning*. Selain itu, bahan alam lain yang lazim digunakan adalah berasaskan rebusan daun *senduduk*, daun *kalamundu*, *tambu kuning* dan *tamulawak*. Dalam penghasilan warna, bahan alam tersebut turut dicampurkan dengan isi kunyit hidup untuk mendapatkan warna yang legap dan menyerlah. Etnik Rungus, di daerah Kudat lebih banyak menggunakan rebusan kunyit hidup, daun *senduduk* dan daun *rungin*. Bagaimanapun, mereka juga hanya menggunakan kunyit tanpa campuran bahan lain dalam menghasilkan warna kuning.

Etnik Murut juga turut menghasilkan warna kuning dengan menggunakan kunyit hidup. Proses pengekstrakan bahan alam adalah dengan kaedah rebusan dalam air rebusan selama 20 minit bagi mendapatkan zat warna. Rebusan kunyit tersebut dicampurkan dengan cuka (*acetic acid)* untuk menyerlahkan warna dan lebih tahan lama[12]. Selain kunyit, *tambu kuning* warna kuning juga dihasilkan melalui campuran daun *kalamundu* ke dalam rebusan kunyit. Selain Teknik rebusan, kulit kunyit hidup juga diguna secara digosok ke permukaan kraf yang ingin diwarnakan. Kaedah ini merupakan warisan turun temurun yang diaplikasikan oleh pembuat sarung parang Bajau.

Warna merah merupakan warna yang dominan dalam kehidupan etnik di Sabah khususnya etnik Rungus dan Murut. Warna merah melambangkan kegagahan dan keberanian. Bahan alam yang digunakan dalam penghasilan warna merah adalah terdiri daripada kayu sepang, buah kesumba, mengkudu dan kunyit. Bagaimanapun, etnik di Sabah mempunyai perbezaan dari segi campuran bahan dan kaedah penghasilan warna.

Etnik Rungus di Kudat menggunakan bahan seperti kulit kayu *tongod*, pucuk *senduduk*, daun *rungin*, kapur sirih dan air. Biasanya bahan seperti kulit kayu *tongod* ditumbuk halus bersama dengan pucuk senduduk, kapur sirih (kalsium hidroksida) dan kemudian dilarutkan dengan sedikit air. Warna merah diperolehi dengan cara membungkus bahan yang ditumbuk dengan objek ingin diwarnakan selama semalaman dengan daun *rungin*. Etnik Bajau pula menghasilan warna merah dengan kulit kayu sepang dan akar mengkudu. Kedua-dua bahan ini direndam selama dua minggu bersama dengan kapas atau kain yang ingin diwarnakan.

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[12] Puan Siat Yanau (36 Tahun). Puan Limbai Tawau (55 Tahun). Kampung Enam, Nabawan.

Etnik Iranun pula menggunakan pokok sepang, buah dirak dan akar mengkudu bagi menghasilkan zat warna merah. Kesemua bahan tersebut direbus bersama selama 10 jam untuk mendapatkan warna. Selain itu, beberapa kaedah lain turut digunakan. Kaedah pertama, menggunakan rebusan kulit kayu bakau, buah dirak dan daun dirak. Kaedah kedua, kulit kayu pokok sepang dan daun *jirang* direbus bersama dengan daun mengkuang. Dalam kalangan etnik Lundayeh di daerah Sipitang menggunakan bahan daun ipang. Daun ipang ditumbuk sehingga lumat sebelum diekstrak. Selain itu, warna merah diperoleh dengan menggosok buah kurad atau *sia rong* pada permukaan objek yang ingin diwarnakan. Mereka turut memproses buah kurad menjadi serbuk dan membungkusnya dengan daun pisang sebelum dibakar. Melalui pembakaran tersebut, buah kurad menjadi ketulan sebelum digosok pada permukaan yang ingin diwarnakan. Selain itu, getah pokok *pugeh* dan *pirok* turut digunakan dalam penghasilan warna merah. Getah pokok *pugeh* juga dibakar menjadi ketulan kemudian digosok pada permukaan yang ingin diwarnakan.

Etnik Brunei pula menggunakan campuran buah kesumba dan kunyit bagi menghasilkan warna merah. Buah kesumba ditumbuk terlebih dahulu kemudian serbuk tersebut dicampurkan dengan air. Dalam penghasilan warna merah jingga, mereka menggunakan kunyit hidup yang dicampurkan dengan kapur. Kapur sirih mengandungi kandungan kalsium hidroksa bertindak untuk merubah warna kuning ke arah warna perang. Bagi etnik Rungus, zat warna merah jingga dihasilkan dengan menggunakan kunyit hidup dan kapur sirih. Proses mendapatkan zat warna mempunyai persamaan dengan etnik lain iaitu, kunyit hidup ditumbuk kemudian dicampur dengan kapur sirih dan diletak dengan sedikit air. Zat warna merah juga dihasilkan melalui campuran *tambu kuning* dan kunyit yang direbus dengan campuran kapur sirih. Selain itu, pokok bakau juga ditumbuk bersama dengan sedikit kapur sirih dan air untuk menghasilkan warna merah.

Penyelidik lepas juga berjaya menemui teknik penghasilan merah jambu atau warna ungu dalam pembuatan kuih tradisional etnik Dusun di Ranau. Mereka menggunakan buah *senduduk* atau buah *gensing* bagi mendapatkan zat warna ungu dengan cara merebus buah senduduk.

Warna coklat juga turut dihasilkan oleh etnik Bajau iaitu, menggunakan kulit kayu tangar untuk menghasilkan warna coklat. Bagi mendapatkan zat warna, kulit kayu tangar diekstrak sehingga menjadi warna varnis (coklat). Mereka lebih gemar menggunakan varnis yang mereka proses sendiri yang dipercayai dapat menguatkan lagi kayu dan papan rumah. Bagi menyerlahkan warna, mereka menggunakan sapuan lilin ke permukaan kayu supaya kelihatan licin dan berkilat.

Hasil penyelidikan sebelumnya juga telah menghasilkan warna perang. melalui zat warna yang terhasil dari kulit kayu *ubol* dan biasanya untuk kegunaan pewarnaan jala agar lebih tahan lama.[13] Zat warna terhasil melalui cara ditumbuk kemudian diperah bagi mendapatkan zat warna perang. Hasil zat warna yang berkualiti terhasil melalui hasil campuran kulit kayu ubol, getah kulit kayu ubol dan air.

Metodologi Penyelidikan

Penyelidik menghasilkan pewarnaan alam yang berkonsepkan kemahiran tradisi daripada kaum atau etnik di Sabah dalam bidang batik. Warna tradisi banyak diceritakan

[13] Angkangon Antagai (50 Tahun). Kampung Mamaitom, Tenom

sejak zaman dahulu. Lang (1966:21) dalam Low Kok On (2003: 21-22)[14], menyatakan peranan mitos sebagai cerita-cerita masa silam berkaitan dengan asal usul manusia dan kewujudan alam semesta.

Dalam kajian awal, penyelidik mengumpul maklumat daripada bahan bacaaan buku, tesis, artikel, jurnal dan media lain. Selain perpustakaan, penyelidik mendapat maklumat secara bertulis di Muzium. Antaranya Muzium Batik Pekalongan, Jawa Tengah. Seterusnya di Fakultas Teknik, Program Studi D3 Teknologi Batik, Universitas Pekalongan (UNIKAL), Jawa Tengah dan Kilang Batik Pak Zahir Wadadi. Semua maklumat yang diperolehi dimanfaatkan sebagai metod kajian dan maklumat eksperimen secara terperinci. Kaedah atau formula campuran bahan juga membantu dalam kerja ekplorasi bahan dalam makmal di samping memahami istilah-istilah khusus dalam penyelidikan saintifik.

Penyelidik terlebih dahulu membuat pemerhatian secara khusus terhadap setiap elemen yang ingin dikaji. Penyelidik seterusnya merekod semua data secara terperinci dan tersusun. Setiap proses adalah data yang direkodkan melalui hasil gambar dan rakaman digital tentang proses eksperimentasi. Sebelum membuat eksperimen, formula mengekstrak bahan alam sebagai bahan pewarna perlu ditentukan.

Prosedur temu bual dalam kajian ini menyokong data yang sahih dan berkualiti. Sebagai contoh, temu bual dan penglibatan peserta dalam latihan eksperimen di Kilang Batik Pembatik Indonesia (Pak Zahir Widadi). Temu bual juga melibatkan beberapa individu atau pengusaha batik. Contohnya, pelajar jurusan batik di Universitas Pekalongan Jawa Tengah, Indonesia.

Kajian ini mengaplikasikan kaedah eksperimen berdasarkan kajian di studio. Penyelidik mengeksploitasi sumber alam di sekitar negeri Sabah sebagai bahan penyelidikan. Zat pewarna alam (ZPA) diperolehi dari alam semula jadi seperti tumbuh-tumbuhan atau bahan galian. Warna yang terhasil dari tumbuhan atau tanaman adalah pigmen alam yang disebut bahan alami. Secara amnya, kesemua bahan alam semula jadi berpotensi menghasil warna.

Kaedah *Mordanting*

Proses awal yang dijalankan dalam kajian ini ialah *mordanting*. *Mordanting* bertujuan bagi menghilang kotoran-kotoran pada kain agar memudahkan warna meresap ke dalam pori-pori kain. Selepas melakukan pewarnaan pada kain, tawas dan abu soda atau gula melaka digunakan sebagai penguat warna dan meningkatkan ketahanan daripada api. Berikut adalah langkah demi langkah kaedah penyediaan kain yang digunapakai dalam eksplorasi warna yang dijalankan (Rajah 1: i hingga xx):

i) Penyediaan air di dalam besen.

ii) *Detergent* dimasukkan ke dalam besen untuk dilarutkan dengan air.

iii) Memasukkan kain dalam besen

[14] Low Kok On. 2003. *Membaca Masa Silam Kadazandusun berasakan Mitos dan lagenda*: Universiti Sains Malaysia, Pulau Pinang.

iv) Rendam kain semalaman untuk menghilangkan kotoran.

v) Keesokan harinya, bilas kain sehingga bersih.

vi) Kain dijemur agar warna mudah serap pada kain.

vii) Sediakan 70g tawas dan 50g abu soda

viii) Larutan tersebut direbus pada 70 celcius. Seterusnya kain direndam selama 24 jam

ix) Kain yang direndam ke dalam larutan tawas dan abu soda.

x) Setelah 24 jam proses perendaman ke dalam larutan tawas dan abu soda, kemudian kain direndam ke dalam air.

xx) Kain dicuci dan dijemur untuk proses pewarnaan.

Rajah 1 (i-x): Proses penyediaan dan kaedah *mordanting*

Setelah proses *mordanting*, pengekstrakan dimulakan dengan teknik merebus bahan alam bagi mendapatkan zat warna pada tumbuhan. Zat warna yang terhasil perlu ditunggu sehingga sejuk. Setelah zat warna tersebut sejuk, saringkan rebusan tersebut daripada bahan alam yang digunakan. Proses pewarnaan dimulakan dengan memasukkan kain ke dalam zat warna. Teori pewarnaan ini melibatkan beberapa kali celupan warna sehingga mendapat warna yang kehendaki. Semakin banyak celupan, maka semakin terang warna yang diperolehi.

Eksperimen Warna Buah Kesumba (Bixa Orellana)

Tanaman kesumba biasanya tanaman pokok yang ditanam di pekarangan rumah dan pinggir jalan sebagai tanaman hiasan. Kesumba mempunyai kesan warna yang menarik. Biji kesumba berbentuk bujur telur mempunyai selaput berwarna merah. Selaput biji kesumba amat penting sebagai pewarna alami kerana kandungan selaput biji ini mengandungi bixin dan norbixin. Biji kesumba juga berpontensi sebagai pewarna makanan.[15] Bahagian selaput biji kesumba juga mengandungi bixin yang

[15] Suparmi (2008) Pengaruh Berbagai Faktor Eksternal terhadap Stabilitas Pigmen Bixin dari Selaput Biji Kesumba (Bixa orellana L.).

diformulasikan untuk menghasilkan warna kuning, jingga dan kemerahan khususnya untuk makanan berlemak seperti mentega, majerin, keju, yogurt, ais krim, kuih dan biskut kering. Selain itu, selaput biji kesumba juga perpotensi sebagai pewarna untuk minyak goreng, minyak jagung dan salad. Eksperimen penghasilan warna merah daripada buah kesumba adalah seperti (Rajah 2: i hingga xi) (Rajah 3 : i hingga v) :

(i) Rupa bentuk buah kesumba

(ii) Asingkan biji untuk diekstrak

(iii)Sediakan 10 liter air bagi proses pengekstrakan.

(iv) Masukkan biji kesumba ke dalam larutan air.

(v) Pengekstrakkan dilakukan selama 1 jam dalam keadaan api yang perlahan.

(vi) Kesan warna selepas 1 jam.

(vii) Saringkan hampas dari larutan zat warna ke dalam besen.

(viii)Hmpas diasingkan daripada larutan zat warna.

(ix) Zat warna yang sebentar.

(x) Kain dicelup beberapa kali dalam zat warna.

(xi) Kain yang siap dicelup.

