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EFFECTS OF TEACHERS COMMITMENT AND ENVIRONMENTAL EDUCATION IN PRIMARY SCHOOL

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ABSTRACT

This study uses a mixed methods research design, which is a sequential approach where quantitative studies are followed by qualitative studies. The target population of this study was primary school teachers in Perak while the study population was teachers who were directly involved in teaching lace school environment education. Researchers selected teachers who are committed to environmental education at 38 Perak state primary schools with 380 teachers as a population. Researchers use quantitative research design and observation methods to gain a sense of teacher commitment in influencing the effectiveness of environmental education. The findings showed that there was a low positive correlation ($r = .175$, $p > .05$) between teacher commitment and primary school environment based on the Pearson Correlation test. To see the difference in the level of commitment of teachers at the high, medium and low levels of primary education; One-way ANOVA statistical tests were used to see the mean of one variable for more than two non-dependent groups. Based on the ANOVA test, the results of the analysis of the difference in the level of teacher commitment to primary school environment, $p < 0.05$. Based on the study value $F = 1.13$, $p = 0.29$ is obtained, which is a significance level greater than 0.05. While qualitative research also provides the findings of the primary teachers' commitment to primary school environment education. This suggests that if teachers' commitment is low then the level of environmental education is low. It is hoped that this study will serve as a benchmark and guide to support a specific subject of Environmental Education science, in enhancing the understanding and implementation of environmental education in the country.

Keywords: Environmental Education, Primary Schools, Teacher Commitment

INTRODUCTION

Environmental education is a science that enhances people's awareness of the role and responsibility of preserving the quality of the environment (Whitney, 2014). Environmental education certainly helps new and old generations protect the life of the human world (Taylor, 2014). One of the ways in which environmental education is needed is to integrate environmental education into classroom and classroom teaching (Valerie, 2016). Furthermore,

education is a fundamental agent used to control the environment. It is also for sustainable development since the Declaration of Tbilisi 1978. The Tbilisi Declaration defines environmental education as a learning process that can raise public awareness of the environment, knowledge and challenges that need to be addressed in relation to current environmental issues (Tilbury, 2015).

Schools are a major way of addressing environmental issues (Moroye, 2015). In this regard, environmental education is not limited to the process of teaching and learning in the classroom and should be viewed as an area of education across the curriculum and the curriculum (Holdman, 2015). This is because education is seen as an asset because the education system is an ongoing process for training human beings for effective and sustainable development (Taylor, 2014). Braun (2015) states that successful learning processes will produce individuals and societies who are sensitive, intellectual, active, understanding and capable of identifying things for good or bad (Joy, 2014). Therefore, this is because education is the most influential agent of change in society and life as it can bring change to society from the backdrop and never miss the changing times of society as a developed and civilized society (Burger, 2014).

Through education, especially environmental education, teachers will be able to create a society that is able to understand the relationship between the human environment and the physical environment (Holland, 2017). Also the ability to understand these interactions is important because the two environments are interrelated, as any excess disturbance to the physical environment will have an impact on the human environment (De'Silva, 2018).

LITERATURE REVIEW

Researchers have conducted this research based on several research objectives. In this regard, the mission of environmental education is to seek human well-being and sustainable economic development along with the authenticity of tradition and appreciation of natural resources. Thus, the mission is in line with the statement by the United Nations stating that environmental education refers to a lifelong learning process that produces a scientifically and socially engaged society and has the commitment and responsibility of individuals and groups to effectively protect the world (Jennifer, 2014) .

Accordingly, the success of implementing environmental education at school level is not only in terms of knowledge efficiency but also requires a positive change in planning and implementation practices (Jennifer, 2014). As such, research is focused on the study of comprehensive engagement between student teachers, communities and government policy (Taylor, 2014). According to this study based on the concept of student engagement, in shaping the positive attitude of future generations towards the environment, environmental education has been introduced globally including in Malaysia as a long term step towards ensuring quality education. The World Conservation Strategy states that environmental education has the measure to transform society's attitudes and behaviors and thus shape the ethics of the environment (O'Riordian, 2018).

Thus, through education alone, one's thoughts and actions can change (Glass, 2014). Therefore, schools are an appropriate institution to educate and develop environmental attitudes for future generations to be more concerned with the environment (Tiwi Kamidin, 2014). According to this study based on the concept of community involvement, the aspect of community

involvement is emphasized towards a good quality of life. The study of quality of life is related to the quality of life and comfort with which it needs to be acquired (Raphael et al. 2015; Carlsson et al. 2014) and it is related to psychological and sociological perspectives (Raphael, Renwick, Brown, Steinmentz, Sehdev, & Philips, 2016). The study of quality of life is essential to reflect the quality of life of the human being aimed at a better and more comfortable life.

Education of a society will improve the quality of life, as learning will produce knowledgeable, virtuous and responsible people (Wrage, 2017). Due to the current phenomenon, environmental education has been able to improve the quality of life of a nation based on a country's development through sustainable development strategies (LaCharite, 2014). Close cooperation from the surrounding communities can promote a stronger sense of environmental management for school students (Brooke, 2014).

According to this study, government involvement or government policy was also supported by Eskew (2016) and he pointed out that students who have been educated and raised with environmental values will be more aware of any environmental issues that may arise in their eyes (Lykes, 2016). As such, the strengths built will be strong forts of knowledge and can indirectly act to guide others in loving the environment (Rosselli, 2014).

Therefore, it is argued that through environmental education will give birth to people who care about the environment, are aware of and aware of any environmental issues that occur around them (Aerin, 2016). Government policies that are more sensitive to national education especially in environmental education contests should be more efficient and effective in shaping the thinking of the nation's children. Therefore, students exposed to environmental education can contribute towards improving their quality of life as they will withstand any pollution, environmental problems and damage that may occur to them (Opperman, 2015). In other words, environmental education can shape an individual's soul and self into a person who loves his or her environment and shapes the identity of a more caring nation (Rita Julia, 2016).

PROBLEM STATEMENT

Researchers study the implementation and effectiveness of teaching and learning (PdPc); environmental education in Malaysian schools. The problem is that not all teachers have or have used the handbook provided to teach environmental education. Second, the handbook provided does not fully assist teachers in implementing environmental education programs or activities. Third, the time constraint to spend the syllabus. The fourth is the problem of allocating activities. In this regard, Lee Chi Kin (2016) studied teachers in Hong Kong and found that some teachers are less efficient in teaching environmental education because they lack the knowledge and skills required. Smith (2014) found that only a small number of educators really know what Environmental Education is and how to implement it in a formal classroom. Gordon (2018) even states that teachers clearly have a negative attitude towards the concept of nature.

In addition, Fergusen (2018) found that although environmental awareness exists among the school teachers studied, knowledge of the environment is not enough. According to Samuel, many teachers are aware of 'wellpublicized' issues even though they do not know much about them. Most know only through the media. Many teachers are unaware of their lack of knowledge and do not ask for training (Rossetter, 2018).

Subsequently, Suhaili Samsuddin (2016) identified school climate, and teacher commitment levels based on teacher teaching and gender experiences and the relationship between school climate and teacher commitment for Machang district secondary school teachers in Kelantan. In addition, he also studied school climate dimensions that strongly influence the level of teacher commitment. Dimensions of school climate including dimensions of collaboration, decision-making dimensions, teaching innovation dimensions, students' relationship dimensions and school resource dimensions were also supported in the study (Lykes, 2016).

A total of 248 secondary school teachers were involved in the sample based on the total population of 678 teachers. A total of 7 schools were taken as the study sample and the study sample was randomly selected. This study found that there is a significant and positive impact and shows a moderate relationship between school climate and teacher commitment. Pearson correlation was used as the independent variable in the school climate with the dependent variable of teacher commitment.

Overall, her research shows that there are several dimensions of school climate that influence teacher commitment such as collaboration, decision making and teaching innovation. However, the dimension of decision making is the most influential dimension of teacher commitment. Therefore, his study suggests that if school management intends to increase teacher commitment, teacher involvement in the decision-making process should be increased. This question is also supported by Namal Kaushalya (2018). According to Harizon Suffian (2014), it is argued that teachers need to be prepared and strategic in shaping the teaching of teachers that can be of interest to students. One of the main reasons pupils lack the basic concept of environmental education is the teacher's weakness. Among them are, being unprepared, not creative in the delivery of teaching and learning is a major weakness of teachers.

Teachers need to be prepared, creative during the teaching process, able to handle teaching aids, and able to absorb the content of environmental education values across other subjects. Based on recent research by D'Silva (2018), Manuel (2017), it is clear that problems arising from the challenges of teacher assignments and student achievement are among the research findings. Based on the studies conducted by Lee Chi Kin (2016), Smith (2014), and Suhaili Samsuddin (2016), it is clear that there is a problem of teacher commitment in environmental education due to lack of knowledge and awareness of the environment. In fact, teaching strategies are effective in applying environmental well-being values to preschoolers who are researchers in this study.

RESEARCH METHODOLOGY

Researchers use a mixed methods research design using a sequential approach that is quantitative study followed by qualitative research type. Quantitative data were used to track the effectiveness of teachers' commitment to primary school environmental education. Two types of measurement tools used to collect data in this study are information on the effectiveness of teacher commitment and the level of environmental education in primary schools.

The research design method used by the researcher is quantitative. Researchers use quantitative research design methods. Researchers collected data using questionnaire techniques and achievement test techniques. Researchers used a Likert-scale questionnaire to measure the

effectiveness of teacher commitment. To determine the relationship between teacher commitment and primary education environmental researchers using Pearson's correlation then compared the mean difference in teacher commitment, at the high, medium and low levels of the primary school environmental education program. The researcher conducts a survey of the sample population and the data obtained will be collected for analysis by one test. IBM Version 23.0 software is used to analyze the data obtained.

For quantitative research design, researchers use descriptive study design types. Descriptive studies can provide insights and information on a particular situation at a particular time, while also explaining future planning (Watson, 2014). It is also the most popular method among researchers. This is because the questionnaire is easy to administer once it is well built and the data is easy to process for analysis. Perikleous (2015) emphasizes descriptive research using humans or the public as informants. This means that data or research information is collected from the public in the community. However, not everyone in the community can be asked to provide information. Only those concerned can be asked to provide information for research purposes.

The target population of this study was primary school teachers in Perak while the study population was teachers who were directly involved in teaching primary school environment in Perak. The study population was 21,658, so the target of 20,000 students using a random table was 377 teachers. In this study, the researchers selected teachers who are committed to environmental education from 38 daily schools (Perak state primary schools) for 2018 as a population. A total of 10 environmental education teachers implementing programs in selected schools will be the respondents for this study. The selection of teachers is based on a number of indicators that comprise primary school teachers from the day-to-day schools of Perak and those who have experience teaching environmental education students across the curriculum or teacher clubs of the Environment Club, and have varying experiences between each other.

RESULTS & DISCUSSION

Based on the findings of this study, there is a strong positive correlation ($r = .175, p > .05$) between teacher commitment and primary education (Borg, Gall & Gall, 1983). From the findings of this study, it is clear that there is still a low positive relationship between teacher commitment and primary school environment education. Ruzicka (2017) argues that high teacher commitment is influenced by dedicated and knowledgeable teachers in environmental education. The analysis of the study shows that only a few teachers can master and commit to teaching environmental education. Kimiharu (2015) in the theory of Behaviorism, emphasizes that teachers need to have a credible personality in teaching and learning to teach students well. The analysis also shows a low and low commitment because teachers do not have the right strategies and preparation to teach environmental education. If teachers have high commitment then the results of environmental education will also be high.

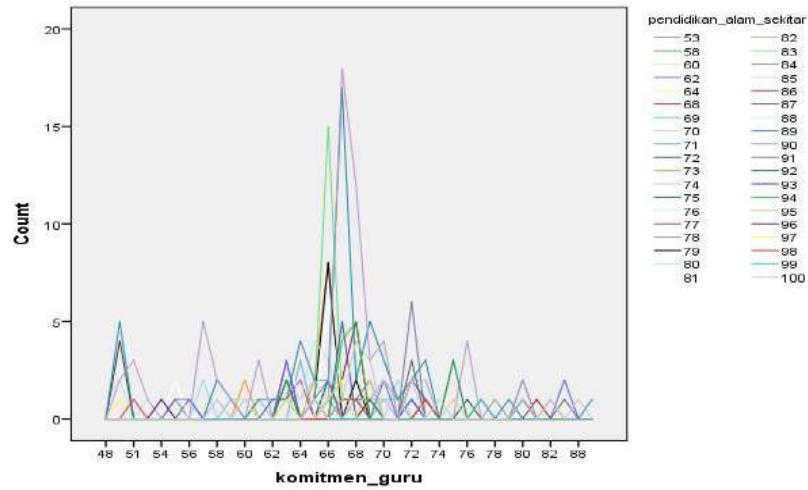


Figure 1: High Commitment Level ANOVA Test

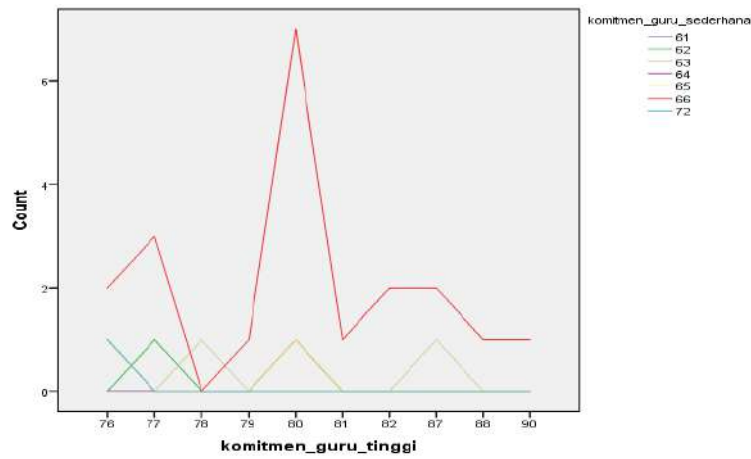


Figure 2: Average Commitment Level ANOVA Test

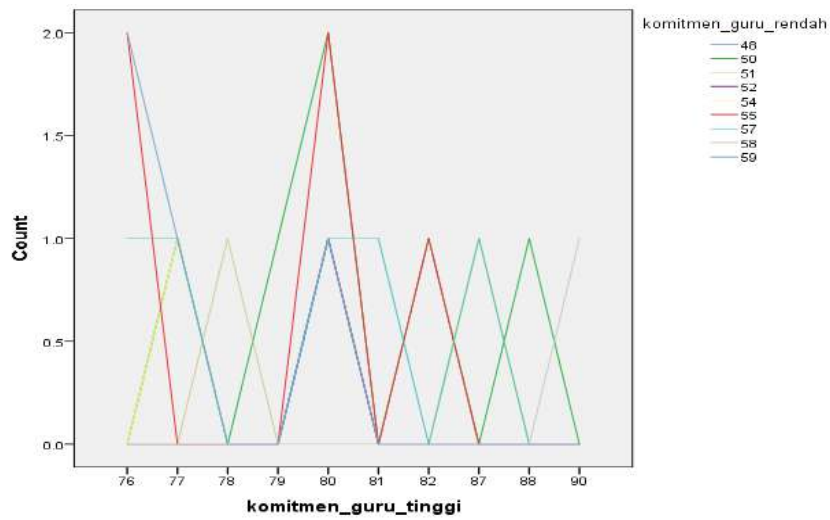


Figure 3: Low Commitment Level ANOVA Test

Based on the results of the $F = 1.13$, $p = 0.29$, which is a significance level greater than 0.05, there was no significant difference in the mean score of high teacher commitment to primary school environment education. Based on the results of the next study the value of $F = 5.08$, $p = 0.84$, which is a significance level greater than 0.05, there was no significant difference in the mean score of the mean level of teacher commitment to primary school environmental education. Whereas based on the results of the $F = 1.16$, $p = 0.35$, a significance level greater than 0.05, the results still found no significant difference in the mean score of low teacher commitment to primary school environment education.

Based on the researcher's conclusions it can also be concluded that most of the teachers surveyed did not show a strong commitment to conducting environmental education in schools. It is found that the lack of knowledge is the essence of the main item that makes PdPc less effective. Therefore, this factor does not give the students good environmental education. In fact, the attitude of the teachers who are tired of teaching causes the students to become bored quickly, sleepless and unable to concentrate. Based on this observational study, researchers can conclude that high teacher commitment is crucial to successful implementation of environmental education agenda through relevant core subjects for successful implementation. Teachers need to be always ready to enhance their knowledge and achieve the mandate of environmental education as a complement to the effectiveness of education in Malaysia.

CONCLUSION

The research found that there is a clear correlation between teacher commitment and the education of primary schools in Malaysia. This has been identified when teachers have shown a lack of concern for the importance of environmental education across the curriculum available in the country's daily school system. Teachers play an important role in shaping the attitude and personality of students from elementary school. If teachers are not quality, then the results of student bullying in primary schools are not fully realized. Of course, teachers need to be more aware and positive in their thinking and interest in learning and teaching environmental education to be more robust and successful for the well-being of all. It is recommended that a special subject entitled 'Environmental Education' be introduced so that relevant teachers can take the course and discover the essence of the true teaching of environmental education. In this way, of course, the concept of environmental education learning can be strengthened and enhanced to ensure the quality of human life in the country is maintained in a healthy and safe environment to generate a generation of Malaysians who care about environmental issues best.

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Event Induced Volatility and Cross-Sectional Correlation from Subsampling – The Case of Malaysian Corporate Spin-offs

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Abstract

This paper aimed to report evidences on the effects and corresponding remedial measures of event induced volatility and cross-sectional correlation arose due to timeline and conditional subsampling for the case of Malaysian corporate spin-offs shareholders wealth effect measurements. We began by examining shareholders wealth effect of 90 listed companies' corporate spin-off announcements from year 1987 to year 2019 in Bursa Malaysia, previously known as Kuala Lumpur Stock Exchange before constructing sub-sample groups based on financial market conditions and post event share performance. Market Model analysis showed spin-offs in Malaysia generally resulted statistically significant positive short term positive cumulative average abnormal returns but weak significance for longer periods. Further sub-sampling analysis which have had higher intensity cascading timeline and conditions found the spin-offs wealth effect under normal market conditions recorded improved significance when robust statistical tests were used. Whereas, other subsamples have consistent statistical significance spin-offs wealth effects measurements irrespective of statistical tests and thus conclude the distortion of the effects were minimal.