Rajah 2 (i-xi): Eksperimen Warna Buah Kesumba (Bixa Orellana)

Eksperimen Warna Pokok Sepang (*Caesalpinia Sappan L.)*

Pokok sepang merupakan spesies tumbuhan yang lazimnyat sebagai ubatan tradisional. Tumbuhan ini tergolong sebagai tumbuhan herba dan tumbuh secara alami di hutan. Pokok sepang mengandungi senyawa fenolik seperti flavanoid yang mengandungi keaktifan antioksidan.[16] Bahan antikoksidan daripada bahan alam atau tumbuhan

[16] Rahmawati, F. 2011. Kajian potensi 'wedang uwuh' sebagai minuman fungsional. Seminar Nasional 'Wonderfull Indonesia', Jurusan PTBB FT UNY, 3 Desember 2011.

seperti sepang dipercayai kualiti yang lebih baik berbanding dengan bahan sintetik.[17] Berikut adalah eksperimentasi pemghasilan warna daripada pokok sepang (Rajah 3 : i hingga xi):

(i)Batang kayu (warna ungu) Kulit kayu (Merah kecoklatan)

(ii) Sediakan 1kg batang kayu sepang.

(iii)Kayu sepang dimasukkan ke dalam larutan air (10 liter).

(iv) Proses menanggal kulit kayu sepang dengan menggunakan parang.

(v) 1kg kulit kayu sepang.

(vi) Kulit sepang dimasukkan ke dalam larutan air.

(vii) Kayu sepang siap diekstrak dan disaringkan.

(viii) Kayu sepang diasingkan daripada larutan zat warna.

(ix) Batang kayu sepang menghasilkan warna ungu.

(x) Kulit kayu sepang diasingkan daripada zat warna.

(xi) Kulit kayu sepang menghasilkan warna merah kecoklatan.

Rajah 3 (i-xi): Eksperimen Warna Pokok Sepang (*Caesalpinia Sappan L.)*

Eksperimen Warna Buah Rambutan (Naphelium Lappaceum L.)

Rambutan merupakan tanaman tropika yang tergolong dalam spisies *sapindaceae* yang dipercayai berasal dari kepulauan Asia Tenggara. Bentuk buah rambutan mempunyai kulit seakan-akan menyerupai rambut. Penanaman pokok rambutan amat popular di Sabah sebagai buah-buahan tempatan. Ketika ini pokok rambutan boleh ditemui di kawasan iklim tropika seperti Afrika, Kmaboja, Karibia, Amerika Tengah, India,

[17] Wijayakusuma, H., Dalimartha, S., dan Wirian, A., 1996, Tanaman Berkhasiat Obat di Indonesia. Jilid ke-4. Jakarta: Pustaka Kartini.

Indonesia, Malaysia, Filipina, Thailand dan Sri Lanka.[18] Kaedah penghasilan warna daripada buah rambutan adalah seperti berikut (Rajah 5:i hingga vii).

(i) Kulit rambutan dijemur sehingga kering.

(ii) Kulit rambutan yang sudah kering.

(iii) Masukkan ke dalam larutan air bagi tujuan pengekstrakan.

(iv) Ekstrak kulit rambutan dalam masa 1 jam dengan keadaan api yang perlahan

(v) Saringkan larutan zat warna daripada hampas (kulit buah rambutan)

(vi) Zat warna kulit rambutan

(vii) Kain yang dicelup bewarna kuning dan kecoklatan.

Rajah 4 (i-vii) : Eksperimen Warna Kulit Rambutan

Eksperimen Warna Pokok Bakau (*Rhizophora Mucronata*)

Malaysia merupakan negara tropika yang mempunyai kepelbagaian jenis hutan dan hutan paya bakau merupakan salah satu komponen utama. Hutan bakau terbentuk melalui kawasan cetek di muara sungai berlumpur. Penulisan awal mengenai hutan bakau bermula pada zaman Theophrastu (305 SM) dan Nearchus (325 SM) tentang akar pokok Rhizophora yang kukuh dan unik di pinggir lautan[19].Perkataan "*Mangrove*" terhasil melalui kombinasi perkataan portugis iaitu pokok dikenali sebagai "*mangue*" dan bahasa inggeris "*grove*". Mastaller (1997)[20], ada menyatakan perkataan "Mangrove" berasal dari perkataan melayu lama "*mangi-mangi*" merujuk famili pokok bakau yang masih digunakan perkataan tersebut di Indonesia Timur pada masa kini yang memperihakan genus *Avicennia* atau dikenali sebagai pokok api-api. Berikut merupakan eksperimentasi penghasilan warna daripada pokok bakau (Rajah 5: i-viii).

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[18] Mahirwono, dkk. 1989. Khasiat dan Manfaat Buah Rambutan. Surya Cipta : Jakarta

[19] Walsh, GE 1977, Exploitation of Mangal, dlm. Chapman, VJ (Pnyt.), Ecosystem of the world wet coastal ecosystem hlm. 347-362, Elsevier Scientific Publishing, Amsterdam.

[20] Mastaller, M 1997, Mangroves the Forgotten Forest between Land and Sea, Tropical Press, Kuala Lumpur.

(i) Memotong akar bakau

(ii) Akar bakau dipotong secara kecilan dengan potongan dua belahan.

(iii) 1kg akar bakau yang selesai dipotong.

(iv) Akar bakau dimasukkan ke dalam larutan air.

(v) Diekstrak selama 1 jam.

(vi) Kesan warna yang terhasil setelah 1 jam proses pengekstrakan.

(vii) Asingkan hampas dari larutan zat warna.

(viii) Kesan warna yang terhasil pada kain yang dicelup.

Rajah 5 (i-viii) : Eksperimen Warna Akar Bakau

Teknik Fixer atau Mematikan Warna

Fixer atau pemati warna merupakan proses untuk memperkuatkan lagi warna agar tidak mudah luntur (Sancaya Rini, dkk. 2011: 9)[21]. Mematikan warna dilakukan dengan sapuan atau celupan bahan seperti tawas, kapur, atau jeruk. Bagaimanapun, setiap bahan mempunyai tersebut mempunyai tahap keberkesanan yang berbeza. Proses mematikan warna dilakukan setelah kain yang diwarnakan dengan zat pewarna. Proses mematikan warna dapat mengunci zat pewarna agar warna yang meresap ke dalam serat kain tidak mudah luntur. Selain eksperimen mendapatkan warna daripada tumbuhan, penyelidik juga berjaya membuat ujikaji terhadap kesan terhadap intensiti warna. Variasi warna juga terhasil akibat kesan penguncian warna dengan menggunakan tawas (Al_2SO_4), kapur ($CaCO_3$), sodium silikat, daun betik, batang pisang dan limau nipis.

Penyediaan pemati warna seperti tawas, tunjung dan kapur perlu dilarutkan dengan air sekurang-kurangnya satu liter. Larutan ini kemudian diamkan selama 24 jam agar kotoran daripada hampas mendap ke bawah. Hampas yang mendap ke bawah, perlu diasingkan daripada zat pemati warna yang diperolehi. Penyediaan bahan pemati

[21] Sancaya Rini, dkk. 2011. *Pesona warna Alami Indonesia*. Jakarta. Kehati.

warna daripada daun betik perlu mengambil masa dan proses tertentu. Misalnya, daun tersebut dijemur terlebih dahulu kemudian diekstrak menjadi larutan zat pemati warna. Limau nipis pula perlu dipetik dari pokok, dibelah dan diperah untuk memperolehi airnya. Keberkesanan proses mematikan warna dalam kaedah ini perlu diulang-ulang agar warna yang diperolehi sesuai dengan warna yang dikehendaki. Bahan tersebut bukan sahaja berupaya sebagai pengunci atau pemati warna malah dapat menghasilkan tona warna yang berbeza-beza. Berikut merupakan sampel warna pada kain hasil daripada pencelupan bahan pemati warna (Rajah 6 : i hingga vi) (Rajah 7 : i hingga vi) (Rajah 8 : i hingga vi) (Rajah 9 : i hingga vi).


(i)Asli


(ii) Tawas


(iii) Kapur


(iv) Tunjung


(v) Daun Betik


(vi) Limau Nipis

Rajah 6 (i-vi) : Sampel Tekstil Eksperimen Penguncian Warna Akar Bakau


(i)Asli


(ii) Tawas


(iii) Kapur


(iv) Tunjung


(v) Daun Betik


(vi) Limau Nipis

Rajah 7 (i-vi) Sampel Tekstil Eksperimen Penguncian (Pemati) Warna Kulit Rambutan


(i)Asli


(ii) Tawas


(iii) Kapur


(iv) Tunjung


(v) Daun Betik


(vi) Limau Nipis

Rajah 8 (i-vi) Sampel Tekstil Eksperimen Penguncian (Pemati) Warna Kayu Sepang


(i)Asli


(ii) Tawas


(iii) Kapur


(iv) Tunjung


(v) Daun Betik


(vi) Limau Nipis

Rajah 9 (i-vi) : Sampel Tekstil Eksperimen Penguncian (Pemati) Warna Kulit Kayu Sepang.

Daripada bahan pengunci (pemati), dapat dilihat setiap bahan tersebut mempunyai tindak balas yang berbeza, (ii) Tawas, memberi arah warna lebih mudah, (iii) Kapur, memberi arah warna sederhana gelap, (iv) Tunjung, memberi warna lebih gelap ataupun tua, (v) Daun betik memberi kesan arah warna yang tidak banyak. Namun, penggunaan daun betik membantu mengelak daripada kelunturan dan mudah pudar warna pada kain batik[22]. Selain itu, menurut pak zahir[23], daun betik juga merupakan bahan bagi melembutkan kain batik selepas pewarnaan (vi) Limau nipis, memberi warna lebih terang kerana kandungan alkali yang terdapat pada limau nipis bertindak balas menjadi warna lebih terang pada kain. semakin tinggi kadar ph, semakin terang warna yang diperolehi.

Penutup

Negeri sabah yang kaya dengan alam tumbuhan semula jadi berpotensi untuk menghasilkan zat warna. Kearifan dan penemuan warna tradisi telah lama diamalkan dalam kalangan etnik di Sabah. Warna tradisi lazimnya digunakan dalam pewarnaan bidang kraf tangan yang berasaskan mengkuang, buluh dan rotan. Pewarnaan dalam terhadap tekstil masih terbatas kepada benang dalam bidang tenunan. Kearifan dan kreativiti etnik Sabah dalam penghasilan warna alami adalah khazanah yang perlu di teruskan dalam bidang pewarnaan batik. Justeru eksperimen dalam kajian ini perlu diperluaskan untuk mendapatkan kaedah pewarnaan dan pengekalan warna yang berkualiti. Pengkaji amat berterima kasih kepada para pensyarah Universitas Pekalongan yang memberi panduan serta bimbingan terhadap penyelidikan yang dijalankan. Selain itu, pelajar daripada Fakultas Teknik, Program Studi D3 Teknologi Batik, Universitas Pekalongan (UNIKAL), Jawa Tengah turut berkerjasama dalam mendapatkan sumber data yang perlu dilakukan dalam penyelidikan ini.

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KECENDERUNGAN PELAJAR DALAM MENJALANKAN PERNIAGAAN ATAS TALIAN: KAJIAN TERHADAP PELAJAR PROGRAM KEUSAHAWANAN

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Abstrak: *Perniagaan atas talian telah menjadi satu fenomena dalam kalangan peniaga khususnya pada masa kini. Dengan pelbagai aplikasi yang dapat diakses melalui internet, ia menjadikan sesebuah perniagaan itu berkembang secara lebih global. Justeru itu, para pelajar di institut pengajian tinggi juga tidak ketinggalan dalam menggunakan kelebihan tersebut untuk menjalankan perniagaan atas talian sebagai sumber wang tambahan. Oleh itu, kajian ini dijalankan bagi mengenalpasti faktor-faktor yang mempengaruhi pelajar dalam menjalankan perniagaan atas talian. Rekabentuk kajian adalah berbentuk kuantitatif dimana instrumen kajian menggunakan soal selidik dengan skala Likert 5 mata. Soal selidik telah diedarkan secara atas talian (online survey) melalui Google Forms kepada responden. Responden kajian melibatkan 114 orang pelajar program keusahawanan di Fakulti Perniagaan, Ekonomi dan Perakaunan, Universiti Malaysia Sabah. Data dianalisis dengan menggunakan perisian Statistical Package for Social Science (SPSS) versi 21.0. Kecenderungan pelajar dalam menjalankan perniagaan atas talian ini diukur berdasarkan tiga faktor iaitu sumber dorongan, kemudahan teknologi dan kecenderungan personal. Dapatan kajian menunjukkan bahawa nilai min bagi ketiga-tiga faktor tersebut berada pada tahap tinggi. Justeru itu, dapat disimpulkan bahawa sumber dorongan, kemudahan teknologi dan kecenderungan personal mempengaruhi pelajar untuk cenderung menjalankan perniagaan atas talian.*

Kata kunci: *Kecenderungan, Perniagaan Atas Talian, Keusahawanan, Pelajar*

Pengenalan

Saban tahun, dapat dilihat semakin banyak institusi pengajian tinggi samada swasta mahupun awam yang ditubuhkan di seluruh dunia bagi membolehkan anak-anak muda lepasan sekolah menengah melanjutkan pelajaran mereka ke peringkat yang lebih tinggi dengan harapan mereka dapat menamatkan pelajaran dengan jayanya dan seterusnya memenuhi jawatan atau kekosongan kerja yang terdapat di negara masing-masing. Negara Malaysia juga tidak ketinggalan dengan lambakan institusi pengajian tinggi ini yang semakin banyak seperti 'cendawan yang tumbuh selepas hujan'. Tidak dinafikan dengan pertambahan institusi pengajian tinggi ini memudahkan dan memperluaskan peluang anak-anak muda lepasan sekolah menengah untuk mencapai cita-cita masing-masing selepas tamat belajar nanti. Namun begitu, masalah pengangguran menjadi igauan ngeri dan kebimbangan kepada graduan pada hari ini disebabkan kesukaran mendapatkan pekerjaan. Malahan, lebih teruk lagi jumlah pengangguran ini dilihat semakin meningkat dari tahun ke tahun (Nor Aishah 2002; Norasmah 2004).

Pada tahun 2017, seramai 54, 103 siswazah universiti menganggur dalam tempoh enam bulan selepas mereka menamatkan pengajian masing-masing dimana jumlah tersebut adalah berdasarkan kepada Sistem Kajian Pengesanan Graduan (SKPG) yang menyaksikan 238, 187 siswazah menamatkan pengajian pada tahun itu. Menurut Jabatan Perangkaan Malaysia pada sukku pertama 2019, negara merekodkan seramai 516, 600 penganggur dimana seramai 238, 286 adalah penganggur yang terdiri daripada siswazah yang mana 174, 327 siswazah mendaftar sebagai pencari kerja aktif dengan JobsMalaysia di bawah Jabatan Tenaga Kerja (JTK) Semenanjung. Hal ini cukup memberi kebimbangan kepada negara kerana jumlah pengangguran boleh terus meningkat sekiranya ia tidak ditangani dengan segera.

Justeru itu, usaha pembudayaan keusahawanan dalam kalangan rakyat Malaysia dilakukan oleh kerajaan di peringkat sekolah menengah sehinggalah ke peringkat pengajian tinggi untuk membentuk sikap pelajar sebagai pencipta pekerjaan yang berpotensi dan bukan hanyalah pencari kerja (Zaidatol et al. 2002). Ia selari dengan dapatan Shahrin & Norsila (2007) yang menyatakan bahawa bidang keusahawanan sedang rancak diperkembangkan di Malaysia melalui pendidikan iaitu selaras dengan usaha untuk menjadikan bidang ini antara bidang kerjaya yang diminati. Hal ini kerana keusahawanan merupakan satu bidang yang penting bagi sesebuah negara kerana dapat menghakis budaya makan gaji disamping dapat membantu membangunkan ekonomi sesebuah negara.

Pendedahan kepada keusahawanan yang dilaksanakan di sekolah dan institusi pengajian tinggi ini telah memberi impak yang positif kepada para pelajar dimana dapat dilihat mereka mula berjinak-jinak dengan dunia perniagaan sebagai salah satu sumber pendapatan atau untuk mendapatkan wang tambahan semasa mereka masih dalam pengajian mahupun selepas menamatkan pengajian. Tambahan lagi, dengan kemunculan internet dan pelbagai teknologi yang ada pada masa kini telah memberikan satu kemudahan kepada para pelajar untuk menjalankan perniagaan atas talian sekaligus menarik minat mereka untuk memilih usahawan sebagai kerjaya. Hal ini kerana perniagaan atas talian dikatakan mendatangkan banyak manfaat iaitu perniagaan dapat dilaksanakan tanpa menyediakan premis, tidak perlu menggaji pekerja, menjimatkan kos, mudah dan pelajar bebas menentukan saiz perniagaan mengikut keupayaan mereka (Nor Syahilia & Faizatul Hafilah, 2017; Sabariah et al. 2012). Oleh itu, kajian ini dijalankan untuk mengenalpasti faktor-faktor yang mempengaruhi kecenderungan pelajar iaitu sumber dorongan, kemudahan teknologi dan kecenderungan personal dalam menjalankan perniagaan atas talian.

Kajian Kesusasteraan

Keusahawanan

Keusahawanan telah dianggap sebagai manfaat penting yang disedari oleh ahli perniagaan dalam keseluruhan pembangunan ekonomi negara (Brinda & Dileep, 2011). Ianya selaras dengan kajian yang dijalankan oleh Wennekers & Thurik (1999), Carree & Thurik (2003) dan Rasmussena & Sorheim (2006) yang menjelaskan bahawa keusahawanan, melalui penciptaan usaha niaga baru atau mengambil alih firma sedia ada telah dikenalpasti sebagai salah satu enjin utama pertumbuhan ekonomi. Penjelasan ini disokong oleh Yeng Keat & Shuhymee (2012) yang menyatakan bahawa keusahawanan telah menjadi agenda utama di negara ini dengan pengenalan program keusahawanan dan mekanisme yang menampung pembangunan aktiviti keusahawanan.

Kecenderungan

Kecenderungan atau minat keusahawanan digambarkan sebagai faktor motivasi yang mempengaruhi individu untuk meneruskan sesuatu usaha keusahawanan (Hisric, Peters & Shaphard 2008). Menurut Mohd Shahrir (2015) pula, kecenderungan merujuk kepada minat atau keinginan seseorang pelajar itu untuk menceburi bidang keusahawanan. Dapatan Yusof & Sapiah Bohari (2005) menyatakan bahawa kurangnya minat akan mempengaruhi kesungguhan seseorang dan seterusnya akan merendahkan prestasi pencapaiannya dalam sesuatu bidang.

Perniagaan Atas Talian

Perniagaan atas talian merupakan satu bentuk perdagangan elektronik yang membolehkan penjual untuk menjual barang-barang atau perkhidmatan kepada pembeli melalui internet secara terus tanpa melibatkan orang tengah atau perantara. Kini pembeli boleh membeli dalam talian menggunakan rangkaian komputer dan peranti yang berlainan, termasuklah komputer meja, komputer riba, tablet dan telefon pintar. Menurut Rayport dan Sviokla's (1995), perniagaan atas talian atau dikenali sebagai pembelian secara *'online'* merupakan konsep perniagaan di pasaran maya. Mereka menyatakan terdapat salah satu cara bagaimana pasaran maya mampu berkembang antaranya adalah wujud transaksi antara penjual dan pembeli tanpa perlu wujud premis perniagaan.

Sumber Dorongan

Sumber dorongan merupakan motivasi untuk melaksanakan atau mencapai sesuatu (Salmianti Mutalib 2015). Yep Putih (1985) menjelaskan bahawa sumber dorongan merupakan motivasi atau desakan yang kuat pada seseorang untuk menceburi bidang keusahawanan. Selain itu, sumber dorongan juga boleh didefinisikan sebagai keinginan yang keras pada diri seseorang yang mendorongnya untuk berusaha atau melakukan sesuatu dengan tujuan untuk mencapai kejayaan. Tanpa dorongan atau motivasi, seseorang itu tidak akan bersemangat atau berupaya untuk meneruskan perjuangan dalam bidang kerjaya yang diceburinya.

Kemudahan Teknologi

Kemudahan teknologi yang semakin berkembang pesat pada hari ini telah memberi banyak kebaikan kepada setiap individu dimana ia memudahkan urusan masing-masing dalam kehidupan seharian. Kemudahan teknologi seperti komputer riba, telefon pintar, internet, media sosial, laman web dan sebagainya telah memberi satu kelebihan kepada seseorang untuk mereka menjalankan perniagaan secara atas talian. Kelebihan kemudahan teknologi yang ada pada hari ini iaitu menjimatkan kos dan tidak memerlukan premis perniagaan telah memberi galakan kepada seseorang untuk berniaga. Menurut Amy et al. (2018), peniaga dapat meluaskan perniagaan mereka dari pasaran tempatan ke pasaran nasional dan global dengan adanya internet.

Kecenderungan Personal

Menurut Fini (2009), kecenderungan personal merujuk kepada tahap keinginan seseorang mengikuti kerjaya usahawan atau bermaksud keinginan untuk mencipta nilai baru dalam perniagaan yang sedia ada. Folkman & Lazarus (1984) pula mendefinisikan kecenderungan personal sebagai daya tindak iaitu satu usaha individu untuk mengendalikan keadaan atau situasi yang melebihi tahap penyesuaiannya. Ianya selari dengan kajian Compas (1987) yang menyatakan bahawa faktor personal boleh berbentuk tingkah laku atau pemikiran yang dilakukan dan difikirkan oleh seseorang.

Metodologi

Kajian ini berbentuk kuantitif dan menggunakan soal selidik dengan skala Likert 5 mata sebagai instrument kajian. Soal Selidik yang digunakan telah diedar secara atas talian *(Online survey)* melalui *Google Forms* kepada sasaran responden. Sampel kajian ini terdiri daripada 114 orang pelajar program keusahawanan di Fakulti Perniagaan, Ekonomi dan Perakaunan, Universiti Malaysia Sabah. Secara amnya, borang soal selidik yang telah diedarkan kepada responden kajian terdiri daripada 4 bahagian utama iaitu latar belakang, pembolehubah kecenderungan pelajar iaitu sumber dorongan, kemudahan teknologi dan kecenderungan personal. Soal selidik yang digunakan di dalam kajian ini adalah soal selidik yang diambil daripada soalan soal selidik kajian Sabariah, Faizatul & Siti Fatimah (2012). Data yang telah dikumpul daripada borang soal selidik telah dianalisis dengan menggunakan perisian komputer iaitu IBM SPSS statistik versi 21.

Responden di dalam sampel kajian ini adalah terdiri daripada pelajar prorgram keusahawanan tahun 2 daripada Fakulti Perniagaan, Ekonomi dan Perakaunan, Universiti Malaysia Sabah. Pemilihan responden yang terdiri daripada pelajar tahun 2 adalah kerana mereka telah terdedah dengan subjek keusahawanan dan e-dagang di mana mereka telah terdedah dengan perniagaan atas talian. Responden terdiri daripada 69 orang pelajar perempuan dan 45 orang pelajar lelaki. Penilaian terhadap kecenderungan mereka untuk mencebur diri dalam perniagaan atas talian ini dinilai daripada tiga aspek iaitu sumber dorongan, kemudahan teknologi dan kecenderungan personal. Ketiga-tiga aspek ini telah dianalisis menggunakan kaedah statistik deskritif. Kaedah ini digunakan untuk menerangkan min bagi mengukur kecenderungan pelajar untuk menceburkan diri dalam bidang perniagaan atas talian.

Dapatan

Analisis pengaruh faktor sumber dorongan, kemudahan teknologi dan kecenderungan personal terhadap kecenderungan menjalankan perniagaan atas talian.

Jadual 1 dibawah menunjukkan keputusan min keseluruhan yang diperoleh berdasarkan pemboleh ubah yang dikaji iaitu sumber dorongan, kemudahan teknologi dan kecenderungan personal. Dapatan menunjukkan min keseluruhan bagi pemboleh ubah sumber dorongan adalah 4.03, pemboleh ubah kemudahan teknologi pula adalah 4.04 dan bagi pemboleh ubah kecenderungan personal adalah 4.09. Ketiga-tiga nilai min bagi setiap pemboleh ubah menunjukkan min keseluruhan masing-masing berada pada tahap tinggi. Penentuan nilai min ditentukan melalui interpretasi skor min seperti Jadual 2 untuk menentukan sama ada sumber dorongan, kemudahan teknologi dan kecenderungan personal berada pada tahap rendah, sederhana rendah, sederhana tinggi atau tinggi. Oleh itu, secara keseluruhannya dapat dilihat bahawa faktor sumber dorongan, kemudahan teknologi dan kecenderungan personal berada pada tahap yang tinggi dalam mempengaruhi pelajar program keusahawanan untuk cenderung menjalankan perniagaan atas talian.

Jadual 1: Analisis Pengaruh Faktor Sumber Dorongan, Kemudahan Teknologi dan Kecenderungan Personal Terhadap Kecenderungan Menjalankan Perniagaan Atas Talian

Faktor	Min	Sisihan Piawai	Tahap Interpretasi Skor
Sumber Dorongan	4.03	0.788	Tinggi
Kemudahan Teknologi	4.04	0.764	Tinggi
Kecenderungan Personal	4.09	0.748	Tinggi

Jadual 2: Interpretasi skor min

Skor Min	Tahap Skor Min
1.00 hingga 2.00	Rendah
2.01 hingga 3.00	Sederhana Rendah
3.01 hingga 4.00	Sederhana Tinggi
4.01 hingga 5.00	Tinggi

Sumber : Nunally (1978); Jamil (2002); Haryati et al. (2013)

Perbincangan dan Kesimpulan

Kajian ini dijalankan untuk mengenalpasti faktor-faktor yang mempengaruhi pelajar program keusahawanan untuk cenderung menjalankan perniagaan atas talian. Faktor yang diukur di dalam kajian ini adalah sumber dorongan, kemudahan teknologi dan kecenderungan personal. Nilai keseluruhan min bagi faktor sumber dorongan menunjukkan bahawa ia berada pada tahap yang tinggi dalam mempengaruhi pelajar menjalankan perniagaan atas talian di mana ia selari dengan dapatan Zairon, Mohd Yusof & Abdul Halim (2016) yang menyatakan bahawa sumber dorongan mempengaruhi pelajar Kolej Komuniti dalam menjalankan perniagaan. Selain itu, dapatan kajian ini turut disokong oleh kajian terdahulu iaitu Tsogas (1999) & Linan et al. (2009) yang menjelaskan terdapat hubungan positif yang kuat antara sumber dorongan dengan kecenderungan menjalankan perniagaan atas talian.

Seterusnya, dapatan mendapati bahawa faktor kemudahan teknologi dan kecenderungan personal juga turut mempengaruhi pelajar menjalankan perniagaan atas talian berdasarkan min keseluruhannya yang berada pada tahap yang tinggi. Ia selari dengan dapatan Siti Hawa (2009) yang menyatakan bahawa kecenderungan personal mempunyai hubungan yang positif dan signifikan dengan kecenderungan keusahawanan di kalangan pelajar ijazah sarjana muda tahun akhir dalam bidang kejuruteraan. Namun, dapatan ini bertentangan dengan kajian Norasmah et al. (2002) dan Mohd Fauzi et al. (2007) yang menunjukkan tahap kecenderungan personal dalam mempengaruhi pelajar menceburi perniagaan masih di peringkat sederhana tinggi. Selain itu, Armanurah (2013) menjelaskan dalam kajiannya bahawa kemudahan sokongan seperti teknologi dapat membantu seseorang menjalankan perniagaan. Ia selaras dengan kajian Norazila et al. (2016) yang mendapati sumber sokongan seperti komputer dan internet mendorong siswazah untuk memulakan perniagaan atas talian.