Keywords

Corporate Spin-offs, Event-induced Volatility, Cross-sectional Correlation, Sub-sampling, Emerging Capital Market

Introduction

Due to the presence of transaction costs, potential de-synergy and loss of valuable revenue capability, shareholders' value after spin-off exercise should set to decline. However, most spin-offs studies instead observed an increase in share price performance also known as positive shareholders wealth effect and more intensely so, in emerging capital markets including Malaysia. The two Malaysian spin-off studies (Yoon & Ariff, 2007) and (Nadisah & Arnold, 2012) have established that spin-offs in Malaysia, an emerging capital market, behaved like what were observed in other spin-off studies on developed capital markets but there were differences in the magnitude of wealth effect measured as well as statistical significance. In attempt to determine the linkages between the market economic conditions as well as post-exercise share performance with these wealth effect measurements, we employ sub-sampling techniques and infer that presence of abnormal return, also known as residual error in its raw form, as indicator of whether share prices respond to an event. Traditional

parametric methods in testing the significance of these residuals have been found to be misrepresenting as one of the key assumptions of traditional parametric methods was to assume normality in data distribution, goes contrary to the norms where daily stock data are often not normally distributed. Additionally, the averaging approach used to measure cumulative average abnormal return can cause bias amongst results, namely, (i) event-induced volatility bias and (ii) cross-sectional correlation. Due to the inherent design of sub-sampling methods, event-induced volatility bias can arise due to the non-homogenous spin-off announcement dates across observations and cross-sectional correlations problems may present due to overlapping windows period of observations amongst samples either partially or wholly. The later phenomenon was especially true for sample groups based on financial market condition that constitute largely by samples occurred in the same year or preceding years. If these issues were ignored, the consequences were a reduction bias in standard deviation and thus an upward bias t-statistic and finally increased vulnerability to type I errors. As prelude and citation basis for our future works, we discuss our spin-offs announcement wealth effect measurement, their sub-sampled measurements and their comparative statistical results in this paper. Our comparison involves classic t-test based parametric tests with non-parametric tests such as sign based test and rank based test that do not require normality assumptions, and those designed to address event-induced volatility bias and cross-sectional correlation bias.

Literature Review

Empirical results of wealth effect studies were generally consistent for spin-offs in the US and European regions. (Hite & Owers, 1983), (Miles & Rosenfeld, 1983) and (Schipper & Smith, 1983) observed near consistent short term abnormal gains of 2.8% to 3.3% while others like (Seifert & Rubin, 1989), (Vijh, 1994), (Johnson & Klein, 1996), (Veld & Merkoulouva, 2003), (Kirchmaier, 2003), (Murray, 2008), (Boreiko & Murgia, 2013) reported average abnormal gains in the range of 1.8% to 4.8%. Citing an average for longer window period results is on other the hand difficult due to the inconsistent length of window periods across studies. Individually, (Hite & Owers, 1983), (Miles & Rosenfeld, 1983) as well as (McConnell, Ozbilgin, & Wahal, 2001) reported positive abnormal gain of 7%, 7.6% and 5.69% respectively for longer window period and (McConnell, Ozbilgin, & Wahal, 2001), (Kirchmaier, 2003) and (Murray, 2008) reported abnormal gains at -1.84%, -0.30% and 2.01% respectively. When samples were further subjected to subsampling criteria, the magnitude of abnormal gain reported started to vary significantly. For example, (Hite & Owers, 1983) analysed wealth effects in relation to company size and in cases of preamble of a merger, found small equity spun off short window period average abnormal returns fell to as low as 0.8% whereas for spin-offs motivated by potential mergers the average abnormal returns went as high as 5.6%. Likewise, (Miles & Rosenfeld, 1983) observed higher gains for subsample of firms who spun-off at least 10% of equity. (Kirchmaier, 2003) reported significant disparity among his subsamples where although in average the firms stood at 4.2% for very long period window, the subsamples see huge differences as large firms were at abnormal loss of -20% compared to small firms at abnormal gain of 25.7% and (Desai & Jain, 1999) observed a longer term 13.49% abnormal gain for focus-increasing parents and 12.05% abnormal gain for non-focus-increasing parent firms. For other international studies that reports variations through subsampling, see (Vroom & Frederikslust, 1999) and (Veld & Veld-Merkoulouva, 2008). Despite the use of sub-sampling techniques of these studies are similarly executed, they do not introduce much event-induced volatility bias and cross-sectional correlation bias as these criteria do not involve specific periods.

Table 1: Selected spin-off studies in US and European region

Paper	Market	Period	Determinants/Criteria/Motivations
(Hite & Owers, 1983)	US	1963 – 1981	Merger, Focus, Tax & Size
(Schipper & Smith, 1983)	US	1963 – 1981	Tax, Efficiency & Size
(Miles & Rosenfeld, 1983)	US	1963 – 1980	Voluntary & Involuntary
(Copeland, Lemgruber, & Mayers, 1987)	US	1962 – 1981	Success, Size & Tax
(Kudla & McInish, 1988)	US	1972 – 1981	Pure play & Size
(Cusatis, Miles, & Woolridge, 1993)	US	1965 – 1988	Merger
(Seward & Walsh, 1996)	US	1972 – 1987	Governance
(Johnson & Klein, 1996)	US	1975 – 1988	Investment
(Desai & Jain, 1999)	US	1975 – 1991	Focus & Size
(Krishnaswami & Subramaniam, 1999)	US	1978 – 1993	Pure play, Merger & Size
(McConnell, Ozbilgin, & Wahal, 2001)	US	1989 – 1995	Size
(Veld & Merkoulova, 2003)	Europe	1987 – 2000	Governance, Focus & Size
(Kirchmaier, 2003)	Europe	1989 – 1999	Size

(Murray, 2008)	Europe	1992 2004	–	Leverage
(Dasilas, Laventis, Sismanidou, & Koulikidou, 2010)	US	2000 2009	–	Size, Focus & Shareholder Protection
(Chemmanur, Jordan, Liu, & Wu, 2010)	US	1990 2000	–	Takeovers
(Boreiko & Murgia, 2013)	Europe	1989 2005	–	Board Turnovers, Signals, Restructuring & External factors

For the case of Malaysia, (Yoon & Ariff, 2007) examined 84 Malaysian spin-offs and found statistically significant 22.7% cumulative abnormal gain 1 day surrounding spin-off announcement date and 66.9% for the window period of 151 days. Following that, (Nadisah & Arnold, 2012) reported presence of a spin-off effect for parent firms over very short-run period at 4.99% but non-statistically significant long-term abnormal gains. Both papers' sample periods were weighted very differently across different periods and were based on different sample sizes.

Table 2: Spin-off studies in Malaysia

Paper	Market	Period	Determinants/Criteria/Motivations
(Yoon & Ariff, 2007)	Malaysia	1986 2002	– Focus, Tax, Age & Size
(Nadisah & Arnold, 2012)	Malaysia	1980 2008	– Focus, Size & Government Link

Data, Variables, Hypotheses and Methodologies

Data

This study is based on 90 spin-off announcements from companies listed in the Bursa Malaysia, previously known as Kuala Lumpur Stock Exchange (KLSE) between year 1987 to year 2019. Announcement dates were obtained via publications including KLSE Daily Diary (up to 2004), analyst reports, articles and newspaper clippings. Share prices and FTSE Bursa Malaysia Kuala Lumpur Composite Index (KLCI), along with companies' financial information that form the sub-sample criteria of this study were extracted via DataStream.

Measuring Spin-off Wealth Effect

In order to allow for comparison, we mirrored predecessor Malaysia spin-offs studies (Yoon & Ariff, 2007) and (Nadisah & Arnold, 2012) by using the same Market Model by (Sharpe, 1964) and preferred the KLCI as market index to measure spin-off wealth effects. Market

Model abnormal returns (AR) was used as the daily measurement of wealth effects and cumulative abnormal returns (CAR) for measurements with longer window period. Market Model was expressed as:

$$AR_{i,t} = R_{i,t} - B_i(R_{m,t}) - \alpha_i \quad (1)$$

Where, $AR_{i,t}$ is the abnormal return of company share i at day t , α_i is the intercept of company i , B_i is the systematic risk of company i 's share, $R_{m,t}$ is the KLCI market return at matched day t . Beta B_i and intercept α_i are calculated by regressing 261 trading days share return $R_{i,t}$ with matched KLCI market return $R_{m,t}$. The estimation windows started 320 daily trading days before (t_{-320}) the announcement date $t=0$ and end 60 trading days before (t_{-60}) the announcement date using Ordinary Least Square. Following the recommendations of Fama (1976), both share return and market returns are transformed into log difference for statistical benefits. Rewriting equation (1), computations for cumulative abnormal returns are expressed in equation (2) and are populated into extended formulas as expressed in equation (3) and (4):

$$CAR_{it} = \sum_{t=s}^{t=e} AR_{i,t} \quad (2)$$

Where, CAR_{it} is the cumulative abnormal return of company share i for window period starting at trading day s and ending at trading day e . Average of abnormal returns are simply:

$$AAR_t = \frac{1}{N} \sum_{i=t}^N (R_{i,t} - \hat{\alpha} - \hat{\beta}R_{m,t}) \quad (3)$$

In the same manner, cumulative average abnormal returns are specified as:

$$CAAR_t = \frac{1}{N} \sum_{i=t}^N \sum_{t=s}^{t=e} AR_t \quad (4)$$

Cumulative average abnormal return window periods observed (s, e) for all observation groups were very short period of three days (-1,1), short period of five days (-5,5), longer period of forty-one days (-20,20), and very long period of one hundred and one days (-50,50).

Financial Market Condition Sub-Sample Criteria

The financial market condition sub-sample criteria are constructed based on three major periods of stock market crash in Malaysia. The three financial crisis period comprised the commodity market crash in year 1985-1989, the currency crunch in year 1997-1998 and the worldwide financial crisis in year 2008-2009. Spin-offs with announcement dates fell on the financial crisis period were categorized as “crisis” group, while the rest are categorised as “normal” group.

Spin-offs Share Performance Sub-Sample Criteria

Sub-sample based on share performance criteria grouped samples into two groups depending on the spin-off firms' 151 days (-100,50) cumulative abnormal returns, at t_{50} . Spin-offs that ended up with surplus cumulative abnormal return at t_{50} were referred under "positive" group and vice-versa, spin-offs that ended up with adverse cumulative abnormal return at t_{50} were referred under "negative" group.

The Statistical Tests

The null hypothesis specified for statistical significance tests is H_0 : There is no shareholders wealth effect arising from spin-off announcements, where $CAAR=0$. The same null hypothesis is tested across non-subsample and all sub-sample groups. For parametric test, we compute conventional Cross-Sectional T-Test, t_{CAAR_t} (abbreviation: Csect T) as benchmark:

$$t_{CAAR_t} = \sqrt{N} \frac{CAAR_t}{S_{CAAR_t}}, \quad (5)$$

Despite Csect T's popularity, this significant test was proven weak against event induced volatility in (Brown, 1985) and cross-sectional correlation bias. Another widely used significant test for event studies is by (Patell, 1976) Standardised Residual Test, Z_{Patell} (Abbreviation: Patell Z) with specifications of:

$$Z_{Patell} = \frac{1}{\sqrt{N}} \sum_{i=1}^N \frac{CSAR_i}{S_{CSAR_i}} \quad (6)$$

To address event induced volatility not resolved in Patell Z, (Boehmer, Musumeci, & Poulsen, 1991) introduced some modifications to the design of Patell Z. Their standardized cross-sectional model is named after them as BMP Test, $Z_{BMP,t}$ (Abbreviation: StdCSect Z), are specified as:

$$Z_{BMP} = \sqrt{N} \frac{\overline{SCAR}}{S_{\overline{SCAR}}} \quad (7)$$

Notwithstanding the enhancements of BMP test, simulations result in (Kolari & Pynnonen, 2010) still showed evidence of true null hypothesis been incorrectly rejected for both Patell Z and BMP Test. (Kolari & Pynnonen, 2010) suggested a re-specified version of Patell Z, known as Kolari and Pynnnen Adjusted Standardised Residual Test, Adj. Patell Z (Abrrreviation: Adj. Patell Z) that includes a modifier to adjust for non-normality specified as:

$$AdjZ_{Patell} = z_{Patell} \sqrt{\frac{1 - \bar{r}}{1 + (N - 1)\bar{r}}} \quad (8)$$

In the same manner, (Kolari & Pynnonen, 2010) also suggested the same modifier to be applied to BMP Test. Kolari and Pynnnen Adjusted Standardised Cross-Sectional Test, $AdjZ_{BMP}$ (Abbreviation: Adj. Std. Csect Z) specified as:

$$AdjZ_{BMP} = z_{BMP} \sqrt{\frac{1 - \bar{r}}{1 + (N - 1)\bar{r}}} \quad (9)$$

Unlike BMP's modification to Patell Z, these adjustments are independent of the design of the original statistics. The modifier largely acts as an add-on to the pre-adjusted statistic and are not intrusive. When \bar{r} is equal zero, which translates to absence of cross-correlation in data, the modifier becomes 1 and essentially return values equal to pre-modified Patell Z and BMP Test scores. Notwithstanding the fact some of the test above showed resilience towards event induced volatility and cross-correlation issues, the tests above are still parametric tests as they are built upon the normality assumption in data distribution.

Non-parametric tests excel for reasons they do not require on normality in distribution to work reliably. (Cowan, 1992) Sign Test converts data points to figures of 1 representing a positive data point and 0 for negative data points. Then, the ratio of 1s against population is used to determine whether $H_0: \text{Mean} = 0$ is rejected (in the case of event studies, CAAR). The generalized version of sign test proposed by (Cowan, 1992), Cowan Generalised Sign Test, Z_{gsign} (Abbreviation: Gen. Sign Z) is specified as:

$$Z_{gsign} = \frac{(w - N\hat{p})}{\sqrt{N\hat{p}(1 - \hat{p})}} \quad (10)$$

The Wilcoxon Test (Wilcoxon, 1945) which is hybrid of rank test and sign test as it considers both the sign as well as the magnitude of abnormal returns. Where, the weight, W is the summation of the positive rank of abnormal returns in absolute value rank and within it do not possess absolute values that are nil. Wilcoxon Test, $Z_{wilcoxon,t}$ (Abbreviation: Rank Z) is specified as:

$$Z_{wilcoxon,t} = \frac{W - N(N - 1)/4}{\sqrt{(N(N + 1)(2N + 1)/12)}} \quad (11)$$

The modified version of rank tests by (Kolari & Pynnonen, 2011), the Generalised Rank T test, t_{grank} (abbreviation: Gen. Rank T) and Generalised Rank Z test, Z_{grank} (abbreviation: Gen. Rank Z) are specified as:

$$t_{grank} = \frac{\bar{K}_0}{S_{\bar{K}}} \left(\frac{L_1 - 1}{L_1 - \left(\frac{\bar{K}_0}{S_{\bar{K}}}\right)^2} \right)^2 ; \text{ and; } Z_{grank} = \sqrt{\frac{12N(L_1 + 2)}{L_1}} \bar{K}_0 \quad (12)$$

Where cumulative abnormal returns are first standardized by the standard deviation of prediction errors before re-standardized by cross-sectional standard deviation to account for event induced volatility.

Results and Discussions

We demonstrate the cascading effect present within the sub-samples group using two graphs per sample group. The first being Daily Abnormal Return of samples cascaded on unified timeline where higher overlapping intensity are represented by darker regions and the other being sample group population adjusted overlapping datapoints where higher overlapping datapoints are represented by higher adjusted values.

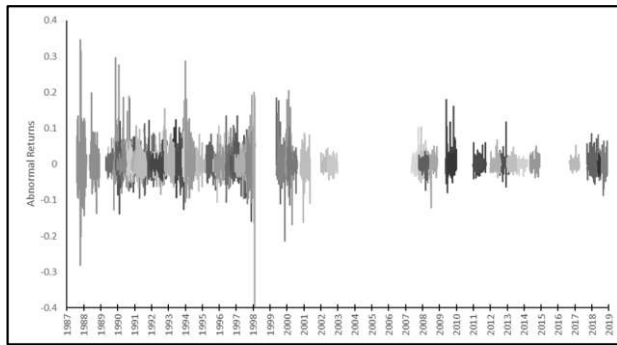


Figure 1: General Spin-offs Abnormal Return

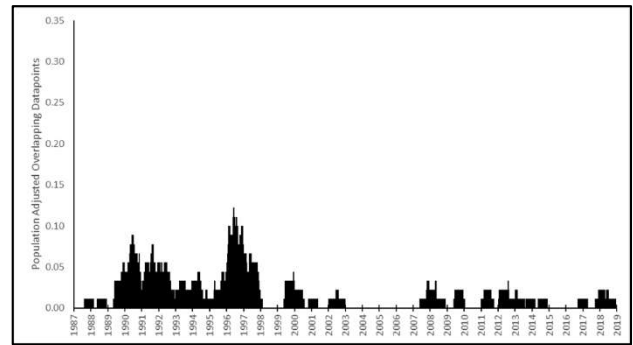


Figure 2: General Spin-offs Population Adjusted Overlapping Datapoints

Figure 1 and Figure 2 show the cascaded spin-offs abnormal return for the data population and population adjusted overlapping datapoints respectively, before any sub-sampling techniques were applied to the dataset. Specific to this general group, overlapping of datapoints were not more than 0.15. This measurement will serve as benchmark for measurements in other sub-sample groups.

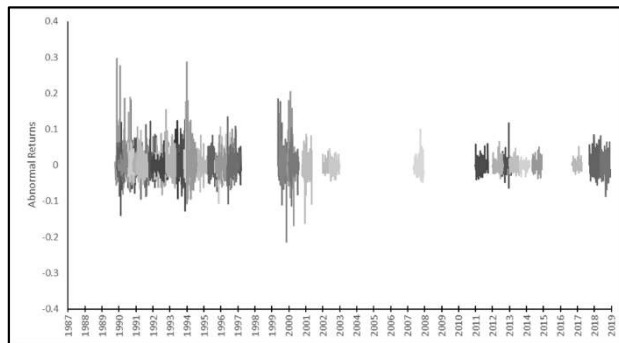


Figure 3: Normal Spin-offs Group Abnormal Returns

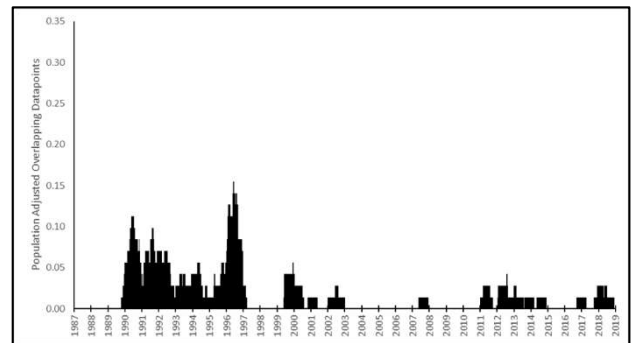


Figure 4: Normal Spin-offs Group Population Adjusted Overlapping Datapoints

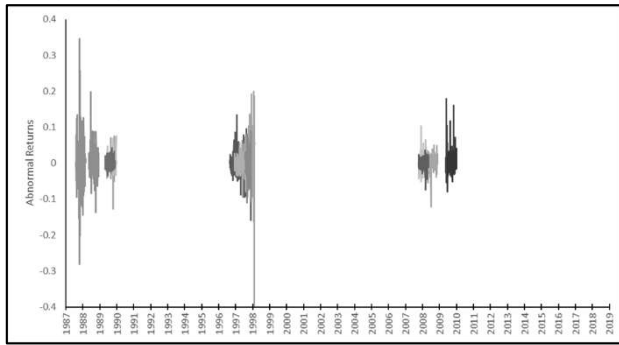


Figure 5: Crisis Spin-offs Group Abnormal Returns

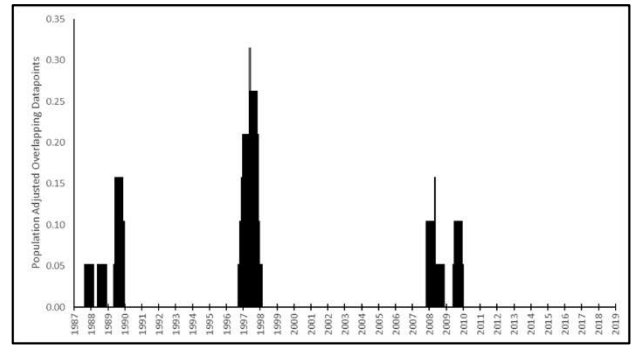


Figure 6: Crisis Spin-offs Group Population Adjusted Overlapping Datapoints

The results for sub-sample groups based on financial market condition criteria were presented in Figure 3 to 4 and Figure 5 to 6. It is apparent that sub-sampling based on financial market condition criteria, which is incidental to timeline based datapoints grouping saw increased intensity in overlapping datapoints. Additionally, these sub-sample groups also present narrower spread compared to general group. Especially for the case of crisis spin-offs group, judging purely on the above 0.30 population adjusted overlapping data point, it meant crisis group have increased exposure to event induced volatility and cross-sectional correlation biasness.

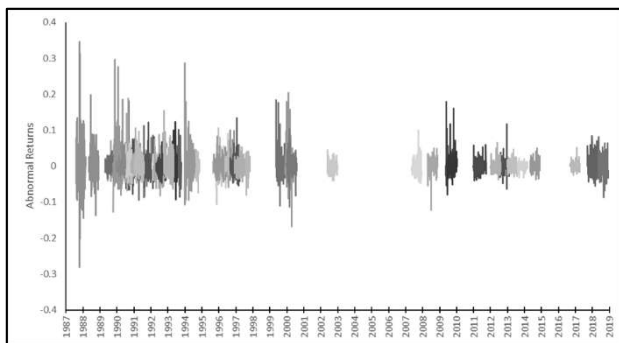


Figure 7: Positive Spin-offs Group Abnormal Returns

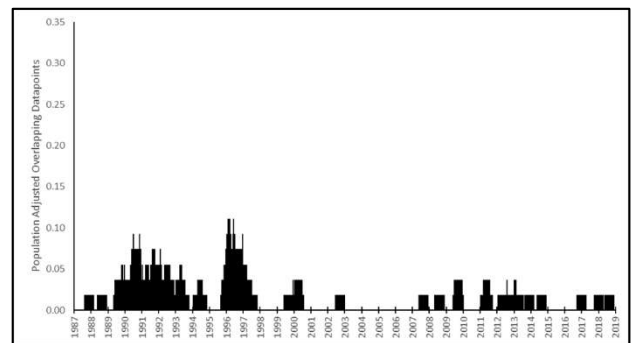


Figure 8: Positive Spin-offs Group Population Adjusted Overlapping Datapoints

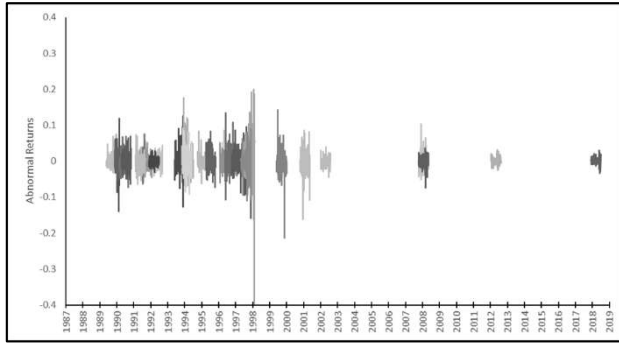


Figure 9: Negative Spin-offs Group Abnormal Returns

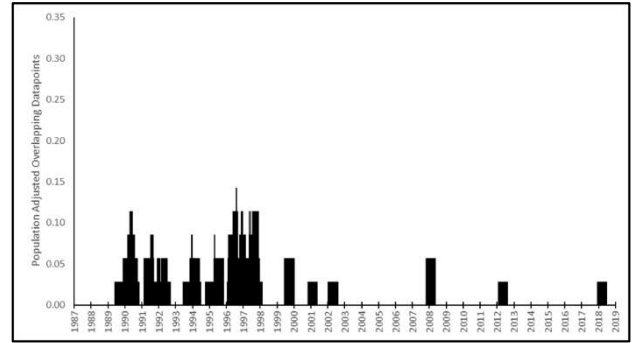


Figure 10: Negative Spin-offs Group Population Adjusted Overlapping Datapoints

As for sub-sample groups based on post event share performance sub-sample criteria, the results were presented in Figure 7 to 8 and Figure 9 to 10. Due to the nature of post event share performance sub-sample criteria not being a timeline inclined criterion, cascading of datapoints in these groups did not significantly differ. The observation of narrowing spread in financial market condition criteria sub-sample groups were not present. Population adjusted overlapping data point for the sub-sample groups remained below 0.15 and have no increased exposure to event induced volatility and cross-sectional correlation biasness.

Table 1: KLCI market model cumulative average abnormal returns

Interval Days	CAAR Value	Sign +ve:-ve	Parametric Tests						Non-Parametric Tests			
			Csect T	Patell Z ¹	Std- ^{2,a} Csect Z	Adj. ^{3,b} Patell Z	Adj.Std- ^{4,a,b} Csect Z	Gen. ⁵ Sign Z	Rank Z ⁶	Gen. ^{7,a,b} Rank T	Gen. ^{8,a,b} Rank Z	
Panel A: KLCI based Market Model by financial market conditions												
General												
(-50, 50)	2.16%	54:36	0.822	1.341	1.197	1.444	2.271 **	2.379 **	0.168	1.837 *	1.752 *	
(-20, 20)	0.86%	52:38	0.565	1.728 *	1.484	1.861 *	2.364 **	1.957 *	0.830	2.047 **	1.952 *	
(-5, 5)	1.01%	59:31	1.236	3.041 ***	2.375 **	3.275 ***	2.835 ***	3.435 ***	1.347	3.177 ***	3.029 ***	
(-1, 1)	1.12%	53:37	2.667 ***	3.880 ***	3.281 ***	4.179 ***	3.490 ***	2.168 **	2.791 ***	3.445 ***	3.284 ***	
Panel B: KLCI based Market Model by financial market conditions												
Normal												
(-50, 50)	2.95%	43:28	1.116	1.633	1.802 *	1.750 *	2.225 **	2.195 **	0.846	2.373 **	2.259 **	
(-20, 20)	1.74%	41:30	1.238	2.047 **	2.194 **	2.193 **	2.639 ***	1.719 *	1.320	2.187 **	2.082 **	
(-5, 5)	1.73%	48:23	2.163 **	3.605 ***	2.990 ***	3.863 ***	2.989 ***	3.383 ***	2.064 **	3.578 ***	3.407 ***	
(-1, 1)	0.90%	41:30	1.877 *	2.980 ***	2.478 **	3.194 ***	2.770 ***	1.719 *	2.399 **	2.669 ***	2.542 **	
Crisis												
(-50, 50)	-0.81%	11:8	-0.105	-0.239	-0.109	-0.244	0.873	0.937	-1.219	-0.049	-0.049	
(-20, 20)	-2.40%	11:8	-0.478	-0.194	-0.110	-0.198	0.290	0.937	-0.703	0.261	0.262	
(-5, 5)	-1.71%	11:8	-0.716	-0.349	-0.308	-0.356	0.183	0.937	-0.983	0.070	0.070	
(-1, 1)	1.97%	12:7	2.227 **	2.684 ***	2.409 **	2.734 ***	2.474 **	1.396	1.460	2.256 **	2.259 **	
Panel C: KLCI based Market Model by share price performance												
Positive												
(-50, 50)	14.12%	47:7	5.694 ***	5.315 ***	6.199 ***	5.575 ***	4.782 ***	5.700 ***	2.168 **	6.700 ***	6.443 ***	
(-20, 20)	5.81%	39:15	3.346 ***	4.389 ***	4.107 ***	4.604 ***	3.844 ***	3.521 ***	2.354 **	4.269 ***	4.105 ***	
(-5, 5)	1.03%	37:17	0.925	3.209 ***	2.273 **	3.366 ***	2.558 **	2.977 ***	1.210	2.435 **	2.344 **	
(-1, 1)	1.07%	31:23	1.783 *	3.252 ***	2.430 **	3.411 ***	2.537 **	1.343	1.905 *	2.460 **	2.368 **	
Negative												
(-50, 50)	-16.18%	7:28	-4.134 ***	-4.442 ***	-4.586 ***	-4.249 ***	-5.402 ***	-3.088 ***	-2.199 **	-4.169 ***	-4.467 ***	
(-20, 20)	-6.92%	12:23	-2.954 ***	-2.747 ***	-2.578 **	-2.628 ***	-1.597	-1.392	-1.390	-1.940 *	-2.080 **	
(-5, 5)	0.49%	21:14	0.439	0.501	0.494	0.479	0.773	1.661 *	0.304	1.698 *	1.820 *	
(-1, 1)	1.30%	22:13	2.315 **	2.276 **	2.486 **	2.178 **	2.550 **	2.000 **	2.056 **	2.390 **	2.560 **	

¹(Patell, 1976) Standardised Residual Test ²BMP Test by (Boehmer, Musumeci, & Poulsen, 1991) ³Kolari and Pynnen Adjusted Standardised Residual Test and ⁴Kolari and Pynnen Adjusted Standardised Cross-Sectional Test by (Kolari & Pynnonen, 2010) ⁵Cowan Generalised Sign Test by (Cowan, 1992) ⁶(Wilcoxon, 1945) Wilcoxon Test ⁷Generalised Rank Z test and ⁸Generalised Rank Z test by (Kolari & Pynnonen, 2011) respectively. ***, **, * denotes p-values at significance level 1%, 5% and 10%, respectively. ^aAddresses event induced volatility bias. ^bAddresses cross-sectional correlation bias.

In

Table 1, we present the cumulative average abnormal returns of samples generally, subsample groups based on market conditions as well as share performance for four window period lengths. Significance test statistics for each value were presented along with their respective p-values and notes indicating potential bias addressed by specific tests were annotated under the table with note abbreviated ^a and ^b. Results without sub-sampling were presented in Panel A to report wealth effect measurements without accounting for further criteria that affect wealth effect measurements served as the benchmark for following criteria-based measurements in Panel B and Panel C.

Panel A presented cumulative average abnormal return calculated based on KLCI without sub-sampling. Cumulative average abnormal returns remained positive 2.16% up to very long window period (-50,50) of one hundred and one days showed that wealth gain from spin-offs were in general persistent and sustainable. H₀: CAAR=0 was rejected for window periods (-1,1), (-5,5), (-20,20) and (-50,50) with both parametric and non-parametric significance tests showing p-values as strong as 0.01 to 0.10. Interestingly, statistical results for windows period

longer than (-5,5) were only significant on statistical tests that remedy event-induced volatility bias and cross-sectional correlation bias.

Panel B showed cumulative average abnormal return of spin-off groups based on market conditions. Normal spin-offs group exhibit the same positive persistent value as the general spin-offs group, where normal spin-offs group's cumulative average abnormal return achieved higher and comparable positives 2.95% on window period (-50,50). Wealth gain from spin-offs under normal market condition were persistent. It is evident that like results for samples without sub-sampling, $H_0: CAAR=0$ was rejected for all window periods observed as both parametric and non-parametric significance tests showing p-values between 0.01 to 0.10. Again, we observed event-induced volatility bias and cross-sectional correlation bias in window period longer than (-5,5). Whereas, results for crisis group differed significantly. While cumulative average abnormal return in short window period (-1,1) was positive at 1.97%, results for (-5,5), (-20,20), and (-50,50) were negative at -1.71%, -2.40%, -0.81% respectively. We noted that cumulative average abnormal returns for (-5,5), (-20,20) and (-50,50) were not statistically significant irrespective of parametric or non-parametric tests. The results in this subsample group showed underlying market conditions affect spin-offs wealth effect. The generalized theory that most Malaysian corporate spin-offs result in gain do not apply in any period longer than three days during financial crisis.

Panel C showed cumulative average abnormal return of spin-off groups based on price performance. For positive group, the difference compared to general group's cumulative average abnormal gain for very long window period (-100,50) were even higher compared to the already high cumulative average abnormal gain disparity observed in window period (-20,20). Cumulative average abnormal return for very long window period remained a strong positive 14.12%. $H_0: CAAR=0$ was rejected as both parametric and non-parametric tests showed strong significance for all window period observed. Positive cumulative average abnormal returns in window period (-50,50) indicated wealth gains from spin-offs were persistent and growing. Unlike general group, positive group results were consistent across all statistical tests, therefore event-induced volatility bias and cross-sectional correlation bias were negligible. On the other hand, negative group recorded cumulative abnormal loss for very long period (-50,50) at -16.18% with both parametric and non-parametric tests showed strong significance for cumulative average abnormal return of window period (-1,1), (-20,20) and (-50,50). Interestingly, even though the mean values for very long window period for both positive and negative datasets were on two different extremes, both the spread were about the same at +/-15%.

Conclusion

In Malaysia, whilst the average mean reported for (-50,50) window period for all samples was 2.16%, sub-sampling data based on market conditions saw that spin-offs under normal market conditions achieved more at 2.95% and spin-offs during financial crisis lost -0.81%. However, after adjusting for event-induced volatility bias and cross-sectional correlation bias, we found wealth effect for spin-offs during financial crisis was only seen in three days surrounding the announcement dates and was positive. Sub-sampling based on spin-offs share performance uncovered the larger values for spin-offs potential to gain and loss through disparity in results showing positive spin-offs mean performance was 14.12% and negative spin-offs was -16.18%. Further sub-sampling analysis have lead to higher intensity cascading datapoints only for financial market condition criteria, which is incidental to timeline based datapoints grouping. However, all subsamples have consistent statistical significance spin-offs wealth

effects measurements irrespective of statistical tests and thus the distortion of the bias effects were minimal.

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Human Resources Planning Supports for Switching to a Personal Electric Car Policy in Thailand

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Abstract

Due to the problem of pollution in large cities with heavy traffic, there has been an idea to promote the use of electricity as clean energy. Therefore, the policy to encourage the use of electric cars has been set up in almost every country, including Thailand. Technological changes, no matter what they are, always affect the original system either positively or negatively. In the transition to the use of electric cars, there are also effects to several people, such as owners of cars using fuel oil or gas, business operators dealing with car repair, and, most importantly, car repair and maintenance workers who need to be knowledgeable in such technology or so-called highly skilled labors. For this reason, there must be a preparation for training that takes a long time. This study was a pilot study to quantify the number of cars in order to estimate the number of cars and car repair centers in the future. In addition, the qualitative research interviewed the car repair business owners to investigate the possible problems they expected to occur when electric cars would be used in the future.

Keywords: *Electric Cars, Skilled Labors, Training*

Introduction

Dramatically technological changes have affected both large and small industries. All downstream and upstream activities of the chains within the manufacturing and service industries have been changed; for example, the production process has been adapted to use robotic and artificial intelligence technologies while the delivery of goods / services to consumers has been transformed to a real-time process that responds to consumer behavior at the present time.

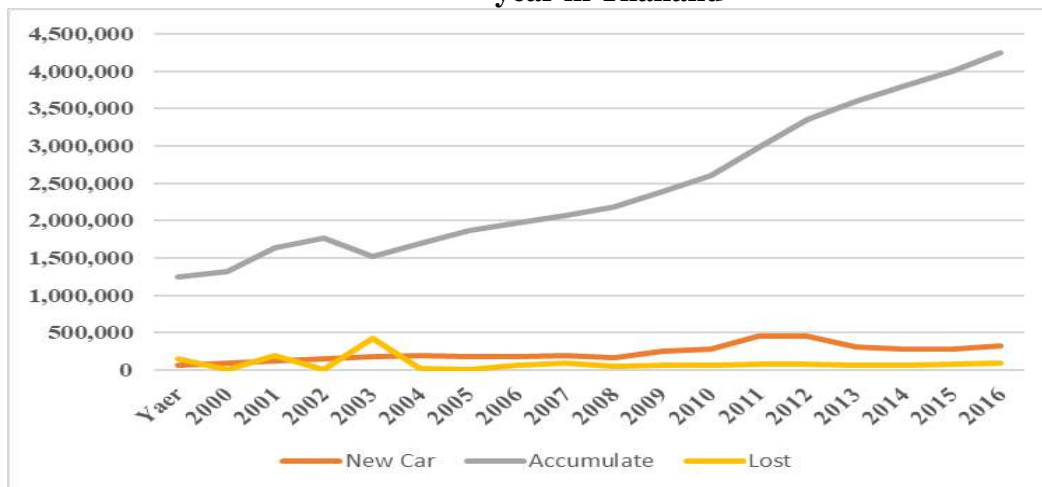
In the automotive industry, there has also been a shift to use electricity instead of traditional fuel oil and gas for environmental reasons. When used with cars, as a clean energy, electricity will serve as a way to reduce global warming. Car manufacturing, assembly and repair industry is a big industry with enormous value that relies on production technologies and skilled personnel with deep and diverse knowledge base. The major components of the automotive industry are (1) car assemblers and component manufacturers, (2) car repair and maintenance businesses, and (3) fuel service businesses. Therefore, the management of car business changes in the future according to the governmental plan on the use of electric cars has encountered a problem in the change services that must be prepared for three phases according to the hypothesis: Phase 1 - Electric vehicles are initially used (5%), Phase 2 - Electric vehicles are

moderately used (30%), and Phase 3 - Electric vehicles are generally used (>60%). Therefore, preparing to accommodate changes in each phase is important requiring an analysis to plan resource management. In practice, the resources of factory, machinery, and infrastructure are an immediate and measurable investment. In this regard, the management may be difficult to find financing resources, but the human resources for taking care of cars in the new innovation must be educated and trained with more difficult evaluation and time-consuming process because of their different knowledge bases and personal factors, including training methods. For this reason, the planning process of human resources, i.e. electric car technicians, in the future is an important factor in the study for planning future changes.

Background and significance of the problem

There are a number of groups of car maintenance companies: (1) car authorized dealers and repair centers, (2) companies registered in the car-related businesses focusing on car repair or maintenance, and (3) small business operators with few employees focusing on car repair and maintenance. It can be seen that the number of cumulative cars had an annual increase of 5%, except for 2006 to 2007 when the number increased abnormally and significantly due to the government's first car policy.