Secara keseluruhannya, ketiga-tiga faktor iaitu sumber dorongan, kemudahan teknologi dan kecenderungan personal mempengaruhi pelajar program keusahawanan untuk cenderung menjalankan perniagaan atas talian. Dapatan kajian ini merupakan satu dapatan yang cukup memberangsangkan serta memberikan petunjuk bahawa pelajar-pelajar program keusahawanan mempunyai potensi yang besar untuk dilatih dan didedahkan dengan perniagaan yang berasaskan teknologi dan internet. Walaubagaimanapun, kecenderungan sahaja tidak mencukupi bagi melahirkan seorang usahawan yang berjaya kerana ciri-ciri seorang usahawan mestilah sanggup menanggung risiko, kreatif, berpendirian, pencapaian kendiri dan kawalan dalam diri (Sabariah 2012). Oleh itu, pelbagai usaha dan inisiatif perlu dipergiatkan oleh kerajaan untuk memastikan lebih ramai graduan memilih kerjaya sebagai usahawan sekaligus melahirkan lebih ramai usahawan muda yang dinamik dan berdaya saing.

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EKSPERIMENTASI PENGHASILAN WARNA LICAU MENGGUNAKAN PELBAGAI JENIS BATUAN DI SABAH

EXPERIMENTATION COLOUR OF GLAZE USING A VARIOUS ROCKS IN SABAH

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Abstrak: *Seramik merupakan objek seni yang tertua pernah dihasilkan oleh manusia sejak zaman pra sejarah lagi. Seramik terhasil dari tanah liat dan akan bertukar karakter apabila didedahkan pada suhu yang tinggi melebihi 1200 darjah celsius (‘C). Produk seramik diliputi dengan lapisan kekaca yang lebih dikenali sebagai licau dan mempunyai ketahanan yang tinggi terhadap suhu atau haba. Penyelidikan ini adalah bertujuan untuk mendokumentasikan penghasilan warna licau secara sistematik menggunakan pelbagai jenis batuan di Sabah seperti batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan Ranau pada permukaan jasad spesimen yang dihasil menggunakan kaolin. Selain itu, penyelidikan ini juga bertujuan untuk mengenalpasti tindakbalas sampel ujikaji menggunakan campuran peratusan yang berbeza menggunakan formula “Triaxial Line Blend” terhadap permukaan kaolin yang melibatkan aspek bahan, jenis pembakaran dan teknik-teknik dekorasi. Penghasilan warna licau menggunakan bahan semulajadi iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang terdapat di sekitar Ranau, Kota Kinabalu, Sabah merupakan satu pembaharuan dalam penghasilan warna bersumberkan bahan semulajadi serta usaha bagi memajukan industri seramik di Malaysia. Ia lebih kepada penghasilan bahan semulajadi yang telah mengalami proses penghasilan sehingga mengeluarkan warna licau yang baru. Kajian awal menggunakan sampel dari agen warna seperti batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan Ranau telah dijalankan secara eksperimen. Penyelidikan tersebut merangkumi penyediaan dan formulasi licau dengan menggunakan bahan tersebut sehingga ia berjaya mengeluarkan pigmen warna mengikut tindak balas suhu dan jenis pembakaran yang telah dilaksanakan. Selain itu, kajian ini juga bertujuan untuk mengkaji kesesuaian warna licau pada permukaan produk seramik seperti kaolin. Kesimpulannya, melalui kajian yang dilakukan kita akan lebih memahami tentang proses-proses serta cara bagaimana untuk menghasilkan warna licau dalam industri seramik dengan menggunakan bahan semulajadi yang terdapat di persekitaran. Melalui kajian ini juga, ia dapat mengenalpasti bahan mineral yang terdapat dalam bahan ujikaji yang mempengaruhi tindakbalas dalam penghasilan warna licau seramik.*

Kata Kunci: *Licau, Batuan, Triaxial Line Blend, Kaolin, Oxide*

Pengenalan

Sejarah seni seramik bermula dengan pembuatan barangan tembikar. Seramik bermaksud keramos (tanah liat) iaitu berasal daripada perkataan Greek yang digunakan untuk pembuatan barang keperluan harian. Perkataan keramos juga membawa maksud tembikar namun, perkataan seramik lebih sesuai digunakan berbanding tembikar kerana sifat dan cara penggunaannya pada zaman tersebut. Seramik merupakan salah satu peninggalan sejarah seni tertua yang pernah dihasilkan oleh masyarakat pada zaman dahulu. Penghasilan produk seramik memerlukan suhu pembakaran yang tinggi iaitu 600'C sehingga 1200'C sebelum menukarkan sifat tanah liat menjadi kekaca (seramik).

Ciri-ciri produk seramik adalah sangat sensitif dan mudah pecah serta permukannya bersifat poros. Para penyelidik seramik telah melaksanakan kajian berkenaan cara untuk mengenalpasti punca retakan pada produk seramik serta usaha meningkatkan kekuatan bahan seramik. Permasalahan tersebut adalah berpunca daripada kecuaian semasa menghasilkan produk seramik seperti gagal memastikan tiada kandungan udara pada liang pori yang terdapat pada jasad tanah liat. Zarah kasar atau liang udara pada jasad tanah liat dapat memberi kesan buruk pada produk seramik kerana ia dapat menyumbang kepada risiko pecah atau retak semasa proses pembakaran (biscuit firing).

Rekabentuk seramik boleh dilakukan dengan sempurna dengan mengambil kira beberapa pertimbangan yang khusus sebelum pelaksanaannya. Pendekatan-pendekatan rekabentuk seramik adalah langkah-langkah penting yang perlu diambil kerana setiap satunya mempunyai kepentingannya sendiri. Semenjak itu, rekabentuk seramik telah berjaya dan berkembang maju.

Di Malaysia, perkembangan industri produk seramik secara besar-besaran kini semakin menggalakkan. Pada tahun 80-an, produk seramik telah diusahakan oleh beberapa syarikat ternama iaitu Franklin Porcelain dari Amerika Syarikat dan syarikat tersebut telah berjaya menubuhkan beberapa kilang di kawasan perindustrian, kulim. Beberapa tahun berikutnya, syarikat Franklin Porcelain telah melebarkan perniagaannya dengan meningkatkan kemahiran pekerja dalam bidang seramik serta meningkatkan pasaran produk dari syarikatnya. Kesan positif dari perkembangan industri seramik tersebut, pengusaha-pengusaha dari negara lain seperti Jepun telah mengorak langkah dengan menjalankan perniagaan berasaskan produk seramik dan sehingga kini industri seramik telah berkembang ke serata dunia.

Selain daripada industri pembuatan, kerajaan Malaysia telah menggalakkan perkembangan dan pembelajaran seni seramik ini melalui institusi pengajian tinggi awam. Contohnya, Universti Malaysia Sarawak. Di Universiti Malaysia Sarawak, kelengkapan seperti studio, bilik pembakaran dan juga peralatan seperti mesin "*throwing*" dan sebagainya disediakan. Selain itu, pengajian tinggi awam di seluruh negara juga telah menyediakan tenaga pengajar yang mahir dalam bidang seramik. Hal ini demikian kerana pengusaha seramik perlu meningkatkan ilmu berkaitan industri tersebut bagi memperoleh hasil produk yang unik dan berkualiti. Selain itu, usaha tersebut dapat menyemarakkan lagi perkembangan seni seramik di kalangan golongan muda di Malaysia.

Penyelidikan ini adalah bertujuan untuk mendokumentasikan penghasilan warna licau secara sistematik menggunakan jenis sampel ujikaji iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang terdapat di sekitar Ranau, Kota Kinabalu, Sabah pada permukaan jasad spesimen yang dihasil menggunakan kaolin. Selain itu, penyelidikan ini juga bertujuan mengenalpasti tindakbalas sampel ujikaji menggunakan campuran peratusan yang berbeza menggunakan formula "*Triaxial Line Blend*" terhadap permukaan kaolin yang melibatkan aspek bahan, jenis pembakaran dan teknik-teknik dekorasi. Penghasilan warna licau menggunakan bahan semulajadi iaitu batu Sungai Moyog, kayu bakau, rumpai laut, keladi dan cengkerang yang terdapat di sekitar Ranau, Kota Kinabalu, Sabah merupakan satu pembaharuan dalam usaha memajukan industri seramik di Malaysia. Ia lebih kepada penghasilan bahan baru yang telah mengalami proses penghasilan sehingga mengeluarkan warna licau yang baru. Seterusnya, penyelidikan ini bertujuan untuk mengenalpasti bahan mineral yang terdapat dalam sampel ujikaji menggunakan ujikaji makmal *Fourier Transform Infra-Red Spectrometer* (FTIR) merupakan teknik analisis yang digunakan terutamanya untuk pengenalpastian fasa sumber bahan kristal dan dapat memberikan maklumat mengenai kandungan mineral yang terdapat dalam sampel eksperimen. Penyelidikan ini juga bertujuan untuk mengenalpasti ciri-ciri warna dan corak yang terhasil selepas pembakaran dilaksanakan pada produk seramik.

Kajian awal menggunakan sampel dari agen warna seperti batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang telah dijalankan secara eksperimen. Penyelidikan tersebut merangkumi penyediaan dan formulasi licau dengan menggunakan campuran bahan tersebut sehingga ia berjaya mengeluarkan warna mengikut tindak balas suhu dan pembakaran yang telah dilaksanakan. Selain itu, kajian ini juga bertujuan untuk mengkaji kesesuaian warna licau pada permukaan produk seramik seperti kaolin. Kesimpulannya, melalui kajian yang dilakukan kita akan lebih memahami tentang proses-proses serta cara bagaimana untuk menghasilkan warna licau dalam industri seramik dengan menggunakan bahan semulajadi yang terdapat di persekitaran.

Latar Belakang Kajian

Penyelidikan ini adalah bertujuan untuk mengkaji dan menghasilkan warna licau[24] menggunakan beberapa jenis bahan semulajadi iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan untuk digunakan dalam proses penghasilan warna licau dalam industri seramik. Penyelidikan ini juga merangkumi penyediaan dan formulasi licau dengan menggunakan teknik-teknik pembakaran dan suhu yang tertentu sehingga memperoleh hasil warna pada permukaan jasad ujikaji yang dihasilkan menggunakan kaolin. Dari keputusan penyelidikan didapati bahawa bahan ujikaji tersebut amat sesuai digunakan sebagai bahan licau. Penyelidik memilih bahan dari sumber alam semulajadi iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan untuk dijadikan bahan utama dalam ujikaji warna licau adalah disebabkan terdapat beberapa bahan mineral yang boleh mengeluarkan warna permukaan jasad ujikaji (test pieces) dan ia begitu sesuai untuk dijadikan *agent pigment colour* dari bahan tersebut. Licau yang terhasil dari batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan ini memberi beberapa kesan istimewa apabila dikenakan keatas jasad seramik serta dapat menambahkan nilai estetika barangan tersebut. Medium penghasilan warna licau ini boleh menjadi sumber bahan pembentuk kaca iaitu silika yang mana merupakan komponen utama dalam penyediaan licau. Tahap matang licau ini ialah diantara 1200-1800 ‘C dan suhu pembakaran bagi jasad ujikaji adalah 800’C. Kajian ini membolehkan sampel ujikaji dikelaskan sebagai licau bersuhu tinggi serta mempunyai sifat fizikal yang kuat dan keras (Craig. J dan Fillie. R, 1963:54).

Penyelidik menggunakan licau asas dalam ujikaji licau yang berfungsi untuk mencengkam bahan ujikaji serbuk agar ia melekat pada permukaan jasad spesimen kajian. Licau yang dihasil menggunakan batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan ini akan mengeluarkan kesan warna yang berbeza mengikut jenis bahan, teknik pembakaran dan suhu yang digunakan selepas menjalankan proses pembakaran. Memandangkan bahan batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan ini mudah didapati di sekitar perkampungan di Sabah, maka jelas bahawa bahan ini amat ekonomikal dijadikan bahan komponen utama dalam penghasilan warna licau disamping dapat membantu untuk memperluaskan penggunaan bahan semulajadi sebagai *agent pigment colour* dalam penghasilan warna produk seramik.

Licau

Definisi licau adalah sejenis bahan yang akan membentuk lapisan hiasan yang berkaca dan licin apabila dibakar pada suhu 1200’C. Selain itu, licau adalah lapisan perlindungan yang

[24] Licau merupakan satu lapisan nipis kaca (*super-cooled liquid glass*) yang dikenakan ke atas barangan seramik bagi tujuan menambahkan kesan serian serta kekuatan barangan tersebut.

membuat seramik kelihatan menarik, berkualiti dan berguna. Licau juga mempunyai pelbagai bentuk dan fungsi yang dapat memberikan kesan yang cantik, bersih dan meningkatkan ketahanan sesuatu produk tanah liat kerana ia mempunyai permukaan licin dan boleh mengambil pelbagai warna dan tekstur. Selain itu, licau boleh ditakrifkan sebagai lapisan berkaca pada tanah liat, yang telah melalui proses pembakaran yang tinggi iaitu melebihi suhu 1200'C. Pelbagai jenis dan tekstur licau yang terdapat dalam pengusahaan produk seramik seperti warna terang, merah berkilat ke pastel lembut, emas logam untuk satiny, hitam dan sebagainya.