Figure 1: Number of new cars, discarded cars, and accumulated number of cars each year in Thailand



Source: Transport Statistics Group, Planning Division, Department of Land Transport (N_R: new car, ACC: Accumulate, LOST: not use)

According to the statistics on the website of the Transport Statistics Group, Planning Division, Department of Land Transport, the accumulated number of registered cars in Bangkok as of January 31, 2018 is about 9.8 million cars, which consists of 4.2 million 7-passengers private cars. 1.3 million vans and pick-ups, 77, 867 urban taxies, 3.5 million private motorcycles, and 100,000 public motorcycles. In addition, for the cars under the law on land transport, there are about 43,000 public, non-public, and private buses and 440 trucks in Bangkok. As for 4.2 million 7-passengers private cars, there are two parts of their management: maintenance and repair.

This study focused on 7-passengers private cars, which are about 4.2 million cars in 2018, and on approximately 6,000 car maintenance and repair businesses located in Bangkok, especially on management of their personnel or multi-level workforce to respond to future changes in electric vehicles at each phase of the policy implementation.

The significance of the problem was about operating businesses in the future based on skills and knowledge of personnel; therefore, the objectives of this research were as follows.

Objectives:

- (1) To forecast the number of passenger private cars that use different types of energy in the future; and
- (2) To study how to apply strategies in developing human capital in the passenger private car industry at each phase.

Literacy Review

[1] Research related to a shift from using traditional to electric cars

For example, Huib van Essen (2011) (Impacts of Electric Vehicles - Summary Report Eco Logic) examined the need to change from using traditional to electric cars in the EU countries with the following seven sub-projects:

- WP 1 - Current status of EV development and market introduction
- WP 2 - Assessment of vehicle and battery technology and cost
- WP 3 - Assessment of impacts on future energy sector
- WP 4 - Economic analysis and business models
- WP 5 - Workshop on developments and expectations
- WP 6 - Scenario analysis
- WP 7 - Policy implications

The current study focused on the development of human capital and expectations equivalent to WPs 5 – 7.

In addition, Blackman (1998), Roco (2002), and Bainbridge (2005) investigated the impact of organizational structures and strategies on technological changes.

[2] Research related to change management

Sheldon Levy (2007) examined the issues of implementing changes at each stage, including anti-change management forms, communication and empowerment, and development of human capital to accommodate changes. Kotter & John (2011) investigated the problems of organizational failures due to resistance. Coetzee et al. (2014) studied the intellectual and emotional maturities as factors contributing to the success of the training changes. Katzenbach (2012) examined the cooperation of accommodating changes. Cameron et al (2009) studied the employees' motivation to adapt themselves under changes.

[3] Research related to human capital development

Senge (1990) investigated the composition and importance of individuals in the learning organizations. Greene (2013) examined the training form of coaching in the development of personnel by taking into account the difference of personnel. According to the study of performance management in terms of personnel development to develop their competencies and engagement, the organizational support is the driving force behind success (Lockett, 1992). Armstrong (2006) suggested that as for teamwork, the ability of each team member and the ability to communicate and learn together are also a result of success.

[4] Supportive theories

Self-determination theory is a macro theory in the learning of people according to the psychological principle in terms of motivation driven by human needs.

Rational choice theory discusses the rational choice of evaluating what is derived from the exchange of human resources.

Resource-based theory describes the management of organizational resources to achieve the desired results.

Research Methodology

The study consisted of qualitative and quantitative research.

Data source

Primary data were obtained from interviews of car repair business owners and from questionnaires distributed to car repair and maintenance personal.

Secondary data were obtained from the Department of Land Transport and the Department of Business Development, Ministry of Commerce

Research Proposed Framework

- (1) The number of cars, personnel, and business owners was analyzed at each period to plan the changes; and
- (2) Relevant individuals were interviewed to find the problems and guidelines for personnel development.

Results

- (1) The number of cars, personnel, and business owners was analyzed at each period to plan the changes in car repair and maintenance system by using the data in Table 2 to determine the equation for predicting the number of cars in each year.

Table 1: Equation analysis of number of cars in Thailand for predicting accumulated cars in the future

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10344.66	89210.96	0.115957	0.9092
ACC(1)	0.926094	0.033154	27.93318	0.0000
R-squared	0.981138	Mean dependent var		2352429.
Adjusted R-squared	0.979881	S.D. dependent var		885723.4
S.E. of regression	125632.8	Akaike info criterion		26.43024
Sum squared resid	2.37E+11	Schwarz criterion		26.52827
Log likelihood	-222.6571	Hannan-Quinn criter.		26.43999
F-statistic	780.2623	Durbin-Watson stat		1.805721
Prob(F-statistic)	0.000000			

According to the above-mentioned analysis, the accumulated number of cars in year t resulted from the number of cars in year t-1 with a coefficient of 0.926 and a high significance level. The value of R² was up to 98 percent and Durbin-Watson value was 1.8057, indicating that there was no auto correlation problem. Therefore, the equation was:

$$Y_t = 10344.66 + 0.926 Y_{t-1} ; t = 2543, \dots, 2560$$

If the assumption was that in the next 10 years the passenger private cars were electric cars instead of traditional cars and that the accumulated number of cars in 2026 was 4,242,556 cars,

with a fixed annual increase of 2.68 percent, the accumulated number of passenger private cars in 2027 would be approximately 5.5 million cars, which would be under the repair and maintenance systems (personnel and repair garages).

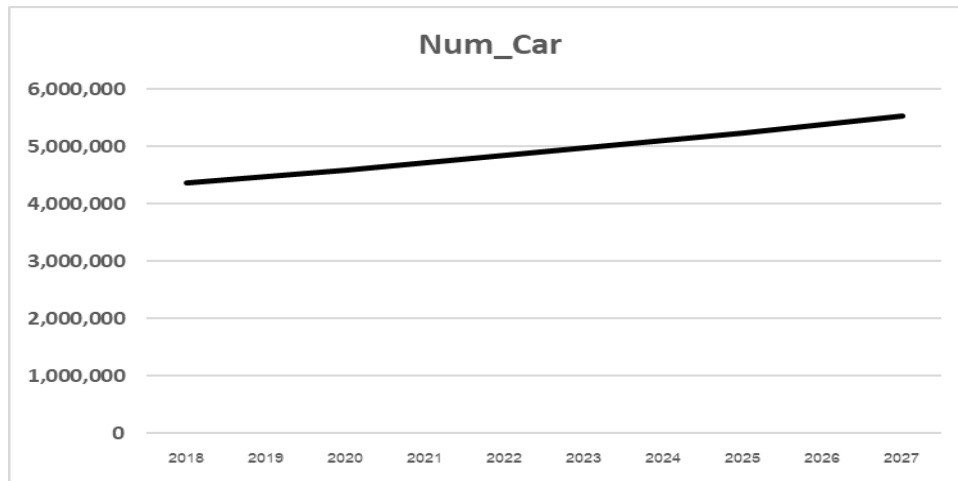
As mentioned earlier, according to the statistics on the website of the Transport Statistics Group, Planning Division, Department of Land Transport, the accumulated number of registered cars in Bangkok as of January 31, 2018 is about 9.8 million cars, which consists of 4.2 million 7-passengers private cars. 1.3 million vans and pick-ups, 77, 867 urban taxis, 3.5 million private motorcycles, and 100,000 public motorcycles. In addition, for the cars under the law on land transport, there are about 43,000 public, non-public, and private buses and 440 trucks in Bangkok. It can be seen that there are about 4.2 million 7-passengers private cars in Bangkok, which is consistent with the forecast data in Table 2.

Table 2: Number of registered cars during 2000 - 2017 in Bangkok and forecast of accumulated number of cars during 2018 - 2027

Yaer	New Car	Accumulate	Lost	Increase (%) each year
2000	69,185	1,240,985	145,262	
2001	92,064	1,322,643	10,406	7.85
2002	118,564	1,631,721	190,514	1.62
2003	146,945	1,773,145	5,521	25.62
2004	176,933	1,526,417	423,661	0.58
2005	188,936	1,691,544	23,809	6.94
2006	179,206	1,867,902	2,848	61.92
2007	175,122	1,974,751	68,273	1.57
2008	190,057	2,074,491	90,317	1.11
2009	172,892	2,190,150	57,233	2.02
2010	255,132	2,379,457	65,825	2.88
2011	286,590	2,596,526	69,121	3.15
2012	451,651	2,972,305	76,272	4.92
2013	456,513	3,356,099	72,719	5.28
2014	305,233	3,592,212	69,120	3.42
2015	275,592	3,799,125	68,697	3.01
2016	287,968	4,001,423	85,670	2.36
2017	331,098	4,242,556	89,965	2.68
2018		4,356,269		
2019		4,473,030		
2020		4,592,921		
2021		4,716,025		
2022		4,842,428		
2023		4,972,220		
2024		5,105,490		
2025		5,242,332		
2026		5,382,842		
2027		5,527,119		

Source: Transport Statistics Group, Planning Division, Department of Land Transport(N_R: new car, ACC: Accumulate, LOST)

Figure 2: Estimated number of cars during 2018-2027



Source: Calculation using a 3-year average

By assuming the accumulated number of 7-passenger private cars in Bangkok, the prediction on the number of electric and non-electric vehicles is shown in Table 3.

Table 3: Prediction on the accumulated number of 7-passenger private cars in Bangkok compared between electric(EC) and non-electric vehicles(NEC)

Year	AMOUNT	EC/NEC(%)	EC	NEC
2561	4,356,269	1	43,563	4,312,706
2562	4,473,030	2	89,461	4,383,570
2563	4,592,921	5	229,646	4,363,275
2564	4,716,025	10	471,602	4,244,422
2565	4,842,428	20	968,486	3,873,943
2566	4,972,220	30	1,491,666	3,480,554
2567	5,105,490	40	2,042,196	3,063,294
2568	5,242,332	50	2,621,166	2,621,166
2569	5,382,842	60	3,229,705	2,153,137
2570	5,527,119	70	3,868,983	1,658,136

Source: Calculation based on assumption (EC: Electric Car, NEC: Non Electric Vehicles)

By predicting the number of cars using different types of fuel that must be repaired and maintained under an agreement that 10% of cars receive such repair and maintenance services each year (equal number of cars each month), the prediction on the number of passenger private cars using different types of fuel that will be repaired and maintained is shown in Table 4.

Table 4: Number of passenger private cars using different types of fuel in Bangkok that will receive services at car repair garages and service centers on average each year based on the assumptions

Year	NON ELECTRIC	ELECTRIC
2561	35,939	363
2562	36,530	746
2563	36,361	1,914
2564	35,370	3,930
2565	32,283	8,071
2566	29,005	12,431
2567	25,527	17,018
2568	21,843	21,843
2569	17,943	26,914
2570	13,818	32,242

Source: Calculation based on assumption that each car repair takes one month.

The statistics and number of newly registered businesses and liquidations collected to calculate the number of car repair and maintenance businesses located in Bangkok for predicting the number of electric and non-electric passenger private cars as well as for anticipating the management of personnel and capacities to support the planning of technical personnel are listed in Table 5.

Table 5: Number of car repair and maintenance businesses in Bangkok

Registration statistics	Newly registered businesses			Current businesses		
	2016	2017	2018	2016	2017	2018
45200 Car maintenance and repair	-	-	-	11	12	12
45201 Car engine and component maintenance and repair	85	90	19	1,154	1,122	1,135
45202 Car body, door, window maintenance and repair	25	13	6	436	423	430
45203 General car maintenance	34	35	5	465	421	430
Total (estimated) from other source	337	340	102	5,536	5,500	5,579

Source: Department of Business Development, Ministry of Commerce

Table 5 indicates that the cumulative growth rate of the number of car repair and maintenance businesses was very low or about 6,000 businesses. On average, six non-electric cars received repair and maintenance services at one service center each month in 2018, while two and six non-electric and electric cars will receive repair and maintenance services at one service center in 2027, respectively. These basic figures will be used to plan the personnel development in order to improve the knowledge of electric vehicle planning in the future.

(2) Thirty car repair and maintenance business owners were interviewed to support future changes in terms of personnel development as summarized in Table 6.

Table 6: Summary of problems faced by business owners in various dimensions

Issue	Number	Remark
Workers will be reduced by the use of modern technology to replace people.	12	Modern technology prefers a replacement rather than repair.
Business owners must invest a lot on modern tools.	30	Old tools can no longer be used. Investment may not be cost-effective.
Complex technology	25	The change is very rapid and may not be managed in time.
Shortage of specialized personnel	30	Most technicians have learnt from their practice for a long time. Therefore, technological changes may take a long time to learn.
Higher service charges	18	Specialized tools and technicians
Battery and electric systems must be learnt more.	22	
Minor businesses must be shut down.	12	
Problem of disposing of non-electric cars	5	
No educational institutes on electric car repair.	29	

According to Table 6, it can be said that the preparation of personnel in this area is important and must be planned to prevent two risks. First, the personnel who have no appropriate knowledge and skills may be unemployed. Second, there may be a shortage of qualified personnel to perform these jobs in the future.

Conclusion And Recommendations

To manage the personnel risks, it is necessary for all stakeholders to take into account the problems arising from the policy of using electric cars instead of other fuel-powered cars in order to reduce pollution because electricity is so-called a clean energy. Research in the future should examine the personnel preparation, especially in production of personnel by educational institutions as well as training courses in public or private agencies to solve this problem.

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The Potential Impact of Currency Risk on Banks Performance

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Abstract

The purpose of this study is to investigate the potential impact of currency risk on banks performance in Indonesia. This study uses transaction and translation gain or loss divided by total asset to measure currency risk, while banks performance is measured by return on asset (ROA). This study also uses 29 commercial banks that are listed in Indonesia Stock Exchange for the period 2014-2018 and has 133 observations as final sample. Using panel data analysis, this study finds that transaction risk as proxies of currency risk have significant impact on the financial performance of commercial banks in Indonesia, while translation risk as proxies of currency risk do not have significant impact on the financial performance of commercial banks in Indonesia. Meanwhile, this study finds that credit risk, operational risk and interest rate has negative impact on banks performance and capital risk and bank size has positive impact on banks performance. The result of this study has implication that high risk high return for banks performance.

Keywords : Banking, Currency risk, Risk management, Commercial Banks

JEL classification – C33, G21, G32

Introduction

Background

The management's ability to manage inherent risk effectively is one of the main success factor for any institution (Kamau et al., 2015). In practice, banks often facing a large number of risk such as credit risk, liquidity risk, exchange rate risk, market risk, and interest risk, among others, risk that can threaten a bank's survival and success (Al-Tamimi & Al-Mazrooei, 2012). In addition, one of the main risk faced by banks is currency risk. Allayannis et al. (2003) point out that the growing number of companies must be analyzing and managing exchange rate risk as an integral part of their operations in the global economy.

In managing exchange rate risk, it is necessary to preparing a hedging strategy, which is most often connected with measuring currency risk exposure and therefore can deciding on the right actions taken to cover the risks (Fiedor & Hołda, 2016). Failure to manage currency risk can have a negative impact on financial performance, thereby reducing achievement of bank goals. These losses occur because of inadequate currency risk management. In Indonesia, banking sector plays a central role in the country's financial system and the economy as a whole (Raz, 2018). Commercial banks, also known as conventional banks, has undergone a significant transformation in the last decade due to advances in technology, the globalization of financial markets, changes in demand for bank services, as well as geographic regulations.

This study continues the study of Kamau et al. (2015) which finds that currency risk do not have impact on the financial performance of multilateral banks. Kamau et al. (2015) conducted a previous research in the period 1998 – 2006 in multilateral banks, and suggesting the future research to investigate the relationship of currency risk and financial performance of

commercial banks. Previous studies showed that currency risk had no significant impact on the financial performance, but for non-financial firms in the United States (Rodriguez, 1977; Business International Money Report, 1977; Cooper et al., 1978). So, this study is following the suggestion of Kamau et al. (2015) by investigating the relationship of currency risk and financial performance of commercial banks and separating two kinds of currency risk presentation in financial report, namely transaction risk and translation risk. Kamau et al. (2015) did not separate both kinds of currency risks. The separation of these kinds of currency risks presentation is important, due to the nature and different potential the impact of transaction risk and translation risk on banks performance. Therefore, the separation investigation of transaction risk and translation risk on commercial banks performance is the objective and also the main contribution of this study.

Literature review

Theoretical framework

Nowadays, banking industry facing a large number of risks, including risks that can threaten the survival and success of the bank due to the increasing uncertainty that resulting from currently turbulence business environment. Al-Tamimi & Al-Mazrooei (2012) points out that banking industry is a high-risky business. For this reason, efficient risk management is absolutely needed. According to Bank Indonesia, risk is the potential loss due to a certain event. Referring to Bank Indonesia Regulations (PBI) which is concerning Application of Risk Management for Commercial Banks, there are eight type of risks that must be managed by banks, namely: credit risk, market risk, operational risk, liquidity risk, compliance risk, legal risk, reputation risk, and strategic risk. Those type of risks can also be classified into; credit risk, market risk, and operational risk (IBI, 2015).

PSAK 10: The Effect of Changes in Foreign Exchange Rates (revised 2014) explains that foreign currency transactions are transactions that are denominated or required for settlement in a foreign currency. A unit has exposure to foreign currency risk only if it enters into a transaction (or has an exposure) that is denominated in a currency other than the functional currency's unit. Accounting Standards Update No. 2017-12 Topic 815 explains that a unit has exposure to foreign currency risk only if it enters into a transaction (or has an exposure) denominated in a currency other than the functional currency's unit (FASB, 2017).

Currency risks should be recognized in the financial statements in the amount of transaction and translation gains or losses resulting from risk exposure of foreign currency's volatility (Choi & Meek, 2011). Currency risk arises from unexpected exchange rate fluctuations between the reporting currency of companies and other foreign currencies. Kamau et al. (2015) and Carrada-bravo & Fernandez (2015) has discusses and categorizes currency risks into transaction risk, translation risk and economic risk.

Transaction risk is the difference between the exchange rate at which the receivables are collected and payables paid and the exchange rate at which they are recorded in the general ledger and reported in the financial statements of the bank (Kamau et al., 2015). Carrada-bravo & Fernandez (2015) explains that transaction risk is related to the amount of losses that is associated with the unexpected depreciation of a foreign currency. PSAK 10 (revised 2014) explains that the amount of foreign currency is calculated into functional currency with the spot rate between functional currency and foreign currency on the transaction date. Meanwhile, translation risk is the impact of revaluation of foreign currency positions into the reporting

currency of a bank for external and internal financial reporting purposes (Kamau et al., 2015). The following three exchange rates can be used to translate foreign currency balances into domestic currencies, namely: current rate, historical rate and average rate (Choi & Meek, 2011). PSAK 10 (revised 2014) explains when there is a change in the functional currency, an entity applies the translation procedure for the new functional currency prospectively from the date of the change, and all resulting exchange differences are recognized in other comprehensive income (OCI). In addition, economic risk is the impact of unexpected fluctuations in exchange rates on the present value of future operating performance and cash flows of the bank when expressed in the reporting currency (Kamau et al., 2015). According to Horne & Wachowicz (2008), economic exposure depends on what happens to the expected cash flows in the future, so subjectivity needs to be involved.

Shapiro (2013) stated that measurement of transaction risk combines the retrospective and prospective aspects because it is based on activities that occurred in the past but will be settled in the future. Transaction risk can therefore be part of translation risk and economic risk in the sense that contracts already entered into and recorded in the balance sheet are part of translation risk and contracts not yet recognized in the balance sheet are part of economic risk.

Direct loss or indirect loss caused by an unexpected exchange rate move usually defined as an exchange rate risk (Fiedor & Hořda, 2016). Kamau et al. (2015) explains that fluctuations in exchange rates, in turn, create currency risks arise from changes in interest rates, inflation, trade and capital flows between foreign and reporting currency. To manage exchange rate risk, Carrada-bravo & Fernandez (2015) explains that trader have to consider the level of the spot rate, the rate of return, the anticipated change in the exchange rate, and three hedging decisions.

PSAK 55: Financial Instruments (revised 2014) explains the effectiveness of hedging can be measured reliably, the effectiveness of hedging is the extent to which changes in fair value or cash flows from hedged items that can be attributed to risks to be hedged can be offset by changes in fair value or cash flow from hedging instruments. The effectiveness of hedging is calculated prospectively and retrospectively, actual results are in the range of 80 - 125%. PSAK 55 (revised 2014) also describes derivatives and hedging is used to reduce the risk. Derivative objectives include reducing risk, reducing loan interest and earning profits from trading or speculative activities. A common example of a derivative is a futures, forward, swap and option contract.

This study includes several other factors, as control variables, which may affect banks performance other than currency risk. Those control variables are operational efficiency ratio (BOPO), interest rate, non-performing loan (NPL), bank size, and capital adequacy ratio (CAR). Based on the discussion above, the relationship between the types of currency risk and their impact on banks performance is visualized in the following framework:

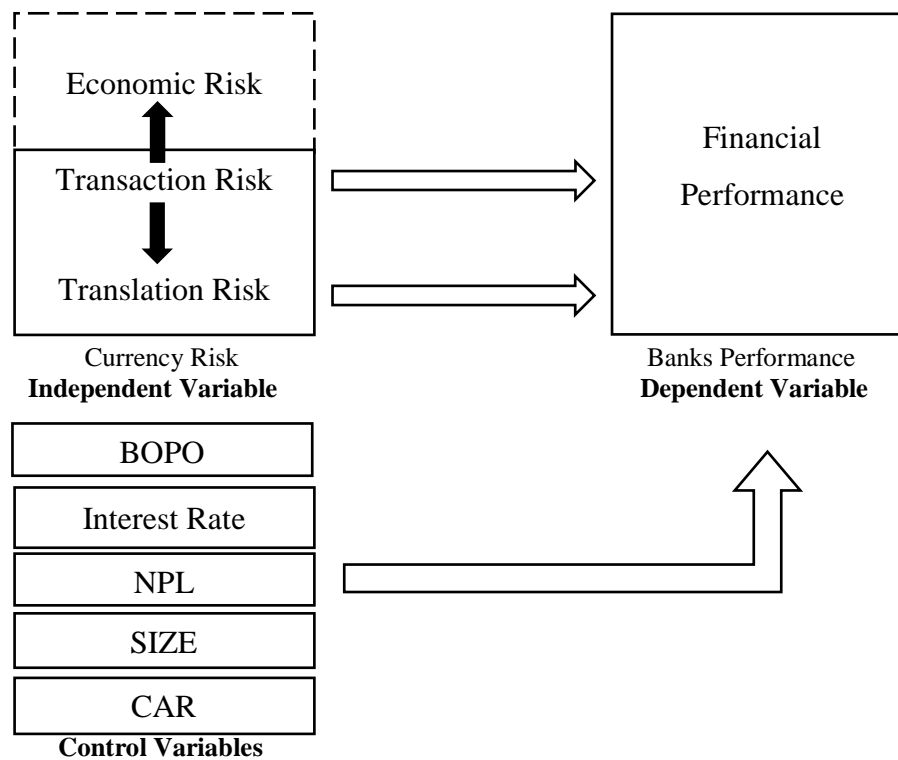


Figure 1. The theoretical framework

Literature review and hypothesis

A failure to manage currency risk can have a negative impact on banks performance and thus reducing achievement of bank goals. Choi & Meek (2011) have explained that currency risk is recognized in the financial statements for the amount of transaction and translation gains and losses. Transaction gains and losses arises from the transaction that has been completed and that have not been resolved. Unresolved transaction gain or loss arises from exchange rate movements between the date a foreign currency transaction was incurred. Completed transaction gain or loss arises from exchange rate movements between the transaction incurrence date and the settlement date (Kamau et al., 2015). Currency risk (transaction) may affect banks performance both positively or negatively. When a bank experiences an exchange rate gain from transaction gain or loss, it will affect the company's profit by increasing profits (positively), and vice versa. Therefore, the impact of currency risk (transaction) on banks performance can be stated in the first hypothesis as follows:

Ha1. Transaction risk affects the financial performance of commercial banks.

Translation gains and losses that affects net income or loss (financial performance) arise from exchange rate movements between the date of preparation of the initial and subsequent financial statements for foreign currencies that have been recorded in the accounting records (Kamau et al., 2015). Hagelin (2003) explains that translation gains or losses tends to be

unrealized and have little direct impact on firms' cash flows, which suggests that translation exposure hedges create little shareholder value through reducing expected costs of financial distress, taxes or the underinvestment problem. Currency risk (translation) may affects banks performance both positively or negatively. When a bank experiences an exchange rate loss from translation gain or loss, it will negatively affect the company's performance trough decrease of equity, and vice versa. Therefore, the impact of currency risk (translation) on banks performance can be stated in the first hypothesis as follows:

Ha₂. Translation risk affects the financial performance of commercial banks.

Research method

Data and Sample

This study uses 29 of 34 commercial banks that are listed Indonesia Stock Exchange (BEI) for the period of 2014-2018 or 145 the initial observations. One suspended bank of those 34 banks is excluded from observation, while four banks are excluded from observation because of the translation and transaction gain or loss data are unavailable. In addition, there are 12 detected-outliers of 145 initial observation are excluded, so there are 133 final observations. This study uses secondary data, such as banks financial statements that are gathered from Indonesia Stock Exchange database, banks website, and Bank Indonesia database.

Empirical model and variables

To test the hypotheses, this study uses regression model in equation (1). The hypotheses alternative 1 (*Ha₁*) can't be rejected if the coefficient of transaction gain or loss variable (*TRSC*) or β_1 is significant, while the hypotheses alternative 2 (*Ha₂*) can't be rejected if the coefficient of translation gain or loss variable (*TRSL*) or β_2 is significant. The model in the equation 1 has estimated using panel data regression analysis.

$$FP_{i,t} = \beta_0 + \beta_1 TRSC_{i,t} + \beta_2 TRSL_{i,t} + \beta_3 BOPO_{i,t} + \beta_4 INTEREST_{i,t} + \beta_5 NPL_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 CAR_{i,t} + \epsilon_{i,t} \quad (1)$$

The dependent variable of this study is financial banks performance, which is measured by Return on Asset (ROA) (*FP*). Meanwhile, the independent variable of this study is foreign currency risks. This study uses two proxies of currency risks, namely transaction risk and translation risk. Transaction risk is measured by transaction gain or loss divided by total asset (*TRSC*), while translation risk is measured by translation gain or loss divided by total asset (*TRSL*).

This study also uses five control variables that may affect banks performance. Firstly, operational risk variable, which is measured by operating costs and operating income ratio (*BOPO*). The higher value of *BOPO*, the bank is more inefficient, so *BOPO* is expected has negative effect on banks performance. Secondly, interest rate variable, which is measured with BI-7day (reverse) repo rate (*INTEREST*). According to Tumwine et al. (2018) interest rates are bridges or links between income and capital. The higher value of *INTEREST*, the banks interest margin is lower, so *INTEREST* is expected has negative effect on banks performance. Thirdly, credit risk which is measured by non-performing loan ratio (*NPL*). According to Ozili (2019), the comprehensive understanding of the factors that may influence the level of *NPL* is very important as a function of bank risk management and also the sign of banks financial stability. The higher value of *NPL*, the bank credit risk is higher, so *NPL* is expected has negative effect

on banks performance. Fourthly, bank size variable, which is measured by natural logarithm form total assets (*SIZE*). According to Raz (2018) the relationship between bank risk and size can be either positive or negative. Bigger banks tend to have a more complex business, which increases their risks. Accordingly, *SIZE* is expected has positive effect on banks performance. Fifthly, bank capital risk ratio variable (*CAR*), which is measured by capital adequacy ratio. According to Liao (2013) risk management is crucial to the banking industry. Since the Basel Accord was introduced, the minimum *CAR* requirement has become a major regulatory tool in various jurisdictions. The higher value of *CAR*, the bank capital risk is lower because bank have a buffer against good earnings volatility, then bank profitability will be higher, so *CAR* is expected has positive effect on banks performance.

Empirical result

Descriptive statistic

Table I presents descriptive statistics of variables of this study.

Table I. Descriptive statistics

	FP	TRSC	TRSL	BOPO	INTEREST	NPL	SIZE	CAR
Mean	0.009360	0.000747	0.000043	0.873161	0.061514	0.029353	17.86848	0.187653
Median	0.009036	0.000526	0.000000	0.878100	0.055800	0.027100	17.94924	0.182300
Maximum	0.031343	0.005773	0.002554	1.806200	0.075000	0.089000	20.98324	0.394600
Minimum	-0.064000	-0.001470	-0.001655	0.582000	0.045600	0.000800	14.49578	0.104400
Std. Dev.	0.01132	0.001038	0.000367	0.146728	0.011893	0.017136	1.660791	0.045660
Observations	133	133	133	133	133	133	133	133

Based on Table I, the mean value of bank performance (*FP*) variable is 0.009360. The median value of *FP* is 0.009036, the maximum value is 0.031343 belongs to Bank Central Asia for the period 2018, while the minimum value is -0.064000 belongs to Bank MNC Internasional for the period 2017. In addition, the standard deviation value of *FP* is 0.01132.

The mean value of first currency risk variable, transaction risk (*TRSC*) is 0.000747. The median value of *TRSC* is 0.000526, the maximum value is 0.005773 belongs to Bank QNB Kesawan for the period 2018 and the minimum value is -0.00147 belongs to Bank Central Asia for the period 2014. The standard deviation value of *TRSC* is 0.001038. The mean value translation risk (*TRSL*) is 0.000043. The median value of *TRSL* is 0, the maximum value is 0.002554 belongs to Bank Of India Indonesia for the period 2014, while the minimum value is -0.001655 belongs to Bank CIMB Niaga for the period 2015. The standard deviation value of *TRSL* is 0.000367.

The mean value of *BOPO* variable is 0.873161. According to Bank Indonesia, the banks operation, in average, is efficient, because the mean value of *BOPO* does not exceed 90%. The median value of *BOPO* is 0.878100, the maximum value is 1.806200 belongs to Bank MNC Internasional for the period 2017, while the minimum value is 0.582000 belongs to Bank Central Asia for the period 2018. The standard deviation value of *BOPO* is 0.146728. The mean value of interest rate (*INTEREST*) variable is 0.061514. The median value of *INTEREST* is 0.058800, the maximum value is 0.075000 in 2014 and 2015, while the minimum value is

0.045600 in 2017. The standard deviation value of *INTEREST* is 0.011893. The mean value of non-performing loan (*NPL*) variable is 0.029353. According to Bank Indonesia, *NPL* in average 2.9353% is efficient, because the mean value of *NPL* does not exceed 5%. The median value of *NPL* is 0.027100, the maximum value is 0.089000 belongs to Bank of India Indonesia for the period 2015, while the minimum value is 0.000800 belongs to Bank KEB Hana for the period 2014. The standard deviation value of *NPL* is 0.017136. The mean value of bank size (*SIZE*) is 17.86848. The median value of *SIZE* is 17.94924, the maximum value is 20.98324 belongs to Bank Rakyat Indonesia for the period 2018, while the minimum value is 14.49578 belongs to Bank Ganesha for the period 2015. The standard deviation value of *SIZE* is 1.660791. The mean value of capital adequacy ratio (*CAR*) variable is 0.187653. According to Bank Indonesia, *CAR* in average 19.02% is efficient, because the mean value of *CAR* does not exceed 8%. The median value of *CAR* is 0.182300, the maximum value is 0.394600 belongs to Bank of India Indonesia for the period 2018 and the minimum value is 0.104400 belongs to Bank Mayapada International for the period 2014. The standard deviation value of *CAR* is 0.045660.

Estimation model result

Table II presents estimation result of the model that examine the impact of currency risks on banks performance.

Table II. The estimation result of the model

The Variables	Expected Sign	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>		0.068522	0.004485	15.27807	0.0000
<i>TRSC</i>	+/-	0.246451	0.143304	1.719774	0.0886*
<i>TRSL</i>	+/-	-0.022341	0.499494	-0.044727	0.9644
<i>BOPO</i>	-	-0.077164	0.001564	-49.33106	0.0000***
<i>INTEREST</i>	-	-0.039779	0.012448	-3.195605	0.0019**
<i>NPL</i>	-	-0.016011	0.011373	-1.407821	0.0623*
<i>SIZE</i>	+	0.000311	0.000186	1.676962	0.0967*
<i>CAR</i>	+	0.002392	0.004276	0.559290	0.0572*
R-squared		0.990227	Mean dependent var		0.00936
Adjusted R-squared		0.986969	S.D. dependent var		0.01132
F-statistic		303.9617	Durbin-Watson stat		1.962286
Prob(F-statistic)		0.000000			
<p>Notes: TRSC=Transaction risk; TRSL=Translation risk; BOPO= Operational efficiency ratio; INTEREST=Interest rate (BI-7d RR); NPL=Non-performing loan; SIZE=Bank size; CAR=Capital adequacy ratio. <i>P</i>-value are reported in Table II; ***, **, * correspond to the 1, 5 and 10% levels of significance, respectively, for a two- tailed distribution and accept the alternative hypothesis.</p>					

Based on Table II, the currency risk and the other variables that are included in the model have simultaneous significant effect on banks performance and has explanation power for

98.6969%, *ceteris paribus*. The both currency risk variables, namely transaction risk (*TRSC*) did have significant effect on banks performance, while translation risk (*TRSL*) did not have significant effect on banks performance. Therefore, the first result did support the hypotheses that transaction risk (*TRSC*) have impact the bank performance and the second result did not support the hypotheses that translation risk (*TRSL*) may have impact the bank performance.

Of the five control variables, as expected, *BOPO*, *INTEREST*, and *NPL* has negative significant impact on banks performance, while *CAR* and *SIZE* has positive significant impact on banks performance. This finding complements the main result of this study that that high risk high return for banks performance, namely transaction risk as currency risk did have significant effect on banks performance.

Discussion

Previous study Kamau et al. (2015), found that impact of currency risk on financial performance of multilateral banks was insignificant. This study also confirms previous study that one of the currency risk variable namely translation risk in this finding was insignificant. According to Table II, a two-tailed t test of the b regression coefficient indicated transaction risk support for the hypothesis and translation risk no support for the hypothesis. The result of two tailed test on the b regression coefficient suggest that the relationship between *TRSC* with *FP* is statistically significant and *TRSL* with *FP* is statistically insignificant. Which means that there is significant impact of transaction risk on the banks performance of commercial banks, while there is no significant impact of translation risk on the banks performance of commercial banks

For control variable, first, *BOPO* has significant impact on financial performance. Leepsa & Mishra (2015) also found significant improvements in *BOPO* on financial performance on merged firms, same as in Indonesia, many commercial banks in mergers and acquisitions. Second, *INTEREST* has significant impact on financial performance. This study also confirm that the higher value of interest rate, the bank interest margin is lower because cost of fund that must be issued continues to increase that make bank performance lower. Third, *NPL* has significant impact on financial performance, this is also confirms with findings of Raz (2018) that *NPL* and financial performance are expected had negative significant impact because the magnitude of bank credit risk affects the banks performance. Fourth, *SIZE* has significant impact on financial performance, this is also confirms with findings of Raz (2018) and Orlitzky (2001). Micco et al. (2007), found that bank performance of state-owned bank less profitable than private national bank, while in this study, we uses commercial banks that included both of state-owned bank and private national bank. Last, *CAR* has significant impact on financial performance, this is also confirms with findings of Morekwa Nyamongo & Temesgen (2013) and Jha & Hui (2012) that *CAR* reflects the company's capital, the higher value of *CAR*, the greater opportunity for banks to generate profits.

Conclusion

The purpose of this study is to investigate the impact of currency risk on banks performance of commercial banks in Indonesia. The result shows that transaction risk did has significant impact on the commercial banks performance in Indonesia and translation risk did not has significant impact on the commercial banks performance in Indonesia. In addition, of the five control variables, namely credit risk (*NPL*), capital risk (*CAR*), operational risk (*BOPO*), interest rate (*INTEREST*) and bank size (*SIZE*) have significant impact on banks performance.

This finding complements the main result of this study that high risk high return for banks performance, namely transaction risk as currency risk did have significant effect on banks performance.

The result of this study adds empirical evidence that banks risks are more determines banks performance. This study also has several limitations. This study only used commercial banks in Indonesia that listed in Indonesia Stock Exchange (BEI), so further study may include all commercial banks in Indonesia. This study did not address the possible impact of governance and risk management ability of banks to mitigate the currency risk exposure on banks performance. Therefore, future study may consider both variables to be included in the model.