Licau Berunsurkan Bahan Semulajadi

Penghasilan warna licau menggunakan bahan semulajadi iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan adalah untuk menghasilkan warna baru serta mengenalpasti tindakbalas bahan ujikaji terhadap permukaan jasad ujikaji (kaolin). Dalam kajian ini, bahan dari sumber alam semulajadi iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan merupakan bahan ujikaji yang dikenali sebagai *agen pigment colour* yang asli dan ia memerlukan proses ujikaji di bengkel seramik. Ia memerlukan beberapa langkah semasa memproses bahan-bahan tersebut antaranya proses menghancurkan batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan bagi mendapatkan serbuk dari bahan tersebut. Maka setiap bahan yang telah diproses akan ditapis dan dimasukkan dalam bekas yang berlainan bagi melancarkan proses seterusnya. Setiap bahan tersebut mempunyai bahan mineral *iron oxide* yang boleh menghasilkan warna. Namun begitu, ia bergantung kepada jenis bahan dan jenis pembakaran yang telah dilaksanakan.

Penghasilan warna licau menggunakan bahan semulajadi juga dapat memberikan ketahanan pada sesuatu barangan seramik. Hal ini demikian kerana terdapat bahan mineral yang tinggi dan sangat sesuai dijadikan agen warna dalam penghasilan warna licau tersebut. Seterusnya, Mohd Khairi Baharom (2010) telah membuat analisis bahawa penghasilan produk seramik dengan menggunakan bahan semulajadi telah berkembang sejak berabad lamanya. Hal ini dapat dilihat melalui dokumentasi sejarah seramik yang telah mencatatkan bahawa produk bone china pada asalnya dihasilkan oleh orang Inggeris di Britain yang menggunakan tulang lembu yang dikisar menjadi abu[25]. Produk *bone china*[26] telah menjadi satu isu kepada masyarakat Islam tentang bahan yang digunakan seperti yang nyatakan oleh beberapa pihak iaitu penggunaan tulang khinzir. Mungkin bahan yang digunakan oleh industri kini telah mengenalpasti bahawa tulang khinzir mungkin sesuai untuk menghasilkan produk seramik. Tetapi maklumat ini tiada dokumentasi yang wujud dapat diperolehi untuk dirujuk. Sejarah membuktikan bahawa hanya tulang lembu yang sesuai untuk tujuan ini berdasarkan eksperimentasi bahan yang telah dijalankan.

Kaedah Kajian

Penghasilan warna licau dalam produk seramik menggunakan bahan semulajadi seperti batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan dapat menambahkan kepelbagaian dalam kaedah menghias produk seramik bagi meningkatkan daya saing produk seramik di pasaran tempatan dan antarabangsa. Untuk mengelakkan produk-produk seramik yang telah disapu licau melekat pada tanur (*kiln furniture*) setelah dibakar, bahagian kaki atau tapak produk seramik tersebut perlu dibiarkan dalam keadaan tanpa licau. Kesan licau yang

[25] http://sculp2r.blogspot.my/2010/06/sejarah-perkembangan-dan-pengaruh.html. Muat turun pada 20 September 2017.
[26] *Bone China* adalah sejenis bahan seramik (porselin) lembut yang terdiri daripada abu tulang, bahan feldpathic dan kaolin.

terdapat pada tapak atau permukaan seramik sebelum dibakar boleh dihilangkan dengan cara penggunaan span basah. Proses ini perlu dilaksanakan sebelum produk tersebut dibakar bagi mengelakkan ia melekat pada *kiln furniture*. Licau merupakan salah satu aspek yang paling rumit terutama dalam proses penghasilan produk seramik berbanding *engobe*, tetapi ia juga boleh dijadikan salah satu bahan yang dapat memberikan hasil yang sangat cantik mengikut teknik-teknik semasa melakukan dekorasi pada produk tersebut. Hal ini demikian kerana licau akan memberikan kesan tindakbalas kekaca dan berkilat pada permukaan produk berbanding permukaan tanpa licau.

Licau dari bahan semulajadi iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan ini memberi beberapa kesan istimewa apabila dikenakan keatas produk seramik serta dapat menambahkan nilai estetika barangan tersebut. Hal ini demikian kerana ia dapat memberikan kesan tindakbalas yang berbeza mengikut jenis bahan, pembakaran, suhu dan teknik dekorasi yang digunakan. Medium penghasilan warna licau ini boleh menjadi sumber bahan pembentuk kaca iaitu silika yang mana merupakan komponen utama dalam penyediaan licau dengan mencapai tahap matang licau diantara 1200’C hingga 1800‘C dan dengan ini membolehkan ianya dikelaskan kedalam licau bersuhu tinggi serta mempunyai sifat fizikal yang kuat dan keras. Memandangkan bahan ujikaji yang digunakan ini mudah didapati di sekitar Sabah, maka jelas bahawa bahan ini amat ekonomikal dijadikan bahan komponen utama dalam penghasilan warna licau serta dapat memperluaskan penggunaan dalam penghasilan barangan seramik.

Pemilihan bahan-bahan yang digunakan adalah berdasarkan bahan semulajadi yang terdapat di sekitar Ranau dan Kota Kinabalu, Sabah. Ujikaji licau dilaksanakan dengan menggunakan formula *“Line Blend”*. Penyelidik juga menjalankan ujikaji menggunakan suhu dan jenis pembakaran yang berbeza. Penggunaan bahan ujikaji iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan terhadap permukaan seramik menggunakan peratusan bancuhan yang berbeza dapat memberikan tindakbalas warna yang berbeza. Berdasarkan ujikaji yang dilaksanakan, penyelidik dapat melihat hasil warna mengikut kuantiti campuran bahan kimia sama ada ia memenuhi keinginan penyelidik atau sebaliknya.

Selain itu, formula campuran bahan kimia berperanan sebagai panduan yang membantu penyelidik untuk membandingkan resipi yang berada di pasaran dengan resepi yang baru dihasilkan serta menggabungkan jenis yang berbeza dan suhu untuk mengelakkan kualiti produk terjamin. Penyelidik juga dapat membandingkan resipi yang dihasilkan dengan resepi yang selalu digunakan oleh pengusaha produk seramik untuk memastikan penyelidik telah mematuhi beberapa piawaian asas ataupun sebaliknya dalam penghasilan warna licau agar tiada masalah yang bakal dihadapi semasa menggunakan warna tersebut seperti keretakan halus, kualiti warna yang kurang menarik, warna tidak berfungsi dan sebagainya. Selain itu, penyelidik juga dapat menghasilkan satu variasi warna dari campuran bahan ujikaji yang sememangnya setiap bahan mempunyai kandungan elemen kimia yang tersendiri dan ia sangat diperlukan dalam proses penghasilan licau.Dari segi pengelasan bahan ujikaji pula, pengelasan tersebut amat penting dalam penghasilan warna licau. Hal ini demikian kerana pengelasan bahan ujikaji sangat diperlukan dan dapat memberi maklumat tentang sifat-sifat bahan tersebut serta kandungan mineral yang dapat mempengaruhi warna yang akan terhasil selepas ujikaji dilaksanakan. Licau boleh menukar kroma, nilai, warna dan tekstur permukaan. Pengeringan masa akan bergantung kepada jumlah, ketebalan dan jenis medium yang digunakan dalam penghasilan warna licau dari bahan semulajadi seperti batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan.

Medium tambahan seperti licau asas juga akan digunakan semasa proses ujikaji licau. Penggunaan licau asas sangat diperlukan dalam proses ujikaji kerana ia dapat memberikan tindakbalas yang berbeza pada permukaan jasad yang mempunyai licau asas dan tanpa licau asas. Hal ini demikian kerana penyelidik telah menggunakan licau asas yang tinggi mengikut sukatan iaitu sebanyak 10 hingga 50 peratus (%) kedalam setiap bancuhan kod warna sampel ujikaji. Selain itu, penyelidik juga mencampurkan kesemua bahan tersebut bagi mengenalpasti kesesuaian elemen kimia yang terkandung dalam setiap *agent* warna ujikaji.

Formulasi licau yang dilakukan dengan penggunaan bahan dari sumber alam semulajadi iaitu batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan telah diproses seperti menghancurkan bagi mendapatkan serbuk batu. Kemudian bahan tersebut akan dijadikan *agent* warna dalam proses menghasilkan licau dan engobe. Bahan-bahan ujikaji tersebut perlu menjalani beberapa proses bagi mendapatkan hasil yang menarik. Dalam proses ujikaji licau, batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang telah dihancur halus akan dicampurkan bersama-sama bahan asas (licau *transparent*) dengan campuran air yang secukupnya dalam alat pengisar (*ball mill*). Setelah adunan licau ini telah sebati dan halus ia nya ditapis melalui penapis 150 'mesh' dan dikenakan keatas sampel uji jasad seramik (*test pieces*) yang telah disediakan dengan kaedah celupan dan sapuan. Kadar kuantiti bahan tersebut akan ditentukan mengikut kesesuaian dengan menggunakan penimbang. Hal ini demikian kerana ia dapat memberi sukatan yang tepat terhadap campuran tersebut.

Bahan uji ini kemudiannya dibakar dengan menggunakan tanur elektrik menggunakan suhu 1200’C sehingga 1250’C. Selepas dibakar semua bahan ujikaji dibandingkan keputusannya berdasarkan tekstur, sifat warna dan kesan istimewa yang dihasilkan.

Ujikaji Makmal Hasilan Semulajadi *(Fourier Transform Infra-Red Spectrometer, Ftir)*

Rajah 1: *Fourier Transform Infra-Red Spectrometer* (FTIR)

Fourier Transform Infra-Red Spectrometer (FTIR) biasanya digunakan untuk kaedah perincian bagi mendapatkan keputusan terhadap sesuatu sebatian terutaman dalam bahan kimia organik. Jalur serapan dalam spektrum terhasil daripada perubahan tenaga yang timbul akibat getaran molekul jenis peregangan dan pembengkokn (cacat bentuk) ikatan. Kedudukan atom dalam molekul boleh dianggap sebagai kedudukan keseimbangan min dan ikatan antara atom boleh diandaikan sebagai beranalog dengan spring apabila dikenakan peregangan dan pembengkokan. Setiap atom dalam kumpulan atom dalam molekul berayun pada satu titik iaitu tarikan nukleus terhadap elektron mengimbangi penolakan nukleus oleh nukleus dan elektron dengan elektron. Ayunan ini mempunyai skala semulajadi yang bergantung kepada jisim atom dan kekuatan ikatan yang terlibat. Amplitud ayunan ini boleh ditingkatkan dengan memberikan tenaga melalui sinaran elektromagnet . FTIR (Model BX) mempunyai julat panjang gelombang (*Mid-R*) manakala FTIR (Model GX) mempunyai julat panjang gelombang (*Mid-IR dan Far-IR*).

Instrumen ini digunakan untuk menentukan struktur bahan organik dan bukan organik serta kumpulan berfungsi seperti OH, CH, NH dan CO. Bagi FTIR (Model GX) digunakan khusus untuk sebatian bahan bukan organik sahaja. Bagi menjalankan proses menentukan struktur bahan menggunakan instrumen FTIR, keadaan sampel perlu berada dalam keadaan pepejal (serbuk) yang disediakan dalam bentuk 'pellet' yang telah dicampur dengan kalium bromida (KBr). Selain itu, sampel juga boleh dianalisis dalam keadaan cecair yang memerlukan penyediaan *'window'* NaCI. Dalam ujikaji menggunakan instrumen FTIR, sampel pepejal iaitu serbuk hendaklah sentiasa berada dalam keadaan kering dan bebas daripada air manakala bagi sampel cecair pula ia perlu memastikan agar sampel tidak bertindakbalas dengan air.

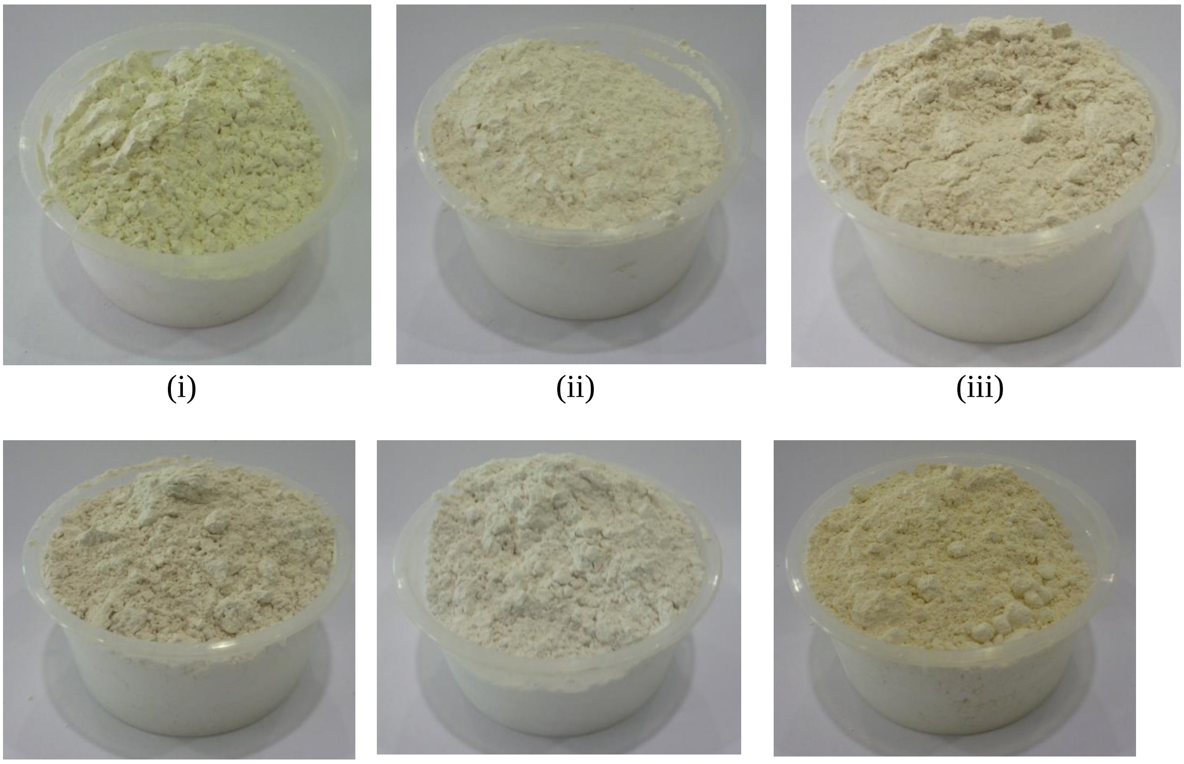
Seterusnya, penyelidik mendapati bahawa seramik tradisional di Sabah memerlukan *agent pigment colour* yang dihasilkan dari bahan semulajadi seperti batu Sungai Moyog, kayu bakau, rumpai laut, keladi dan cengkerang bagi mewarnai pemukaan produk tersebut. Hal ini demikian kerana ia dapat mengekalkan sifat semulajadi seramik tradisional Sabah dengan menggunakan bahan galian yang terdapat di sekeliling. Namun kajian yang lebih teliti diperlukan sebelum menjalani proses ujikaji warna licau menggunakan bahan tersebut dari segi proses penghasilan dan suhu yang sesuai agar ia dapat menghasilkan warna yang jelas dan mencapai tahap matang licau.