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Appendix 1. Table commercial banks

No.	Commercial Banks	Code	No.	Commercial Banks	Code
1	Bank Negara Indonesia	BBNI	16	Bank QNB Kesawan	BKSW
2	Bank Rakyat Indonesia	BBRI	17	Bank Mayapada Internasional	MAYA
3	Bank Mandiri	BMRI	18	Bank Mega	MEGA
4	Bank Rakyat Indonesia Agroniaga	AGRO	19	Bank Muallamat Indonesia	BBMI
5	Bank Artha Graha Internasional	INPC	20	Bank Jtrust Indonesia	BCIC
6	Bank BNI Syariah	BBSY	21	Bank OCBC NISP	NISP
7	Bank Bukopin	BBKP	22	Panin Bank	PNBN
8	Bank Bumi Arta	BNBA	23	Bank Permata	BNLI
9	Bank MNC Internasional	BABP	24	Bank Sinarmas	BSIM
10	Bank Central Asia	BBCA	25	Bank Of India Indonesia	BSWD
11	Bank CIMB Niaga	BNGA	26	Bank UOB Indonesia	BBIA
12	Bank Danamon Indonesia	BDMN	27	Bank Capital Indonesia	BACA
13	Bank Ganesha	BGTG	28	Bank Agris	AGRS
14	Bank KEB Hana	KEHA	29	China Construction Bank Indonesia	MCOR
15	Bank Maybank Indonesia	BNII			

Source: Indonesia Stock Exchange

FACTORS AFFECTING THE EFFECTIVENESS OF TEAM BUILDING AMONG EMPLOYEES IN SMALL AND MEDIUM ENTERPRISES IN MALAYSIA

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Abstract

This study is aimed to find out the factors affecting the effectiveness of team building among employees in small and medium enterprises industry in Malaysia. The focus of the study is the effectiveness of team building. Two main constructs which are group factor and use of technology have been identified as the independent variables. In addition, personal achievement and organizational commitment have been adopted as mediator to view how it affects the relationship of these factors and the effectiveness of team building. The study adopts the quantitative approach. A number of 385 employees from small and medium enterprises in Malaysia will be chosen as sample. The data will be analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0. In specific, Pearson Correlation will be used to examine the relationship; Multiple Regression will be used to evaluate the mediating effect on the relationship. Eventually, a model on the factors affecting team building in this specific context will be proposed. Hence, the conceptual paper aims to highlights the framework for this investigation. Consequently, the results yielded provide valuable information for effective team building among employees in small and medium enterprises in Malaysia.

Key words: Team building, Effectiveness, Small and Medium Enterprises

Introduction

The powerful impact of teams upon organizational effectiveness was first formally recognized in human relations literature by Elton Mayo more than a half century ago (Tubey, Rotich & kurgat 2015). The use of teams has become a prominent trend of modern organizational life (Kriek & Venter, 2009). Effective teamwork allows teams to produce outcomes greater than the sum of individual members' contributions (Stagl, Shawn Burke, & Pierce, 2006).

There are undoubtedly many factors attributed to the effectiveness of team and one of the key contributing factors towards team performance is team building. Team building is an important catalyst in the organizational relations between organizations (Sulaiman, Mahbob & Hassan, 2012). To ensure the competitive advantage in the global market, the Small and Medium Enterprises (SMEs) in Malaysia have recognized the importance of team building and invested a lot in it (Char, Yasoa & Hassan, 2010). The team building is the key factor for the development of SMEs in Malaysia. So, what are the factors affecting the effectiveness of team building among employees in SMEs in Malaysia become the serious question to be answered. This study is aimed to find out the factors affecting the effectiveness of team building among employees in small and medium enterprises industry in Malaysia.

Factors Affecting the Effectiveness of Team Building among Employees in Small and Medium Enterprises Industry

According to the literature review, the group factors, technology factors, personal achievement and organizational commitment are seen as the factors affecting the effectiveness of team building among employees in small and medium enterprises industry. The effectiveness of team building can be valued in various ways (Muo & Oghojafor, 2012). As concluded by Egan and Shandler group can make itself to be high performance one through conducting team building. However, Salas et al (1999) summarized that the performance of organization can not be improved by conducting team building. Although team building is conducted in various ways, there seems no clear evidence to show that team building could improve the performance of organization (Sherwood & Woodman, 1980). On the other side Sumich & Francis (1995) stated that the success application of team building made significantly positive influences on the performance of organization. It is proved that there are many success contributions made by team building such as improving team performance, improving problem solving ability as well as increasing the trust among the members in the organization. The effectiveness of team building can be valued by comparing the input and output (Williams, 2002).

Group size in team building effectiveness has been strongly correlated within the literature with many scholars pointing towards the fact that smaller group sizes lead to better learning outcomes as compared to larger group sizes in which the learning can be compromised due to the limitations of teaching a larger group (Shipherd, et al., 2014).

According to Klein, et al. (2009) Group size is important because it allows for the effectiveness of team building to be moderated. It is understood that smaller group sizes are more effective than larger ones, because they foster engagement better (Mealiea, 2008) .

Leadership will influence not only organization but also other team members in the group (Tarpey & Poultney, 2015). In addition, leadership can help the accomplish the goal of the organizations. Leadership is seen as the ability of person to affect others in the organization in order to help the organization achieve the goal. Leadership plays specific role in the process of team building (Wolfe & Shepherd, 2015).

Social media is kind of emerging tool used by individual and organization to communicate and share information in given situation. Social media such as email, notification services and instant messaging are helper communicators to share opinions and find the most proper solution toward the question. The communication is the essential elements in the success of team building, social media can be used to enhance the communication among members in the team.

Audio and video can be used to enhance learning resources by showing real life scenarios, explaining concepts, observing social groups, and acting as triggers for discussion. They are also able to bring experts and viewpoints to the learning experience and are excellent at bringing subjects 'to life' to engage discussion and inspire learning (Hurst, Wallance & Nixon, 2013). The use of audio and video is hot topic in conducting team building.

Problem solving skills are the most important skills used in determining, practicing, and evaluating during daily work of employees (Wang, Lo, Chi-Hui, & Ya Lie, 2004). Institutions providing training must raise the problem solving skills of employees in order to give qualified

work and solve the problems for individual and group. The problem solving skills will be obtained through team building for individuals. As long as the participants joining the program positively, he or she will improve the ability on problem solving.

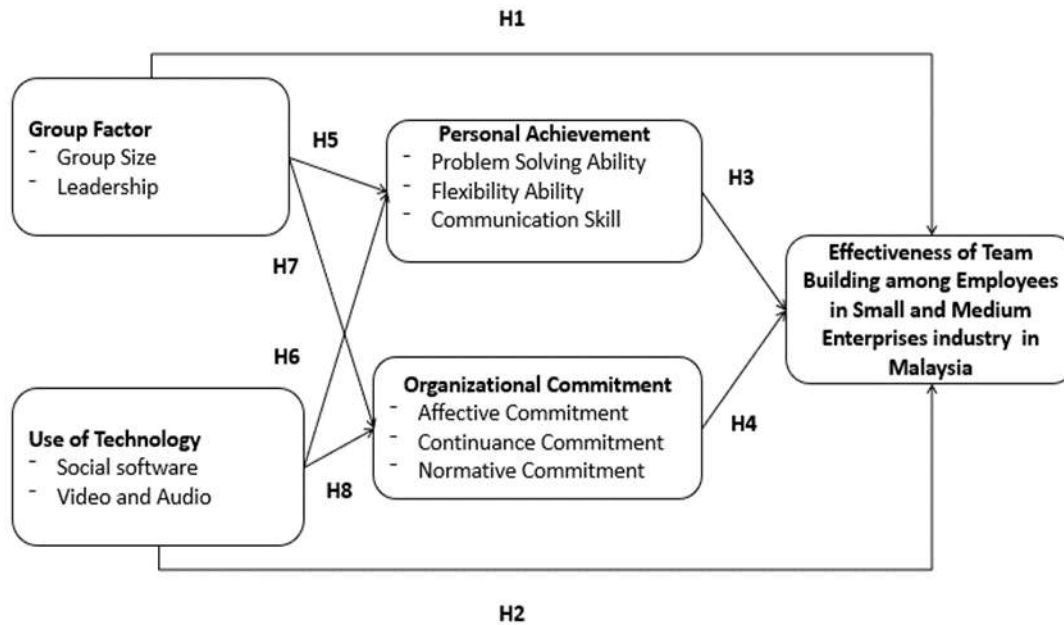
Intellectual flexibility is keeping an open mind is important. You should be able to demonstrate that you can integrate new information and draw conclusions from it, and that you can switch from the detail to the big picture (Matthew, 2011). Study on the potential benefit of flexible employee skills and behaviors has employed different levels of analysis and used multiple, and often inconsistent, explanatory concepts. Team building could make influences on the adaptability of employees, on the other word, the intellectual flexibility can be affected by team building.

The need for thoughtful, effective communication in the workplace is paramount. Seldom does an employee work in absolute isolation, instead, workers interact with consumers, peers, and management on a daily basis; this makes interpersonal communication an essential skill for today's employees (Matin, et, al, 2010). Team building enhance the communication among members in the organization.

Organizational commitment is physiological sense of belongings to the organization (Greenberg & Baron, 2003). Consistent with this view, Rashid et al. (2003) advocate that a committed employee is the one who bestows energy and display loyalty to the organization through any circumstances, attends work regularly, protects the organizations assets, and shares in the organizational goals. Organizational commitment is the element to value the ability of the organization, which can be enhanced by team building (Jaros, 2007).

Conceptual Framework

Based on the literature review, a conceptual framework is produced to facilitate in the data collection. The framework is made up of five major components: 1) group size; 2) leadership; 3) social software 4) video and audio; 5) problem solving ability; 6 flexibility ability; 7) communication skill; 8) affective commitment; 9) continuance commitment; 10) normative commitment. Finally, assuming that these domains are significant, the research investigate factors affecting the effectiveness of team building among employees in small and medium enterprises in Malaysia. Then the conceptual framework is proposed.



Methodology

In the social science quantitative method is the most commonly used in the research design as it can describe the existing phenomenon, investigate the relationship between variables as well as explore the causes and effects relationship between phenomena (Leary, 2004). It requires the collection and analysis of data.

The quantitative method will be chosen for this study because the follows

- Comparing with the other research method such as the qualitative research method, it is effective in measuring the causes and effects relationship.
- The use of the data analysis will provide the empirical evidence to explain the phenomena.
- It is effective in controlling extraneous variables
- It needs less time consuming in interpreting the data compared to qualitative method
- It provides more subjective results compared to qualitative method as it prepares standard answers for the participants
- It is proven effective in measuring the causes and effects relationship between phenomenon

Base on all these justifications, the researcher decided that the quantitative method is more suitable for the current study in order to answer the specific research questions.

Data Collection Method

The present study adopted the questionnaire survey method. According to Zikmund (2003), questionnaire is the simplest and most effective research tool. They are cost effective and reduce data distortion from any other tool. The questionnaire survey method is a method of collecting primary data in which a sample of participants are asked a list of structured questions chosen after considering testing, with a view to eliciting reliable responses. The questionnaire contains a number of usually closed questions that the research participants themselves can answer the questions; hence this is also known as a self-completion or self-administered

questionnaire. The questionnaire could be administrated by different means such as by post, telephone, internet and face to face.

Comparing with other method such as the interviews, the questionnaire for data collection has numbers of advantages that attract many researchers such as covering a large and geographically dispersed sample, absence of interviewer effect, no interviewer variability, cheaper to administer, quicker to administer and convenience for respondent (Bryman and Bell 2007). However, the use of questionnaire also has its limitations such as lack of prompting, probing, asking additional questions and collecting additional data, greater missing values, lower response rate and uncertainty about respondent's genuineness. Nevertheless, survey questionnaires are widely used in research studies especially those that adopt the positivist approach for data collection that can be statistically analyzed and used for testing hypotheses (Grohman et al., 2014).

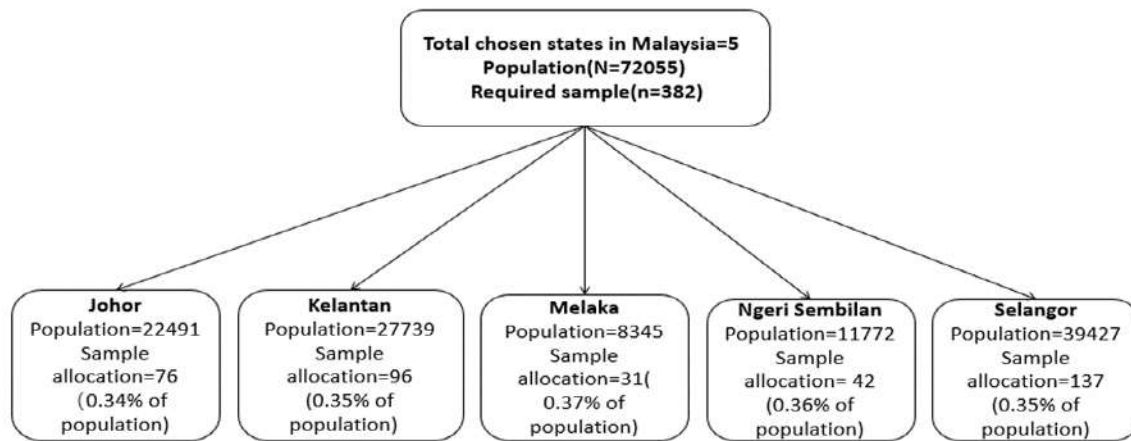
Based on the above analysis the present study used the questionnaire method for data collecting due to the following reasons. Survey questionnaire method is relatively cheaper and quicker for the researcher perspective. Survey questionnaire provides convenience to the respondent to complete it. Survey questionnaire method has a higher suitability for the positivist approach and hypotheses testing, which were both applied in the present study. Use of the survey questionnaires for testing hypotheses in the domain of transfer of testing by several researchers. Quantitative data can be transposed into numbers, in a formal, objective, systematic process to obtain information and describe variables and their relationships.

Population and Sample

Population of the study is considered of employees in SMEs in five states of Malaysia, namely Johor, Kelantan, Melaka, Ngeri Sembilan and Selangor. These five states are taken because they are representative for all the 13 states of Malaysia. A total of 72055 employees were found worked in SMEs in the five states of Malaysia. According to sample sizes from given population as per Krejcie and Morgan(1970) formula. According to the table, at 95% confidence interval, 382 is determine sample size for a population of 72055 Since total number of employees worked in SMEs are (i.e. approximately 75000) therefore a sample size of 382 employees worked in SMEs was considered as the optional size for the population of this study.

The sample was collected from employees in SMEs in five states in Malaysia. The chosen five states are Johor, Kelantan, Melaka, Ngeri Sembilan and Selangor. Based on the number of employees in SMEs in these five states. The process of sampling allocation is explained through a flow chart in Figure 1.

Figure 1: Sample Allocation



Instrumentation

The instrument identified to measure the focus of the study will adapt from the combination of previous developed instruments by McEwan et, al (2017) and Fapohunda (2013).

The questionnaire is composed of two sections. The section A is designed to gather the respondent's demographic information on age, gender, race and level of education. The B contains items on group factors, use of technology, personal achievement, organizational commitment and the effectiveness of team building.

Section A 4 listed factors-multi-response

Section B 56 items close-ended Like-like items

- 8 items on effectiveness of team building
- 8 items on group size
- 8 items on leadership
- 8 items on social software
- 8 items on video and audio
- 8 items on personal achievement
- 8 items on organizational commitment

All the 56 items in section B will be designed to measure the agreeability of the respondents towards each statement on the ten points Likert Scale.

Method of Analyzing Data

Generally, many studies use the Statistical Package for the Social Sciences (SPSS) version 20.0 as the statistical tool to test and examine the structures and hypotheses of studies. In this study, firstly, the descriptive frequency statistics will be tested by using SPSS. This could help to represent a large volume of data, especially the demographic data trends. Secondly, the One Way ANOVA will be applied in this study to analyze the differences between two or more groups. The p-value ($p < 0.05$) will be used to test the statistical significance (Hair et al., 2010). Thirdly, the hypotheses in this study will be tested by using SPSS. This software could estimate the relationship between the latent variables as well as the relationship between the latent variables and their indicators. So, pilot study will be conducted to analyze the validity and

reliability of measurement model. And then the path coefficients will be used to determine the relationships between variables. Additionally, stepwise multiple regressions will be used to gather the significant components of factors in terms of contributing towards establishing the dominant factors and their influence so that a model can be proposed. In short, this method is suitable for testing the hypotheses in this research.

Conclusion

The study sought to explore the factors affecting the effectiveness of team building among employees in small and medium enterprises industry in Malaysia. The effectiveness of team building is decided by many factors. The small and medium enterprises in Malaysia should make the influencing factor into consideration to make the effective team building. The results yielded of current study will provide valuable information for effective team building among employees in small and medium enterprises in Malaysia. Future research is needed to expand the effectiveness of team building based on the factors of the framework in this paper.

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The Power of Positive and Negative Words on Customer 's Purchase Decision

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Abstract.

Two categories of word-of-mouth (WOM) as concerned on this paper are the positive and negative words. To better understand this topic, the authors developed the WOM between positive and negative words on customer's purchase decision. The positive and negative words on customer's purchasing decision were more effective and efficient in advertising compared with the printed advertising. Furthermore, face-to-face WOM communication among customers found a strong effect both in positive words and also in negative words. The testimony in a positive word leads to an increase in purchase decision, but negative words leads to fail purchasing. Finally, for most respondents in this research, the impact of positive words is greater than the impact of negative word.

Keyword(s): *Word-of-Mouth; Positive Word; Negative Word; Customer; Purchase Decision*

Introduction

Nowadays, the development of technology provides various facilities in economic activities, especially those related to marketing. Manufacturers easily market their products both manually and technology-based. As same as consumers who are provided with various conveniences, supported by the internet networking that makes the world put in the finger. All levels of society old people, young, even the children are already familiar with the internet.

The development of internet technology have affects economic activities, especially in the trading sector. The internet can be used as an intermediary medium between sellers and buyers also can provide alot of benefits. The people easily shop through the internet or best known as online shopping. Buying and selling process in goods and services has become easier with the internet services. Online-based market place also began to present in Indonesia, for example; Bukalapak, Tokopedia, Shopee and others. Those market places now become an alternative market that can replace the role of the offline market.

Traders can use this market place to sell their products by online. On the other hand, the buyers also can browse easily the various products offered by the traders and find information about sales track records by looking at reviews (testimonials) about goods and services. These are from buyers who have made transactions. Some of the testimonials contain positive words and some are negatively depending on the quality of goods, price, seller response and so on.

Two categories of word-of-mouth marketing tend to be the determinants of the seller image, fluctuation of sales, up to the decision between purchase or not from prospective buyer. The testimony given by previous buyers also gave the trust and confidence for the potential future buyers, even though only a few words written about the product or only represented by the number of stars given (scale 1-5 star). Based on the background mentioned above, the

researcher interested to conduct small research regarding "The Power of Positive and Negative Words on Customer Purchase Decision".

Theoretical Framework Purchase Decision

According to Kotler and Armstrong purchasing decisions are several steps undertaken by consumers or prospective buyers before determining the purchasing decision of a product. Further they explained that the purchase decision is an approach to solve the problems in human activities, to buy an item or service in facing the wants and needs such as; introduction of needs, information seeking, evaluation of alternative purchasing, purchasing decisions, and post-purchase behaviour.¹

The first stage is regarding to the introduction of needs. This process usually carried out by prospective buyers with an introduction to the problem or the needs they want to fulfill. Prospective buyers can realize the difference between the actual situation and the condition they want. The needs can be driven by stimulus from the inside potential buyers or from outside through previous buyer reviews.

The next stage is information searching. Prospective buyers who interested may or may not immediately search for more information regarding the products offered by the seller. If the encouragement of a potential buyer is strong, and an object can satisfy the needs is available, then the prospective buyer will buy that item. If not, the needs of prospective buyers will not be fulfilled and will only remain in the memory that ends in not buying.

The third stage is alternative evaluation. After searching for as much information as possible related to the object being seeking, and then prospective buyers must make an assessment of some alternatives and determine the next step.

After the alternative evaluation stage there is another important stage, its purchasing decision. In the final stage, this is the time for prospective buyers to make a decision whether to buy or not. Among the decisions taken are usually regarding to the type of product, product form, brand, seller track record, quality, etc.

But there is the last phase according to Kotler and Armstrong, which are not less important than the previous stages, this phase regarding to the post-purchase behaviour. After making a purchase of a product, the buyer will experience some level of satisfaction or even not get satisfaction from the goods or services that he has bought. Possibilities experienced by the buyer after making a purchase its can give to dissatisfaction among others due to the price of the item considered too expensive, the shape of the item does not match with the photos shown on the advertisement, or maybe the products does not as good as the expectations, also maybe the description not in the same of the product with a real physical etc.

Word-of-Mouth

According to Griffith, testimonials are the ways to build the credibility. Information published in the media both online and offline, so that must stand with the people compared to personal

¹ Kotler, Philip dan Gary Armstrong. 2008. *Prinsip-Prinsip Pemasaran*. Jakarta: Erlangga. Hal.179.

interests, including word-of-mouth that can influence the potential consumers in making a decision to use the goods or services, based on recommendations from third parties. However, it will be even more convincing for prospective buyers if there is a consumer who has made a purchase and then uses the product to share his experience in the transaction. ²

The word-of-mouth categories used as study material are positive testimonials and negative testimonials. As explained by George Silverman in his book that positive testimonials usually contain the track record of good sellers, fast responds, product same with the advertisements, low prices, and etc. Conversely, the negative testimony is the form of expression of disappointment experienced by a consumer, such a goods not in accordance with advertisements, too expensive prices, non-humble seller, late in delivery and many more. ³

According to Rhenald Kasali, to measure the reviews or testimonials from consumers can use several indicators commonly used in the world of advertising, such as: ⁴

Attention. Product ads that are displayed and created must be able to attract the attention of potential buyers. The main focus in this display is the development of sensory awareness. To attract the attention of potential consumers the things that must be considered in relation to the product advertisement are; ad sizes, color usage, layout, and fonts displayed

Interest. The advertisement used must be able to create interest for everyone. For the example, using the opening sentence words that can stimulate people to want to know more is also easy to remember

Desire. By using advertising is expected to arouse the needs or desires of potential consumers to have, do or use something

Conviction (feeling confident). Make ads that can convince the potential customers, both through positive views (positive words) from public figures, movie stars and so on. An advertisement can be supported by various demonstrations such as testimonials, free sample distribution, and test results from third parties

Action. This step is an action, which is trying to persuade prospective buyers as soon as possible take the action to buy. The form of persuasion can be in the form of hope that the buyer immediately goes to the store or at least keep it in their memories as a record to buy later

Research Method

This research is descriptive qualitative which emphasizes the analysis of the dynamics of the relationship between observed phenomena, using scientific logic. This research will try to understand and interpret the meaning of an interaction event of certain human behaviour according to the perspective (point of view) of the research team itself. Qualitative research also assumes that empirical reality takes place in a socio-cultural context that are interrelated to one another, namely to get a comprehensive picture of the power of positive and negative words in making a purchase decision for an item or service. To obtain research data, a focus

² Griffiths, Andrew. 2011. *101 Jurus Rahasia Membangun Bisnis Hebat dengan Cara Cerdas, Mudah dan Cepat*. Jakarta: Tangga Pustaka. Hal.153.

³ George Silverman. 2011. *The Secrets of Word-of-Mouth Marketing*. New York: Amacom. Hal. 152.

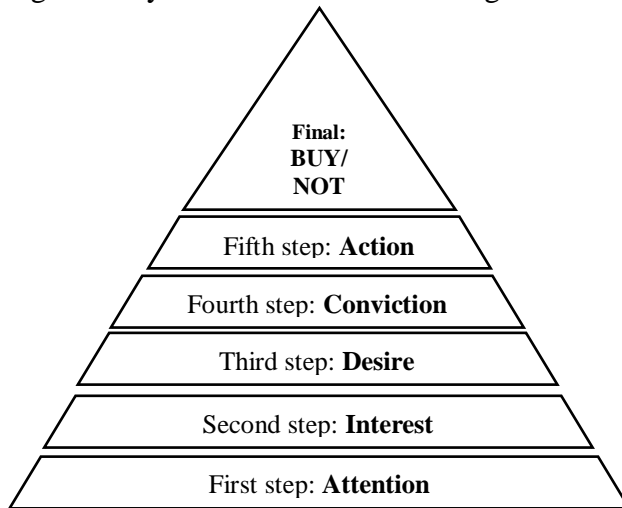
⁴ Kasali, Rhenald. 1992. *Manajemen Periklanan Konsep dan Aplikasinya di Indonesia*. Jakarta: Pustaka Utama Grafiti. Hal.83.

group discussion method was used in which the researcher was able to immediately find out the conversations of the respondents who were from students of the Department of Islamic Economics sixth semester. You do this through face-to-face, telephone or online focus groups using website media.

Findings of the Study

The author can describe the stage of how a potential buyer will decide whether make a decision buy or not to buy , such as the following pyramid drawing:

Figure 1. Pyramid of Decision Making⁵



This term of word-of-mouths in the world of marketing, how the language that is conveyed by word of mouth has a very big impact on the decision making of a prospective buyer. So, the two categories used as indicators in this article are positive words (positive testimonials) and negative words (negative testimonials).

Decisions can be changed by considering positive Testimony or negative testimony. But whatever is the final decision, it must be accounted for. Decisions are made from the accumulation of a series of actions accompanied by emotions in both positive and negative forms, between testimony and emotions play a role for giving consideration to prospective buyers.

The positive testimony usually contains; the track record of good sellers, fast responds, low prices, humble people and so on. Otherwise, negative testimony is more to the expression of disappointment experienced by a consumer, such as goods not in accordance with advertising, prices are too expensive, seller not humble, late delivery and much more.

While positive emotions will trigger constructive or constructive action. Inversely related to negative emotions will lead to destructive or destructive actions. There are at least 4 possibilities that will occur if positive-negative testimony and emotions are combined, specifically:

⁵ Edited by author from various sources

Positive Testimony plus Positive Emotions

The reviews given by buyers or often called testimonials can trigger the appear of emotions. Positive testimonials such as; the goods are good, the price is cheap, the seller is friendly, supported by a positive emotional atmosphere that will bring up the power of empowering (powerful) and will increase the confidence of prospective buyers in making buying options.

Positive Testimony plus Negative Emotions

Although the reviews (testimonials) given by the buyers for the goods offered by seller are positive. But it is not supported by a positive emotional atmosphere or coupled with negative emotions, it will instead create a weakening power (unpowerful) and will reduce the confidence of prospective buyers in making buying options

Negative Testimony plus Positive Emotions

Unlike the previous case, sometimes there are buyers who feel dissatisfied in purchasing an item or the use of services that lead to giving negative reviews (testimony), buying options can still occur if a prospective buyer is in a positive emotional state. In other words, it will change the negative words it receives with positive energy. Certainly the prospective buyer has thought of all the consequences he would receive from his decision making.

Negative Testimony plus Negative Emotions

This condition occurs where the previous buyer feels dissatisfaction with a product or service, then gives a negative review regarding the product. On the other hand, there are prospective buyers who are looking for information related to the goods or services they want against the background of a bad emotional condition (negative emotions). These two negative conditions have a very fatal impact where one can be sure that the option to be taken by potential buyers is the option not to buy.

Al-Qur'an Surah Al-A'raf verse 154 said:

وَلَمَّا سَكَتَ عَنْ مُوسَى الْغَضَبُ أَخَذَ الْأَلْوَابَ^٦ وَفِي نُسُخَتِهَا هُدًى وَرَحْمَةٌ لِلَّذِينَ هُمْ لِرَبِّهِمْ يَرْهَبُونَ

The meaning: "Then, when the anger of Moses abated, he took up the luh-luh (Torah), and in their inscription there was guidance and mercy for all those who fear their Lord".

This verse tells the story of how the Prophet Musa (AS) made decisions and determined things when his anger had subsided. Because everything that is determined in an emotional position will lead to regret.

For the best solution in decision making, Islam teaches the adherents to give more attention to things like; angry, sad, sick, hungry, anxious, upset, and also when in a state of excessive happiness. Why? Because when the person in these conditions, that person can never think clearly, his mind is in chaos. Therefore, never make a decision when you are angry and emotion or when you are facing the problem. When the decision is taken only in a hurry and in an emotional state, it is will only cause regret later on. 6

⁶ Imam Al-Syafi'i Imam Al-Syafi'i. *al-Umm*. Tahqiq dan takhrij oleh Rif'at Fauzi dan Abdul Muthalib. Jilid VI, Yogyakarta: Pustaka Azam. Hal. 199.

Conclusion

In conclusion, from this brief study the author can write some conclusions regarding the power of positive and negative words on customer's purchase decision, such: Two categories of word-of-mouth (WOM) as concerned on this paper are the positive and negative words. The positive and negative words on customer's purchasing decision were more effective and efficient in advertising compared with the printed advertising. Furthermore, face-to-face WOM communication among customers found a strong effect both in positive words and also in negative words.

There are four possibilities that will occur if positive-negative words and emotions are combined, firstly positive testimony plus positive emotions; secondly positive testimony plus negative emotions; thirdly negative testimony plus positive emotions; and lastly negative testimony plus negative emotions.

Furthermore, Islam teaches the people to give more attention for this things like; angry, sad, sick, hungry, anxious, upset, and also when in a state of excessive happiness, because of people who are emotional will usually follow their feelings both positive and negative so that the decisions taken are no longer objective especially in economic activities like purchasing decision.

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Community Concerns of Youth and Young Adults, Age 15-25 Years in Pattani Province

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Abstract

The aim of this study was to investigate the magnitude of the problems encountered by adolescents and young adults in schools and communities. These problems have arisen from both internal community factors and from external factors. The 460 samples from villages in Pattani Province, Thailand were selected. Of all the samples, 45.9 percent were female aged between 17-25 years old and 91.1 percent of those were single. Regarding educational and vocational status, 26.3 percent of the samples were not in school, and 23 percent of them had a job. Most of them were from the single family (76.5 percent).

The factor analysis was used to cluster the 31 response variables into smaller groups. We found that the appropriate clusters for this data comprised of five clusters, namely, 1) Lack of Chance and Opportunity, 2) Lack of Safety, 3) Lack of Social Space, 4) Lack of Facilities, and 5) Lack of Guidance. To access the demographic pattern, linear regression model was fitted to the factor score. The model showed that, only age-sex and sub-district were related with the magnitude of problems in each cluster.

Introduction

Youth and young adults are one of the people who taking an amazing step to improve their conditions and their communities. Their attitudes and actions are a critical window of development through the opportunities of participation in meaningful activities. Since the young people feeling that one matters, and forming warm as well as get supportive relationships with adults, the positive development of their communities could be done. (Fletcher, 2009)

However, in most of developing countries, the problem related to youth's right or lacking of chances to express their power or and lack of opportunity to be a group member still occur. This caused both psychological and physical problems. The study by Zulkefly and Baharudin (2010) reveal that 47 percent of Malaysia's students face with psychological problems. Sharma and Verma (2013) found that most of street children in India, Philippines, Indonesia and South Africa have a stress and stay with other psychological problems. Moreover, there are many studies related to the opinion or needs of youth in many scenarios. The youth in America is feeling proud of themselves when get a chance to participate in social activities and believe they can improve or make a critical change to their communities. (Princeton Survey Research Associates (1998); Peter D. Hart Research Associates (1998). In addition, the survey by Nature Conservancy (2011) found that young people age 13-18 were concerned about environmental problems and believe that those problems was made from human. Apart from that, the survey conducted in Australia indicated that youth age 15-19 years were concerned the problem on the relationship between friends and also family. The education and health problem as well as illegal drug use, discrimination and psychological were the big issue (Bailey et al, 2016).

In Thailand, most of studies aims to investigate the opinion and youth's view. Prajayyothin & Dhamprapha (1996) reveal that young people age 15-24 years disagree with abortion. The unwanted pregnancy can be solved by love and sympathy from parents and people around instead of abortion. Therefore, the sex-education is needed. Another concern and needs of

youth were affected by type of family, number of sibling, education levels, parent’s income and place of living (Pattaravanich, 2001). In addition, the youth and young people who participated in social activities were more concern on the social problem than those people who do not (Devon County Council, 2012).

Since the study for needs and social problems concern of youth in Thailand, especially in southern part is not much published. Thus the main objective of this study is to investigate the magnitude of problem concern of youth and young adults who living in the villages in Pattani province.

Methodology

Study sample and Data collection

The area of this study is Pattani province, where the majority of the population is Muslim. Pattani is divided into 12 districts (Amphoe), which are further subdivided into 115 communes (subdistrict/Tambon). The samples for this study were selected using stratified random sampling. First, we applied the simple random sampling for district and sub-district selection, and the number of samples in each sub-district was assigned using the proportional allocation based on the total number of sample size. Using the formula for estimate single mean population (McNeil, 2015). Totally we get 460 samples which distributed in 15 sub-districts as shown in Table 1.

Table 1: The sample study

District & subdistrict	Sample size	Total
Mueang Pattani		190
Tanyong Lulo	38	
Kamiyo	30	
Pakaharang	34	
Talubo	45	
Baraho	43	
Mayo District		120
Thanon	24	
Trang	20	
Kraso	25	
Sakho Bon	23	
Sakam	28	

Yaring District		150
Tolang	27	
Tali-ai	37	
Baloi	22	
Saban	21	
Charang	43	
Total		460

The data were collected using the structure questionnaires which modified from the previous studies (Sharma and Verma, (2013); Zulkefly and Baharudin, (2010); Hills and Argyle, (2002); Jangoe , (2016) and the Asia Foundation, (2012)). The questionnaires comprise of demographic factors and 31 response variables. The subjects were interviewed face-to-face by an experienced and well-trained team, fluent in village vernacular languages.

Statistical Method

Exploratory factor analysis fitted by maximum likelihood with promax rotation (Venables & Ripley 2002, Chapter 11.3) was applied for cluster the 31 response variables (each coded as 0, 1, 2 or 3 to denote the severity of the problem) into smaller groups, using loadings greater than 0.35 to allocate variables to these groups.

To assess demographic patterns, linear models was fitted to the factor scores and graphed as a means for levels of each predictor. Confounding bias due to associations between factors was assessed by comparing such estimates before and after adjusting for other predictors, and statistical significance was assessed using confidence intervals for comparison with the overall means based on the weighted sum contrasts (Tongkumchum & McNeil 2009, McNeil 2015).

Results and Discussions

The majority of the sample in this study was female (65.9%) with a single status (91.1%). About 73.4 percent were in school and 77.0 percent of them were not working, most of sample living in a single family (76.5%). The average of age and the duration of living in their village are 18.2 and 17.6 years, respectively.

Using factor analysis based on the promax rotation, the response variables were group into 5 factors with loadings as shown in Table 2. Factor 1: “Lack of Chance and Opportunity”, including 7 problems (Lack of education opportunity, Lack of chance to learn and practice new skills, Loss of high expectations, Lack of career/education opportunity, Unhealthy diet, Children do not live with their father and mother and Illegal drug use). Factor 2: “Lack of Safety”, this factor comprise of another 7 problems those are Child abuse, assault bullying, Crime in the community, Lack of emotional safety, Lack of physical safety, No young people’s rights, Lack of child care and Bad nurturance and friendship. Factor 3 includes the problems related to a group membership and the chance as well as the space for express the creativity or making some decision, therefore, we name this factor as “Lack of Social Space”. Factor 4,

mainly related to the problems about facilities such as picnic areas, places for keeping fit and so on, namely as “Lack of Facilities”. Factor 5 is “Lack of Guidance”, it was grouped a problem expressing about the gap between children and adults, none of guidance even a community was hopeless for youths. This finding was supported by the international literature on youth participation. It emphasizes three themes comprising of 1) participation as access to basic services such as education, health recreation, employment, social political economic enfranchisement of youth. 2) Participation as voice and choice within the organization that loom large in young people’s daily lives and 3) participation as public action through planning or involvement in challenging activities that have an impact beyond the narrow interests of the participants themselves. (Tolman et al; 2001)

After factor analysis, linear regression model was used to investigate the effect of demographic determinants on the magnitude of the problem in each factor. Crude (unadjusted) means are plotted as green points in Figure 1, so the differences between them and confidence interval centres indicate confounding bias due to associations between factors (McNeil 2015). We found that, there are age-sex variable and sub-district (Tambon) are significantly related to factor 1: lack of chance and opportunity, factor 2: lack of safety and factor 4: lack of facilities. There is also evidence of an age-gender effect: girls aged 15-16 are less concerned about these problems, whereas men aged 17-25 are more concerned. Since the inequality between men and women in social relations, behaviors, opportunities and access, risks and vulnerabilities became a developmental concern more than three decades (Jerneck, 2018). Gender roles are socially defined task, responsibilities, and behaviors, which are appropriate for men and women. Thus, both men and woman perform different activities in the community. The study by Kassa and Eniyew (2018) was suggested that most of the productive activities were performed by men and reproductive activities which were done mostly at home and time consuming was considered woman activities. This may relate to the levels of community concern in this study.

However, for factor 3: lack of social space, the results show that girls aged 15-16 and those who has married are less concerned for these problems. In addition, no significant differences in magnitudes of problems when concern factor 5: lack of guidance, except sub-district as shown in Figure1.

As results shown, the youth who live in different sub-district given a different attitudes or levels of concerned. For instant, Tanyong Lulo sub-district is one of the areas with a high level of concern in every aspect. Meaning that, this area needs a good policy maker or needs some community development. The study by Tuomas et al, (2016) was suggested that “the dream futures” need to be taken into account. It was contained three domains based on a basis of three questions that everyone has to deal with: how do you earn your living?(livelihood recipe) , where do you live?(accommodation recipe) and how do you live? (lifestyle recipe). This livelihood recipe corresponds roughly with Wheelwright's (2005) domains of activities and finances, and the accommodation recipe to the domains of housing and transportation, and the lifestyle recipe corresponds to the domains of health and social.

Table 2. Loadings for factor analysis with promax rotation. The shaded values show problems in the same factor.