Penyelidik telah memilih batu Sungai Moyog, kayu bakau, rumpai laut, keladi dan cengkerang sebagai medium utama dalam penghasilan warna licau adalah kerana penyelidik percaya bahan semulajadi perlu diterokai sebagai satu penerokaan ilmu serta dijadikan bahan dokumentasi untuk memajukan industri seramik. Ia juga dapat menambah ilmu pengetahuan dan juga ilmu pendidikan. Selain itu, penerokaan bahan semulajadi ini juga dianggap sebagai satu penerokaan saintifik yang boleh diketengahkan sebagai satu bahan baru dalam industri seramik. Warna licau yang diproses menggunakan batu Sungai Moyog, kayu bakau, rumpai laut, keladi dan cengkerang sehingga terhasilnya pigmen warna yang baru dari bahan semulajadi merupakan satu langkah bagi memajukan industri seramik di persada dunia di samping dapat memupuk kembali persepsi masyarakat terhadap penggunaan barangan seramik dalam kehidupan mereka.

Bahan Licau Asas (*Based Glaze*)

Licau adalah sejenis pewarna seramik atau tembikar yang merupakan satu jenis lapisan kaca yang nipis yang menyelaputi permukaan jasad sesuatu barangan yang diperbuat daripada tanah liat. Terdapat beberapa jenis licau yang sering digunakan antaranya *glossy*, *semi-matt* dan *matt glaze*. Tetapi bagi tujuan kajian ini licau dari jenis *glossy* atau berkilat dan lutsinar digunakan kerana sifatnya yang jelas dan mudah untuk dinilai dan ditafsirkan.

Licau ini juga mempunyai bahan campuran yang tersendiri dan mempunyai nilai tertentu bagi setiap bahan yang terdapat pada bancuhan licau tersebut. Antara bahan yang terdapat dalam campuran resepi licau ini adalah *potash feldspar*, *calcium carbonate*, *ball clay*, *china clay*, *flint* dan *zinc oxide*.



(i) (ii) (iii) (iv) (v) (vi)

Rajah 3: Bahan-Bahan Memproses Licau. i) Potash Feldspar, ii) Calcium Carbonate, iii) Ball Clay, iv) China Clay, v) Flint, vi) Zinc Oxide

Rajah 3 (i hingga vi) merupakan jenis bahan yang digunakan dalam memproses licau asas. Kebiasaannya penyelidik menghasilkan licau asas menggunakan bahan tersebut mengikut berat campuran yang terdapat dalam resepi licau (jadual 1) bagi menghasilkan licau yang stabil mengikut suhu matang 1200’C.

Jadual 1: Resepi Licau Transparent

Bil	Bahan	g
1.	Potash Feldspar	40
2.	Calcium carbonate	15
3.	Ball clay	5
4.	China clay	10
5.	Flint	20
6.	Zinc oxide	10
Jumlah		100g

Jadual 1 merupakan jumlah berat bagi setiap bahan tersebut yang digunakan dalam resepi licau. Bagi tujuan kajian ini resepi licau tersebut perlu ditimbang sebanyak 100gram bagi setiap set kajian batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang ingin diujikaji. Jumlah berat bagi setiap campuran bahan tersebut perlu sama bagi setiap set kajian yang dibuat supaya keputusannya adalah tepat. Jika berlaku sebarang kesilapan berat kandungan bahan berkemungkinan hasil set kajian tersebut akan rosak dan tidak memberi sebarang nilai untuk dibuat penilaian.

Penyediaan Bahan Kajian

Sebelum kajian dimulakan terdapat beberapa proses penting yang perlu dilakukan terlebih dahulu antaranya proses penyediaan serbuk bahan ujikaji, menyediakan peralatan-peralatan yang akan digunakan, bahan-bahan asas licau *transparent* dan jasad spesimen kajian. Bagi proses penyediaan serbuk batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang merupakan bahan kajian yang akan melibatkan proses menghancurkan batu keras dengan menggunakan mesin pengisar batu di makmal geologi dan kemudian ditapis untuk mendapatkan serbuk bahan ujikaji tersebut.

Dalam kajian ini, serbuk warna batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan merupakan bahan ejen pewarna yang asli yang perlu diujikaji. Maka, setiap batu yang telah dihancurkan perlu diasingkan mengikut warna dan perlu dikeringkan terlebih dahulu jika ia berada dalam keadaan yang basah. Pengeringan perlu bagi tujuan mengeluarkan kandungan air yang terdapat dalam serbuk batu tersebut. Sebenarnya, setiap batu tersebut mempunyai bahan mineral *iron oxide* yang boleh mengeluarkan warna. Namun begitu, ia bergantung kepada jenis batu yang dikaji dan antara faktor penting yang menentukan warna tersebut ialah keadaan warna batu itu sendiri. Lebih gelap dan terang warna batu tersebut warna yang bakal dihasilkan juga adalah lebih terang dan jelas. Namun begitu, untuk mendapatkan kesan warna yang menarik serbuk batu perlu dicampurkan ke dalam bancuhan licau yang akan dibakar pada suhu 1200’C dan bancuhan slip dengan suhu pembakaran 800’C.

(i)

(ii)

Rajah 3 : Kategori Sampel Batu i) Sampel Batu Yang Belum Diproses, ii) Sampel Batu Yang Telah Diproses Menjadi Serbuk.

(Sumber: Norhayati Ayob, A Preliminary Study of Producing Ceramic Glaze Utilizing Nature Stone: Moyog Stone River, Penampang).

Rajah 3 (i dan ii) menunjukkan sampel batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang telah mengalami beberapa proses sehingga menjadi serbuk untuk digunakan dalam ujikaji warna licau. Sampel Batu tersebut diasingkan mengikut kod warna sebelum dihancurkan. Hal ini dapat memudahkan dalam proses pengasingan serbuk warna batu agar kod dan jenis bahan adalah tepat.

Kesimpulan

Berdasarkan hasil dapatan kajian, dapat merumuskan bahawa kajian ini berjaya mencapai objektif sebenar dan dapat membuktikan bahawa batu Sungai Moyog, batu Lombong Mamut, dan batu Kompleks Sukan yang dikaji boleh mengeluarkan warna tertentu. Kajian ini boleh diperluaskan dan digunakan untuk menghasilkan warna pada produk-produk seramik berlicau. Hal ini kerana ia dapat menjimatkan kos pengeluaran warna bahan mentah yang digunakan. Sampel ujikaji juga boleh didapati dari mana-mana kawasan yang berhampiran dan boleh dijadikan bahan mentah yang berguna. Seterusnya, kajian ini dapat memberi manfaat kepada institusi-institusi pengajian tempatan dari sudut sumbangan ilmu kepada kajian yang seterusnya.

Penyelidik yakin kajian ini dapat digunakan sebagai bahan rujukan oleh generasi akan datang selain keunikan produk seramik dapat dikekalkan. Penyelidik percaya pendokumentasi kajian ini perlu dan penting sebagai bahan rujukan memandangkan produk seramik yang semakin dilupakan oleh masyarakat di Malaysia. Penyelidikan ini dapat memberikan kesan positif terhadap generasi muda dalam proses menambah ilmu pengetahuan berkaitan penghasilan licau dalam industri seramik menggunakan bahan semulajadi.

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ANALISIS KEBERKESANAN AKTIVITI DAKWAH DAN PENDIDIKAN DI SEKOLAH TAHFIZ SAINS TANAH MERAH, KELANTAN MALAYSIA

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Abstrak: *Kajian ini membincangkan keberkesanan aktiviti dakwah dan pendidikan di asrama Maahad Tahfiz Sains Tanah Merah, Kelantan. Kajian ini menggunakan pendekatan kuantitatif berbentuk deskriptif dengan menggunakan metode soal selidik. Pemilihan subjek kajian secara persampelan melibatkan 100 pelajar asrama yang pernah mengikuti program dakwah di asrama Maahad Tahfiz Sains. Selain itu pendekatan secara kualitatif dengan menemubual warden asrama. Jenis instrumen kajian kaji selidik dan temubual. Kajian dianalisis menggunakan perisian SPSS (Version 2.3). Hasil kajian menunjukkan beberapa program dakwah dan pendidikan kurang berkesan. Kajian merumuskan pengurusan asrama dan kerjasama pelajar adalah penting dalam mencapai keberkesanan program yang diadakan. Implikasi kajian menunjukkan aktiviti dakwah dan pendidikan dapat meningkatkan disiplin dan memberi kesan positif terhadap spiritual pelajar.*

Keyword: *pelajar tahfiz, aktiviti dakwah, pendidikan, keberkesanan.*

Pendahuluan

Kalau diteliti secara mendalam terhadap sambutan sekolah berasrama pelajar tahfiz oleh masyarakat, didapati terdapat kecenderungan minat ibubapa terhadap bidang tersebut sangat tinggi. Ada dikalangan ibubapa dalam dan luar bandar menghantar anak-anak mereka memasuki sekolah berasrama bidang tahfiz dengan harapan anak mereka sebagai hafiz dan sebagai pendakwah. Menurut Zaradi Sudin (2008), perkembangan terkini menunjukkan sekolah aliran tahfiz al-Quran dan sains mendapat tempat dalam masyarakat. Pada sekolah tersebut menawarkan pendekatan menghafal al-Quran disertakan dengan aktiviti dakwah dan pendidikan yang tersendiri. Pelajar tahfiz sains perlu diterapkan dengan ilmu dakwah kerana mereka merupakan bakal generasi pendakwah untuk kesinambungan dakwah berterusan. Mereka bertindak sebagai tulang belakang bagi bangsa dan negara dalam pembinaan tamadun Islam. Hancur peradaban bangsa dan negara adalah kerana kegagalan generasi muda menghayati nilai murni agama dan tidak beramal dengan akhlak mulia serta kurang melibatkan diri dalam aktiviti kemasyarakat. (Fariza Md. Sham, 2000). Oleh kerana itu, mereka hendaklah diasuh, dididik, dibimbing dan dipandu dengan penuh teliti dan rapi agar golongan ini dapat menjadikan diri mereka sebagai pemangkin utama dakwah Islam untuk mengajak seluruh manusia melaksanakan segala suruhan dan meninggalkan segala larangan yang telah ditetapkan oleh Allah SWT.

Tidak dinafikan terdapat banyak halangan yang dihadapi oleh pelajar tahfiz yang mana boleh menurunkan kadar proses pembangunan mereka dalam kecemerlangan dari sudut akademik mahupun sahsiah. Halangan tersebut seperti gejala sosial, keruntuhan akhlak, meningkatnya kadar jenayah dalam masyarakat, kehancuran sistem kekeluargaan dan sebagainya. Fenomena ini amat membimbangkan masyarakat masa kini. Pada dasarnya, pelajar tinggal di asrama sebagai aset penting kerana menyumbang modal insan dalam pembangunan negara (Musfirah Rozali, 2009). Proses pelaksanaan dakwah secara konsisten dan sistematik perlu dilakukan secara profesional dan tidak berpenghujung (Fariza Md. Sham, 2000). Peranan pihak pentadbir asrama amat diperlukan bagi menjayakan dakwah secara hikmah dalam usaha membentuk peribadi pelajar menjadi muslim yang cemerlang dan bertaqwa kepada Allah SWT. Permasalahan di sini adakah program dakwah yang dilaksanakan di asrama sekolah tahfiz mampu beri kesan serta pelajar tahfiz dapat memperbaiki sahsiah mereka? Bagaimana pula dengan persiapan dari segi pengurusan, strategi, fasiliti bagi melaksanakan aktiviti dakwah kepada pelajar asrama ini? Sejauh manakah program dakwah di asrama sekolah tahfiz sains dapat menghasilkan pelajar yang mempraktikkan ilmu dan penglibatan dalam aktiviti dakwah di asrama.

Kajian Literatur

Dakwah adalah bahagian daripada kehidupan dan tanggungjawab setiap Muslim. Setiap gerak geri seorang Muslim sepatutnya berlandaskan atas kesedaran untuk mengamalkan Islam dan menyebarkan syiarnya di samping mendidik masyarakat dengan nilai-nilai murni Islam yang sebenar. Dakwah boleh dijalankan dalam pelbagai bentuk yang sesuai dengan keadaan pendakwah mahupun keadaan sasaran dakwahnya. Dakwah boleh berbentuk individu, kumpulan dan institusi. Apa pun bentuknya, namun dakwah mestilah memiliki perancangan yang teliti, matang dan rasional (Burhanudin Abdullah, 2000). Dakwah dan pendidikan adalah saling berkaitan, memberikan pengetahuan, pemahaman dan wawasan sebagai bekalan untuk kejayaan dunia dan akhirat. Tanpa dakwah dan pendidikan, Islam tidak berjaya, bahkan eksistensinya dipertahankan oleh dua hal ini. Oleh kerana itu, perlu diketahui bahawa dakwah dan pendidikan berperanan sebagai wadah menyebarkan agama kepada pelajar sekolah. Program dakwah yang bersesuaian dengan situasi dan era globalisasi bagi tujuan pembangunan insan. Antaranya ialah:

Usrah

Usrah bererti keluarga dan dalam konteks perbahasan ditafsirkan sebagai satu perjumpaan yang melibatkan kegiatan bermuzakarah untuk memahami ajaran agama Islam. Pendekatan usrah lebih berpusatkan ahli usrah dan seorang ketua usrah yang digelar naqib berperanan sebagai fasilitator. Rukun usrah ialah ta'aruf, tafahum dan takaful. Asas rukun ialah iman dan persaudaraan merupakan sumber kekuatan masyarakat Islam. Dalam konteks pendidikan, pengukuhan iman dan persaudaraan sebagai asas kejayaan. Kalau berbicara pasal isu potensi pelajar di sekolah, maka program usrah adalah pelengkap kepada satu matlamat pendidikan. Bertindak sebagai usaha berterusan ke arah membina potensi individu, berilmu, beramal, berakhlak mulia dan berketerampilan. (Muhamad Asmadi Mustakim, 2018). Program usrah memperkukuh kurikulum dan dilaksanakan di luar waktu pengajaran dan pembelajaran. Ia dikendalikan antara guru dengan murid atau murid dengan murid. Objektifnya, ia melahirkan murid yang soleh, musleh dan berdaya kepimpinan. Selain itu, usrah juga memperkukuh nilai iman dan persaudaraan. Membina kesedaran sangat penting dalam komunikasi dan mereka perlu menjalinkan hubungan sesama insan dan alam sekitar. Program usrah mampu meningkatkan budaya kecemerlangan sekolah dan pembangunan sahsiah pelajar. (Ya'qub Muhammad Hussin, 2001).

Zikir al-Ma'thurat

Bacaan al-Ma'thurat merupakan zikir harian khususnya selepas solat Subuh dan Asar. Secara psikologi, zikir memberi ketenangan kepada sesiapa yang mengamalkan. Alunan bait-bait yang diungkapkan menjadikan pemikiran lebih tenang. Ketenangan yang sebenarnya ialah meningkatkan daya fokus seseorang pelajar untuk cemerlang dalam pelajaran. Biasanya pemikiran manusia dibebani dengan masalah dan kerja harian yang banyak. Kerja-kerja yang ada bukan sahaja datang dari arahan orang malah kadangkala ia datang dari masalah yang diadakan diri sendiri. Oleh yang demikian, fikiran kusut dengan masalah kehidupan yang perlu diselesaikan, mengakibatkan terganggu fikiran. Amalan zikir memberi kesedaran dan membantu mengurangkan kesesakan dalam pemikiran seseorang. Sebagai pelajar yang menghadapi peperiksaan, sentiasa mengamalkan zikir. Mungkin biasa umat Islam diberi penerangan tentang kepentingan zikir kerana zikir memiliki kelebihan yang tersendiri.

Ceramah

Ceramah ialah ucapan yang membicarakan sesuatu perkara seperti bahasa, politik dan lain-lain. Ceramah ialah proses komunikasi sehala atau dua hala dalam menjelaskan atau memberi informasi tertentu, sementara peserta atau audiens mendengarnya. Ceramah dalam Islam merupakan satu corak hidup, satu kegiatan yang membolehkan agama meresap ke hati, bergerak daripada suatu fikiran yang lain, berpindah daripada satu generasi yang mengikut masa, dari satu negeri kepada satu negeri yang lain mengikut tempat. Ceramah yang berkesan ialah ceramah yang berfokus ke arah tujuan dan sasarannya yang jelas dan nyata, diikuti dengan penjelasan yang lengkap dan rasional. Menurut Tasmana (1997), para penceramah hendaklah mahir dengan sesuatu isu dan penyakit masyarakat. Ini dapat membantu penceramah menyampaikan mesej kepada para pendengar. Apabila dikemukakan masalah oleh orang ramai, dia dapat menghilangkan keraguan mereka dengan memuaskan hati mereka.

Kuliah

Kuliah ialah ucapan yang disampaikan oleh seseorang yang mempunyai maklumat atau pengetahuan tentang sesuatu bidang dan menyampaikan pelbagai fakta dalam turutan ke arah kesimpulan akhir. Menurut Kamus Dewan (2010) kuliah merupakan pelajaran yang disampaikan secara bersyarah (berpidato) oleh pensyarah di universiti atau maktab. Kuliah biasanya digunakan untuk menerangkan ayat-ayat al-Quran, hadis-hadis Nabi SAW atau menerangkan sesuatu masalah agama seperti masalah fiqh. Jumlah masa 90 minit pada umumnya adalah masa yang maksimum bagi pendengar menumpukan perhatian kepada kuliah. Kuliah juga pada amnya tidak boleh terlalu panjang dan melebihi 45 minit. Masa selebihnya untuk perbincangan umum atau sesi soal jawab. Kebiasaan kuliah diadakan oleh pengurusan asrama selepas solat Subuh atau Solat Maghrib. Kuliah disampaikan oleh guru atau pelajar asrama terpilih.

Program Tahsin Solat

Solat merupakan perkara penting dan menjadi paksi utama keimanan seseorang mukmin. Ibadat solat merupakan rukun Islam yang kedua selepas mengucap dua kalimah syahadah. Ia adalah tiang agama yang telah difardukan ke atas orang Islam yang mukallaf. Program ini adalah bertujuan untuk pelajar memperdalami cara solat yang betul supaya tidak melakukan kesilapan semasa mengerjakan solat. Program tahsin solat dapat membentuk sahsiah cemerlang di kalangan pelajar. Selain itu, ia juga memantapkan lagi solat lima waktu sebagai tiang agama. Sesungguhnya solat itu menghindari diri manusia daripada perbuatan keji dan mungkar.

Program Ihya' Ramadan

Ramadan adalah bulan yang Allah janjikan kepada seluruh umat Islam untuk mendapatkan pahala yang berlipat kali ganda. Justeru, Ihya' Ramadan dirancang dan dilaksanakan bertujuan untuk mendapatkan keredaan Allah SWT dan memohon agar ibadah mendapat ganjaran pahala daripada Allah SWT, serta memberikan penghayatan dan pengajaran dalam penghayatan Ramadan (Jaffar Siddiq, 2010). Justeru, melalui program ini sekolah dapat mendedahkan pelajar dengan kelebihan dan kemuliaan bulan Ramadan di samping menggalakkan mereka menjalani ibadah puasa dengan ikhlas dan bersungguh-sungguh.

Pelajar wajib menyertai aktiviti kokurikulum untuk keseimbangan tahap sosial mereka dalam melangkah ke alam kehidupan yang lebih mencabar. Kebiasaannya, tujuan Program Ihya' Ramadan ini dijalankan untuk melahirkan pelajar yang seimbang dari segi jasmani, emosi, rohani, intelek dan sosial selaras dengan Falsafah Pendidikan Kebangsaan (FPK). Selain itu, program ini juga diadakan bagi memupuk semangat setia kawan dan berpasukan serta melahirkan pelajar yang berketerampilan dan mempunyai disiplin yang tinggi. Akhir sekali, meningkatkan keyakinan diri serta menguji ketahanan fizikal fizikal dan mental setiap peserta. Jadual di bawah menunjukkan aktiviti-aktiviti yang kebiasaannya sekolah akan lakukan setiap kali adanya Program Ihya' Ramadan:

Bil	**Aktiviti**
1	Tadarus al-Quran
2	Hafazan Surah
3	Bacaan Yasin dan Tahlil
4	Kuiz Ihya' Ramadan
5	Majlis Khatam al-Quran
6	Majlis Berbuka Puasa

Golongan pelajar sekolah tahfiz sains adalah sebahagian daripada golongan remaja yang bakal menerajui kepimpinan dan pembinaan tamadun bangsa. Oleh itu, para pendakwah perlu memberikan tumpuan kepada golongan ini sebagai pelapis golongan tua bagi memastikan kesinambungan pemimpin dan cerdik pandai berterusan pada masa hadapan. Menurut Ab. Aziz Mohd Zin (1997), dalam tradisi Islam, pelbagai istilah digunakan untuk pengertian dan interpretasi terhadap dakwah dan pendidikan Islam. Antaranya ialah dakwah, tarbiah yang merujuk kepada pendidikan, pembelajaran, pembentukan dan budi pekerti. Setiap perkataan itu mempunyai pengertian yang tersendiri namun dalam konteks pendidikan Islam adalah saling berkait di antara satu sama lain. (Othman Hj. Talib, 2006). Kini pelbagai cabaran dihadapi oleh guru-guru dan pelajar tahfiz sains di sekolah. Gejala sosial dan masalah disiplin dalam kalangan pelajar tahfiz sering berlaku di sekolah-sekolah. Suatu pendekatan yang sesuai amat diperlukan untuk mengatasi atau mengurangkan berlaku dalam institusi pendidikan. Sehubungan itu, kajian ini cuba kemukakan suatu program pembinaan sahsiah pelajar dalam konteks melahirkan pelajar tahfiz yang mesra dakwah seperti yang dikehendaki. Justeru, dakwah berkepentingan kepada masyarakat terutamanya kepada golongan remaja yang bakal memimpin generasi akan datang. Kepentingan dakwah ini diperhatikan kepada beberapa sudut iaitu:

Sudut Akidah

Kepentingan dakwah dari sudut akidah adalah berasaskan kefahaman serius manusia terhadap konsep tuhan, konsep nabi dan konsep akhirat. Penghadaman terhadap konsep-konsep ini akan menghasilkan ketaatan dalam hidup beragama. Tuntutan kepada ketaatan kepada Allah SWT adalah wajib. Manusia dituntut mengamalkan segala ajaran Islam berdasarkan petunjuk al-Quran dan Hadis. Oleh yang demikian, dakwah sangat perlu menumpukan usaha pemikiran manusia berasaskan akidah Islam yang kukuh bagi mewujudkan kesatuan pemikiran insan yang berkesan, seterusnya mampu mencapai matlamat hidup berasaskan tuntutan Islam (Abdul

Munir Ismail, (2014). Bertujuan untuk mengajak umat Islam supaya bertakwa kepada Allah SWT dan menjauhkan diri daripada melakukan perkara yang dimurkai Allah SWT. Ajakan kepada kebaikan ini merupakan suatu aktiviti dakwah yang perlu dirancang dan dilaksanakan secara berterusan. Sebagai contoh, aktiviti dakwah sesuai dilaksanakan di asrama dengan pelbagai aktiviti bagi menarik pelajar supaya melakukan perubahan diri dengan suci hati.

Sudut Ibadah

Dakwah melalui sudut ibadah berkepentingan kerana bertitik tolak kepada tujuan kejadian manusia. Dua tujuan utama kejadian manusia adalah sebagai hamba untuk beribadat kepada-Nya dan juga manusia sebagai khalifah (Abu Bakr al-Jabir, 1996). Oleh itu, dakwah dari sudut ibadah menumpukan usaha membina pemikiran masyarakat ke arah memahami konsep ibadah seperti yang dianjurkan Islam. Dakwah dari sudut ibadah ialah mengajak manusia supaya menjadikan dunia sebagai tempat yang bermanfaat untuk kesejahteraan hidup. Menurut Yusuf al-Qaradawi (1997), tugas bersama umat Islam untuk menyeru umat manusia supaya beribadah kepada Allah SWT, memberi peringatan dengan berbuat kebaikan dan meninggalkan segala bentuk penyembahan selain Allah SWT kerana dakwah merupakan suatu tuntutan dalam Islam. Sesiapa yang membawa manusia ke jalan kesesatan orang tersebut tidak mendapat hidayah Allah SWT. Manakala sesiapa yang mengajak umat manusia ke jalan lurus, mereka mendapat pertunjuk Allah SWT. Justeru, sebagai umat beriman kepada Allah SWT dituntut menyuruh semua umat manusia membuat kerja-kerja kebajikan tanpa mengharapkan sanjungan atau balasan daripada manusia. Akhirnya manusia tetap memerlukan Allah untuk memohon dan meminta pertolongan.

Sudut Akhlak

Dakwah dari sudut akhlak menumpukan usaha membangun dan memperbaiki akhlak masyarakat yang tercemar dengan akhlak yang buruk sehingga wujud pelbagai masalah sosial yang tidak terkawal. Prinsip utama akhlak Islam ialah mengiktiraf akhlak baik, dan tidak mengiktiraf akhlak buruk (Syed Muhammad Naquib al-Attas, 2001). Prinsip ini selaras dengan dalil al-Quran dan Hadis yang membincangkan tentang akhlak manusia. Pembangunan akhlak pelajar dilaksanakan melalui tuntutan ilmu, pembelajaran kendiri dan sosial, latihan berterusan, penerapan nilai-nilai positif dan pengamalan cara hidup sihat. Pembangunan akhlak pelajar hendaklah disokong oleh masyarakat pelbagai bangsa dan agama dengan mengamalkan niai-nilai akhlak baik serta mengutuk mereka yang melakukan amalan akhlak buruk. Dari segi dakwah, situasi ini ialah satu kelebihan, kerana hidup berakhlak mulia ialah prinsip utama dalam asasi Islam. Oleh sebab masalah akhlak masyarakat kini ditahap yang membingungkan ramai pihak, maka dakwah dilihat sebagai suatu yang sangat penting untuk mengatasi masalah ini.

Ketiga-tiga aspek ini ialah asas kepada pemantapan sesebuah masyarakat. Oleh yang demikian, kebejatan sosial remaja di Malaysia hari ini perlu ditangani segera melalui gerakan dakwah lebih-lebih lagi terhadap pelajar sekolah yang kebanyakkannya mudah terjebak dengan gejala sosial. Melalui program dakwah di asrama, pelajar dibimbing dengan diberi penerapan nilai keagamaan. Objektif kajian ialah untuk mengetahui keberkesanan aktiviti dakwah dan pendidikan kepada pelajar asrama Maahad Tahfiz Sains, Tanah Merah. Objektif kajian juga menganalisis permasalahan pelaksanaan aktiviti dakwah dan pendidikan di sekolah terbabit.

Metodologi

Kajian ini menggunakan kaedah kuantitatif dan kaedah temubual bagi mendapatkan maklumat. Temubual dilakukan terhadap guru tahfiz yang terlibat sebagai warden asrama. Ahmad

Sunawari Long (2014), kaedah temubual sesuai digunakan untuk menyokong sesuatu dapatan kajian kajiselidik.

Sampel Kajian

Populasi kajian ini adalah berjumlah 100 orang pelajar berumur 13 tahun hingga 17 tahun. Respoden dipilih adalah dari tingkatan satu hingga tingkatan lima, masing-masing berjumlah 20 orang. Kajian tertumpu kepada pelajar yang dipilih secara rawak sahaja.

Instrumen Kajian

Instrumen adalah alat yang digunakan untuk mengukur dan memperoleh data. Ia digunakan untuk mengukur konsep yang berkaitan dengan sikap, persepsi, pandangan dan keterangan latar belakang (Mohd Najib Abd Ghafar, 1999). Menurut Azizi Yahaya (2004), soal selidik adalah instrumen yang kerap digunakan dalam kajian deskriptif. Dalam kajian ini, satu set soal selidik dipilih sebagai instrumen kajian. Soal selidik ini sesuai digunakan untuk mendapatkan data kerana melalui kaedah ini, responden lebih mudah memberikan tindak balas terhadap aspek yang diuji berbanding kaedah lain. Maklumat diperolehi lebih tepat, mudah dan menjimatkan kos. Kenyataan pada borang soal selidik berdasarkan skala sangat tidak berkesan, tidak berkesan, tidak pasti, berkesan dan sangat berkesan. Instrumen borang kajiselidik menggunakan senarai semak jenis skala Thurson yang mana soal selidik adalah berkaitan dengan objektif kajian. Menurut Mohd Najib (1999), skala ini memudahkan untuk mendapatkan kerjasama responden bagi menghasilkan kesahan yang dipercayai. Semua data dikumpul, diteliti satu demi satu supaya hasil pengolahan serta menganalisis menepati piawaian. Dalam menganalisis data, pengkaji menggunakan metode induktif dan deduktif, iaitu perisian SPSS 1.7 digunakan untuk menganalisis data.

Metod Analisis Data

Semua data dikumpul, diteliti satu demi satu supaya hasil pengolahan serta menganalisis menepati piawaian. Dalam menganalisis data, pengkaji menggunakan metode induktif dan deduktif.

Dapatan Kajian dan Perbincangan

Jadual 1: Keberkesanan Program Dakwah dan Pendidikan

		Skala Jawapan *f (%)*					
Bil	Penyataan	Sangat Tidak Berkesan	Tidak Berkesan	Tidak Pasti	Berkesan	Sangat Berkesan	Min
1.	Saya dapat mengetahui maksud serta huraian ayat al-Quran dan hadis melalui kuliah yang disampaikan oleh penceramah	-	-	7 7%	70 70%	23 23%	4.16
2.	Hati menjadi tenang setiap kali saya berzikir	-	-	3 3%	68 68%	29 29%	4.26
3.	Bacaan al-Quran saya lancar menerusi aktiviti tadarus al-Quran	-	-	1 1%	58 58%	41 41%	4.4

4.	Saya dapat membentuk peribadi muslim dan saling berkongsi ilmu dalam usrah	-	-	5 5%	62 62%	33 33%	4.28
5.	Saya melazimkan bangun awal pagi untuk Qiamulail dan muhasabah diri	1 1%	15 15%	7 7%	55 55%	22 22%	3.82
6.	Saya yakin dengan solat hajat dan berdoa memohon sesuatu hajat kepada Allah SWT akan dimakbulkan oleh-Nya	1 1%	1 1%	5 5%	64 64%	29 29%	4.19
7.	Saya mengetahui sesuatu peristiwa besar dalam Islam dengan menghadiri ceramah tentang hari-hari kebesaran Islam	-	-	4 4%	60 60%	36 36%	4.32
8.	Melalui aktiviti kuliah bulanan, pengetahuan saya tentang Islam bertambah mantap	-	-	4 4%	63 63%	33 33%	4.29
9.	Saya sangat gembira menyertai aktiviti dakwah dan pendidikan kerana terlibat secara langsung dalam kemasyarakatan	-	3 3%	4 4%	56 56%	37 37%	4.27
10.	Kem tahsin solat dapat membantu saya perbaiki solat saya dengan lebih teratur dan sempurna	-	1 1%	2 2%	60 60%	37 37%	4.33

Berdasarkan Jadual 1 menunjukkan taburan bilangan dan peratusan responden yang memberi maklumbalas terhadap item-item keberkesanan program dakwah dan pendidikan. Berdasarkan skor min di dalam jadual di atas, hampir keseluruhan item mempunyai skor min yang tinggi iaitu antara 4.16 hingga 4.33. Ini menunjukkan keberkesanan aktiviti dakwah dan pendidikan berada di tahap yang baik. Item yang mempunyai skor tertinggi adalah item 10 (Kesan mengikuti Kem tahsin solat dapat membantu responden perbaiki solat dengan sempurna). Kajian mendapati seramai 60 orang (60%) bersetuju dan 37 orang (37%) sangat bersetuju. Justeru, kem tahsin solat menunjukkan sangat berkesan kepada pelajar dalam membaiki cara solat mereka agar amalan solat mereka lebih baik daripada sebelumnya.

Namun begitu, terdapat juga item yang mempunyai skor min 3.82 berada pada tahap keberkesanan sederhana. Item berkenaan adalah item 5 iaitu (Saya melazimkan bangun awal pagi untuk Qiamulail dan muhasabah diri), seramai 1 orang (1%) responden mengatakan sangat tidak berkesan dan 15 orang (15%) mengatakan tidak berkesan dan ini mencatatkan rekod seramai 16 orang. Dari jumlah keseluruhan 100 orang tidak bersetuju dengan item berkenaan. Berdasarkan kajian, responden tidak dapat mempraktikkan aktiviti Qiamulail secara konsistent. Berdasarkan analisis yang dibuat kepada item keberkesanan program dakwah dan pendidikan didapati bahawa program dakwah yang dilakukan yang melibatkan pelajar asrama berada di tahap yang baik dan mampu memberi kesan kepada para pelajar. Berdasarkan skor min yang diperoleh, 9 item daripada 10 item memiliki skor min tertinggi iaitu antara 4.4 hingga 4.16. Skor min melebihi paras 4 menunjukkan keberkesanan program dakwah berada tahap tinggi. Nilai min tertinggi adalah pada item ke 3 iaitu *"Bacaan al-Quran saya lancar menerusi program tadarus al-Quran.* Jumlah min pada item ke 3 adalah 4.4 dan seramai 99 orang pelajar (99%) memberikan respon positif. Iaitu seramai 41 orang pelajar (41%) mengatakan sangat bersetuju dan 58 orang pelajar (58%) bersetuju bahawa melalui program tadarus al-Quran. Kesannya responden dapat melancarkan bacaan al-Quran mereka dengan lebih baik. Menurut Mohd Zaki Hamid (2009), pelajar yang menghafaz al-Quran melazimkan dengan tadarus kerana sebelum mereka memulakan hafazan, terlebih dahulu mereka membaca al-Quran sehingga lancar dan memulakan hafazan mereka. Oleh itu, keberkesanan tadarus al-Quran dalam melancarkan bacaan pelajar mendapat nilai positif yang tertinggi. Adapun amalan tadarus al-Quran dibantu oleh guru Tasmi' dan juga warden asrama kerana warden asrama juga terdiri daripada guru tahfiz al-Quran sebagai membantu pelajar dalam aspek tadarus. Melalui keputusan yang diperoleh, penyelidik menyimpulkan program dakwah ini sangat penting dalam membina sahsiah pelajar menjadi hamba Allah SWT yang mementingkan kehidupan akhirat kerana setiap program dakwah yang dilakukan. Pelajar melakukan sesuatu pekerjaan dengan ikhlas tanpa mengharapkan pujian orang. Mereka melakukan amalan baik tanpa dipaksa atau disuruh kerana adanya kesedaran dalam diri mereka sendiri.

Item kedua tertinggi min 4.33 adalah *"kem tahsin solat bantu saya untuk perbaiki cara solat saya dengan lebih teratur".* Berdasarkan jumlah min, kem tahsin solat yang diadakan secara berkala kepada pelajar asrama dapat menarik minat pelajar menyertai dan kebanyakan pelajar melahirkan perasaan gembira dengan aktiviti tersebut. Program ini dilihat sangat penting kepada remaja bagi memperbaiki solat mereka yang masih belum sempurna. Menurut Menurut al-Qurtubi (2000), syariat solat yang disyariatkan oleh Allah SWT merangkumi peraturan agama yang lengkap dan jelas kepada hamba-Nya. Justeru, solat itu sebagai tiang agama hendaklah didirikan dengan betul dapat melahirkan individu yang berkualiti. Sekiranya solat dirikan tidak betul, maka ia memberi impak negative terhadap kehidupan seharian. Melalui kem tahsin solat ini, pelajar tahfiz asrama dapat memperbaiki solat melalui program tersebut. Mereka dapat mengetahui posisi gerakan dalam solat sekiranya imam terbatal atau sebagainya. Selain belajar cara solat dengan sempurna, pelajar juga didedahkan dengan amali wudu' dengan betul berdasarkan situasi semasa seperti ketika ketiadaan air, ketika musafir dan sebagainya. Sesi pendedahan cara solat berkualiti ditunjukkkan melalui kem tahsin solat, pelajar dapat mempelajari amali dengan lebih yakin dan mampu memberi bimbingan kepada orang lain. Program seperti ini memudahkan pelajar memahami secara mendalam dan seterusnya membuka ruang kepada pelajar mengajukan persoalan solat dan hubungannya dengan amalan solat remaja masa kini.

Namun begitu, terdapat satu item yang mempunyai skor min yang kurang dari 4 iaitu item ke 5 *"Saya akan bangun awal pagi dengan sendiri untuk Qiamulail sambil bermuhasabah diri",* skor min yang diperoleh adalah 3.82. Seramai 16 orang pelajar memberi respon yang negatif terhadap item ini. Dapatan ini memberikan gambaran terhadap program Qiamulail tidak memberi kesan kepada pelajar tersebut kerana pelajar tidak dapat mempraktikkan amalan tersebut seorang diri. Merujuk kepada temubual antara penyelidik dengan warden asrama juga, beliau mengatakan sememangnya Qiamulail ini sangat jarang dilakukan oleh pelajar asrama melainkan apabila pihak asrama sendiri yang mengadakannya. Aktiviti Qiamulail juga antara program dakwah yang sukar dilaksanakan kerana pelajar kurang kesedaran tentang Qiamulail ini. Menerusi temubual dengan warden asrama, beliau mengatakan kebanyakan pelajar terlibat adalah terdiri daripada pelajar berumur antara 13 hingga 15 tahun. Menurut warden asrama, umur pelajar mempengaruhi kehadiran program dakwah yang dianjurkan di sekolah. Umur pelajar dalam 13 tahun hingga 15 tahun giat melibatkan diri dalam program dakwah. Namun, pada aspek bangun awal pagi, kebanyakan pelajar menghadapi kesukaran kemungkinan pelajar kurang cukup tidur kerana pada waktu persekolahan mereka tiada waktu rehat. Umum mengetahui bahawa aktiviti pembelajaran bermula jam 7.45 pagi hingga 2.45 petang, diikuti waktu prep sehingga jam 5. Seterusnya kelas Quran bermula jam 8 malam hingga 10 malam. Di sini jelas menunjukkan seharian pelajar menghabiskan masa dengan kelas, oleh itu masa selain yang disenaraikan itu, pelajar akan memperuntukkan untuk aktiviti lain. Kepenatan kerana aktiviti seharian menyebabkan pelajar dilihat agak sukar bangun awal untuk melakukan aktiviti qiamulail.

Kesimpulan

Berdasarkan perbincangan di atas, disimpulkan program dakwah yang sesuai perlu dirancang, disusun dengan sistematik dan diselaraskan dengan semua bahagian pengurusan. Pelbagai program dakwah dilaksanakan bersifat tradisional ataupun moden bertujuan untuk menarik minat pelajar menyertainya. Dalam masa yang sama kaedah dan pendekatan dakwah yang sesuai perlu digunakan bagi memastikan mesej dakwah yang disampaikan diterima oleh pelajar. Secara umumnya keberkesanan program dakwah berada di tahap sangat tinggi purata antara 4 (setuju) dan 5 (sangat setuju). Antaranya ialah aktiviti ceramah agama sempena hari kebesaran Islam mencatat min 4.32, diikuti oleh pelaksanaan kuliah bulanan, pengetahuan responden tentang Islam bertambah mantap mencatatkan min 4.23. Program dakwah dan pendidikan dikira berkesan kerana sikap pelajar sangat positif dengan menunjukkan minat yang mendalam terhadap sesuatu program.

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