Problem	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness
Lack of education opportunity	0.771					0.419
Lack of chance to learn and practice new skills	0.751					0.483
Loss of high expectations	0.624	0.106				0.569
Lack of career/education opportunity	0.589	-0.156	-0.133	0.31		0.503
Unhealthy diet	0.556				0.134	0.667
Children do not live with their father and mother	0.498	0.2L01	-0.205	-0.162	0.392	0.505
Illegal drug use	0.456	-0.151	0.151			0.683
Child abuse, assault, bullying		0.814				0.312
Crime in the community		0.688				0.408
Lack of emotional safety		0.56			0.231	0.415
Lack of physical safety	0.317	0.505	0.13	-0.179		0.516
No young people's rights		0.479	0.202	0.219		0.489
Lack of child care		0.427	-0.312	0.689		0.556
Bad nurturance and friendship	0.213	0.353			0.169	0.538
Do not have a group membership		0.182	0.863	-0.238		0.325
Do not have chance to express and be creative		0.135	0.611	-0.145	0.179	0.451
Lack of decision making			0.608		0.174	0.504
Lack the skills to listen and learn consciously	0.301	0.159	0.491		-0.259	0.521
Lack of quality media	0.274		0.449	0.176	-0.194	0.504
Little access to resources	0.16	0.232	0.365	0.133	-0.198	0.632
Weak law enforcement	0.268	-0.258	0.341	0.225		0.470
Lack of playgrounds and picnic areas			-0.17	0.885		0.511
Do not have part-time employment	0.189	-0.165	0.169	0.443		0.582
Lack of facilities for keeping fit	0.207	-0.238		0.38	0.161	0.599
No recycling facility	0.185	0.164		0.372		0.647
Lack of supervision and training	0.148	0.128	-0.117		0.798	0.269
Lack of guidance		0.188			0.605	0.458
No standards and boundaries	-0.197	0.162	0.136	0.217	0.496	0.483
Gap between adults and children		0.154	0.169	-0.132	0.48	0.589
Children lack the opportunity to create a group activity			0.23	0.204	0.391	0.542
The community was hopeless to children	0.166	0.138		0.111	0.369	0.532

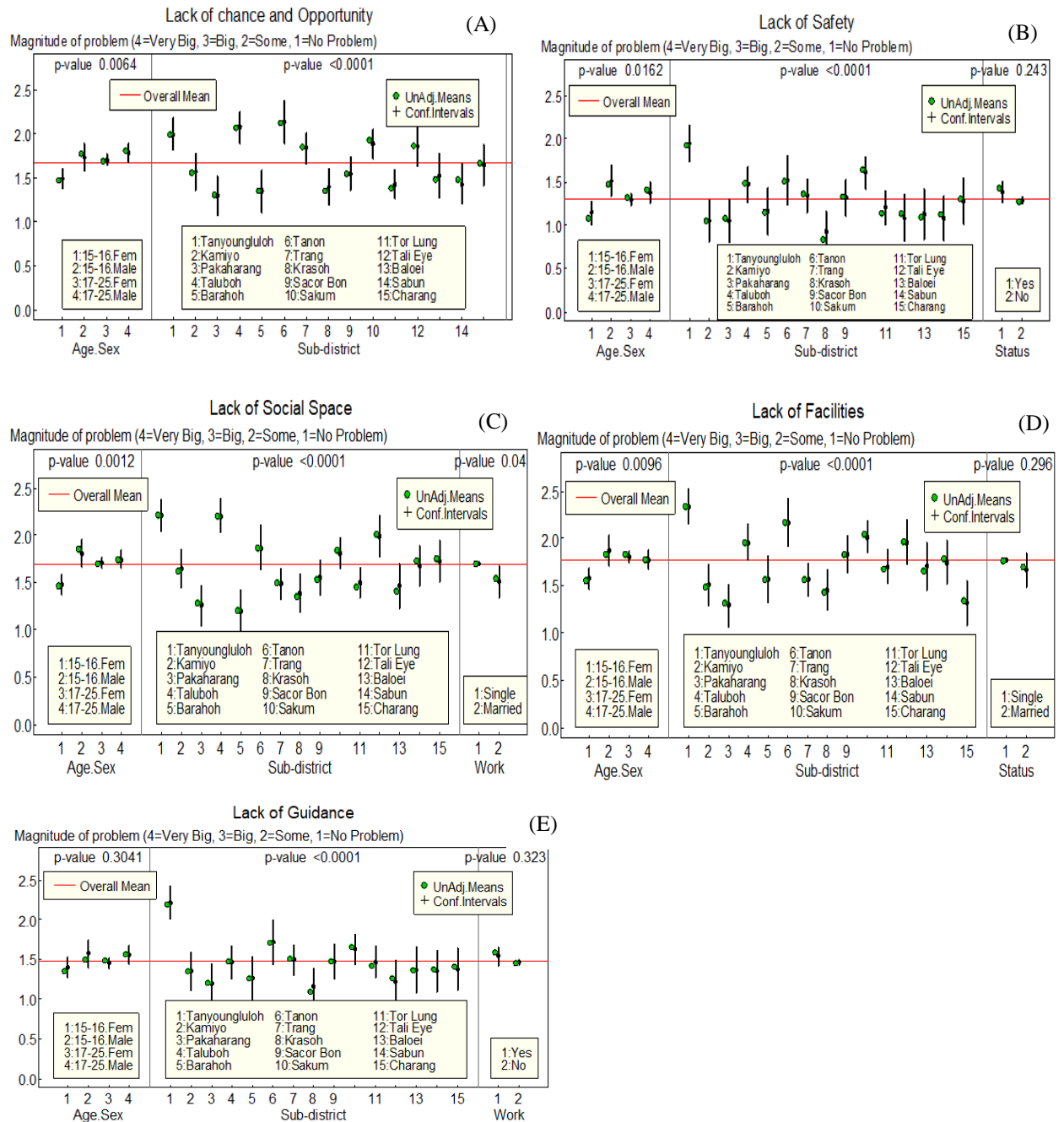


Figure1. The confidence interval for the relationship between demographic determinants and each factor of problems: (A) concern for factor 1, (B) concern for factor 2, (C) concern for factor 3, (D) concern for factor 4 and (E) concern for factor 5.

Conclusions

This study found that the cluster of problems concerned by youth and young adults in Pattani province comprised of 5 clusters, namely, lack of chance and opportunity, lack of safety, lack of social space, lack of facilities and lack of guidance. After linear regression was fitted, found that the factors affects the magnitude of problems concern in every factor are age-sex and sub-districts. There is no evidence for a relation between other determinants on the factors of problems. The main differences in levels of concerned were on age-gender and area of living. Therefore, the policy maker or community's activity planning should take these into account.

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THE INTERNAL CONTROL SYSTEM INFORMATION IN COMPANY'S ANNUAL REPORT

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Abstract

This research was conducted to get an overview of the importance of information about internal control in the annual report seen from three groups of accountants, namely presenters, users and examiners of the company's annual report. Financial report presenter is an Accountant, the examiner is represented by the Auditor, while the user is a financial Analyst. This research is part of a series of studies related to the disclosure of the company's internal control system in the company's annual report. Data collection is done using a questionnaire sent to accountants with various roles, namely auditors, corporate accountants and users. The sample selection process is done with the snowball sampling technique. As a result, 127 respondents were distributed from March 2019 to June 2019. The results of data analysis showed that the three groups of respondents shared the same view of the importance of presenting internal control system information to the company's annual report.

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Keywords: *Internal Control, Annual Report, Disclosure*

Introduction

Today the practice of presenting information about internal control by public companies in Indonesia can only be found in the annual report in the statement of management's responsibility and management's assessment of the effectiveness of the company's internal control over financial reporting. Specific information about internal control practices generally has not been disclosed in detail and clearly. Therefore, investors rely heavily on the information disclosure that the company applies specifically to specific information about the design and implementation of the company's internal controls (Deumes & Knechel, 2008).

However, it should be questioned whether information about the company's internal control system benefits stakeholders and the extent to which information about its application is needed. Considering the internal control system implemented by the company is a process that involves all existing company personnel, with the aim of maintaining the security of company assets and providing adequate certainty about the effectiveness and efficiency of the company's operations. Then the information certainly gives an illustration to investors and creditors in making investment and funding decisions. Effective business operations will certainly lead to reliable financial reporting. Thus a good company internal control system guarantees the survival of the company because all business activities are carried out based on established principles.

The policy regarding disclosure of internal control conditions should be an appropriate means especially for investors and also capital market regulators or financial markets. Because if not, investors don't have other information channels. For reasons of regulation and corporate governance, disclosures about the condition of the company's internal controls are important and increasingly pressing for public companies (Deumes & Knechel, 2008). The disclosure of the condition of the company's internal control in the financial statements will help stakeholders to get certainty about the reliability of the company's financial information used for investment decisions

Problem Statement

Disclosures about the internal control systems of public companies in Indonesia have not been carried out in a standard manner. There are no specific settings about how the company internal control system reports are displayed.

Research Questions

1. Is information about the internal control system on the public company annual report needed by the user?
2. What specific information regarding the internal control system needs to be present in the annual reports of public companies?

Purpose of the Study

Based on the description above, this study will analyze the user's perceptions of company's financial statements about the level of importance of the company's internal control system information, how the contents of the report on the company's annual report are needed by the users. The analysis will be carried out to obtain information about how the company should present information on internal control in financial statements, as well as any specific information needed by users of reports related to the practice of internal control systems in financial statements in the process of making investment and funding decisions. Thus the purpose of this study is to analyze the opinions of accounting professionals regarding the level of importance, any information related to internal control that needs to be present in company's annual report and the importance of standardizing the presentation of that information.

Literature Review

Based on previous studies it is known that there is a debate about the importance of whether disclosure about the conditions of internal control in management reports compared to the costs that must be incurred by the company. However, the emergence of the Enron case in 2000 has confirmed the need for companies to disclose the conditions of internal control in management reports. Before the Enron case emerged, research related to the need for information on internal control conditions had become an important spotlight. Hermanson (2000), for example, analyzing the specific reporting needs of the company's internal controls from various perspectives of users. Hermanson's (2000) research shows that the users of corporate financial statements agree on the importance of internal control and that voluntary reporting of management related to internal control increases control and provides additional information for decision making. Overall, it was concluded from the results of Hermanson's (2000) study that the existence of management reporting related to internal control would improve the

control system and provide better indicators for the survival of the company in the future. But the results show there are differences in perceptions between executives, individual investors, and internal auditors in terms of the relevance of information from management reports to the company's internal controls. Other similar studies were conducted by O'Reilly-Allen & McMullen (2002), which analyzed user perceptions of the usefulness and reliability of internal control reports. The research was conducted by means of experiments on MBA students and the results showed no differences between groups of students about the usefulness and reliability of the report.

Other research conducted by several researchers with the same perspective, namely the perception of users of company's reports related to the weaknesses of the condition of the internal control in the management report. Disclosures about the company's internal controls influence the decision-making of creditors by Costello & Wittenberg (2010); Kim, Song, & Zhang (2011); Schneider & Church (2008) they found that the decision-makers of lending were very dependent on the conditions of the company's internal control. The condition of the company with a weakness in internal control will limit the creditors to give credit. Likewise with investment decisions (De Franco, Guan, & Lu, 2005; Hammersley, Myers, & Shakespeare, 2008; Lopez, Vandervelde, & Wu, 2009; Rose, Norman, & Rose, 2010; Shelton & Whittington, 2008), where information about the condition of the company's internal control is very relevant to the duties of investors in determining investment decisions. The condition of good internal control will lead to the quality of financial statements and will eventually attract investors to invest. But the results of other studies show that reporting internal controls does not have an influence on investment decisions (Schneider, 2009).

Based on the literature study above, this research will be carried out on users of financial statements of public companies in Indonesia, particularly related to the form, format, usefulness, and reliability of information about the internal control system of the IDX issuer's annual report. Although this study was inspired by research conducted by Hermanson (2000) and O'Reilly-Allen & McMullen (2002), the difference is that information that is valued only in the company's annual reports.

This is a follow-up study on the disclosure of internal controls carried out by the company. The results of the study indicate that disclosure about internal control by the company has not been fully compliant according to the requirements of the capital market regulator regarding the form and content of the annual reports of public companies. In addition, the items disclosed also vary between companies. Therefore, further research needs to be carried out in order to obtain a complete picture of the users of financial statements so that there is a conformity of views between presenters and users of financial statements.

Although there have been debates about the benefits and costs of disclosure of internal controls in corporate financial reporting. But based on the principle of information asymmetry and agency costs between company managers and stakeholders, then disclosure of the condition of the company needs to be done with various considerations. Many factors will influence management in choosing ways or material that need to be disclosed in the company's financial reporting.

Another topic of debate that arises is between the preparation of financial statements with users of the report in terms of readability and reliability of management reports on internal control conditions (Foster, Gist, McClain, & Shastri, 2005; Gist, McClain, & Shastri, 2004). The

solution that can be proposed so that management reports regarding the conditions of internal control can be read and can be trusted by its users is by presenting company reports using general standards so that it is beneficial to the interests of investors and creditors (Gist et al., 2004).

Research Methods

This is an exploratory study to obtain information about the level of importance, format, and content of reporting related to the company's internal control system which is presented in the annual report. The subject of this research are accountants which are divided into 3 groups, namely examiners or auditors, presenters and users of annual reports of public companies. The information to be collected is about the user's perception of the importance of the presentation of information related to the implementation of the company's internal control in the company's annual report, what information needs to be presented and whether there is a standard form in the presentation in the company's annual report.

Sampling was done purposively and using snowball sampling technique. Data collection is done by surveys and interviews using a questionnaire consisting of 13 question items. Users will be asked their opinions about the level of need to disclose information about the following items:

1. The purpose of the internal control system.
2. Management's responsibility for internal control.
3. Statement of effectiveness over internal control.
4. Management discussions about elements of specific control activities.
5. Management discussion regarding the limitations of the internal control system.
6. Regular assessment by management of the conditions of internal control.
7. Activity assessment of the internal control system by internal auditors.
8. The need to clearly communicate the objectives of the company's internal control structure.
9. Standard forms of company internal control reports in the company's annual report.
10. Inherent limitations on the internal control system.
11. Voluntary reporting on internal control.
12. Internal control needs to be reported mandatory.
13. There needs to be a standard rule governing the form of presentation of Internal Control System Information in the annual report of a public company.

The results of the respondent's answers will be used to describe the perceptions of users of financial statements about information needs about reporting internal control systems in annual reports. The analysis was carried out with descriptive techniques, which concluded from the

answers to the questions given through the questionnaire. The results of this analysis will determine the research step at the next stage.

Findings

Data collection was conducted from March to June 2019, with 127 responses. The demographics of respondents can be seen in Table 1. Most of the respondents (63%) were less than 30 years old with the composition of the majority education undergraduate and there were no differences in the number of genders, whereas for work experience most of them were in less than 5 years.

Table 1 Demographics of Respondents

Age	Amount	%	Gender	Amount	%
<=30 years	80	63.0	Male	64	50.4
31-40 years	22	17.3	Female	63	49.6
41-50 years	20	15.7			
51-60 years	3	2.4	Working period	Amount	%
> 60 years	2	1.6	< 5 years	75	59.1
			5-10 years	16	12.6
			11-15 years	11	8.7
			16-20 years	14	11.0
			21-25 years	6	4.7
			26-30 years	3	2.4
			>30 years	2	1.6
Education	Amount	%			
Undergraduate	98	77.2			
Graduate	24	18.9			
Doctorate	5	3.9			

The results of the analysis for perceptions related to the presentation of information on the internal control system in company reports are presented in Table 2.

Table 2. Perception about the presentation of the internal control system

Internal Control System Information	Necessary	Need	Need Enough	No Need
Companies need to disclose information about the objectives of their internal control system	60.63	33.07	5.51	0.79
Companies need to disclose information about management's responsibility for their internal controls	70.08	25.98	3.15	0.79
Companies need to disclose information about the statement of effectiveness of their internal controls.	48.03	43.31	8.66	-

The company needs to disclose information about management discussions about elements of specific control activities	36.22	39.37	20.47	3.94
Companies need to disclose information about Management's discussions regarding the limitations of their internal control system	37.01	34.65	25.20	3.15
Companies need to disclose statements about routine assessments of the conditions of their internal controls.	44.88	40.16	12.60	2.36
Companies need to disclose there are assessment activities about the internal control system by their internal auditors	47.24	44.88	7.87	-
The purpose of the company's internal control structure needs to be clearly communicated	56.69	34.65	6.30	2.36
There needs to be a standard format for the company's internal control reports in the Company's Annual Report.	48.82	37.01	12.60	1.57
Companies need to disclose inherent limitations to their internal control systems	39.37	43.31	14.96	2.36
Companies need to be encouraged to report voluntary internal controls	39.37	40.94	15.75	3.94
Reporting on internal control needs to be done mandatorily	48.82	42.52	7.87	0.79
Should there be rules for standardizing the form of presentation of internal control system information in the annual report of a public company?	43.31	48.82	5.51	2.36

The test results on the perceptions of the level of importance of internal control information between groups of Auditors, Corporate Accountants, and Financial Analysts showed no significant differences for all statement items, except for item statements about: Companies need to disclose assessment activities about their internal control systems by internal auditors (see the attachment to the Kruskal Wallis test output). The results indicate that all statement items are deemed necessary to be presented in company's annual reports with a high level of importance. Whereas for statements about the need for disclosure of internal control systems activities by internal auditors it is seen differently for the three groups of respondents, where the group of corporate accountants perceives higher than auditors and financial analysts.

Thus, it can be formulated that all respondents agreed to disclose all items asked regarding the internal control system in the company's annual report.

Conclusion

The results of the analysis of the answers of three groups of respondents, namely the Auditor, Corporate Accountant and Financial Analyst, show that all consider it important and need to present information about the internal control system in the company's annual report both voluntarily and mandatorily and in the standard form for all public companies. Information that needs to be known and needs to be presented is about the objectives of the internal control system and clearly communicating, management responsibility for internal control, the statement of effectiveness of internal controls, management discussions regarding elements of specific control activities and limitations of the internal control system. Management needs to disclose the existence of routine assessment activities regarding the condition of good internal controls by internal auditors. Then information about inherent limitations on the internal control system needs to be known to users of financial statements.

This is part of a series of studies related to the implementation of internal control systems by public companies. So the results of this study need to be further confirmed to get a complete picture of how efficient and effective forms of presentation can be used by users of financial statements. Further research needs to be done to discuss more intensively between groups of corporate accountants, users and financial report examiners related to the forms that need to be implemented by companies with a viewpoint and common interests.

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DETERMINANTS OF FOREIGN DIRECT INVESTMENT: PANEL DATA EVIDENCE FROM THE CLMV AND ASEAN-5 COUNTRIES

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Abstract: *The aim of this empirical article is to explore the factors that determine the foreign direct investment (FDI) for three samples: ASEAN-5 only (Malaysia, Indonesia, Philippines, Singapore and Thailand), CLMV only (Cambodia, Laos, Myanmar and Vietnam) and ASEAN-5 and CLMV combined over a period of 1998 to 2018 using panel data analysis. The results demonstrate that gross domestic product (GDP) and trade openness are the most significant roles in attracting FDI to ASEAN-5; while the roles of inflation rate, labour productivity and population growth are insignificant. For CLMV, all selected variables can influence FDI. This article is significant because it contributes to the literature on factors influences FDI by encompassing the scope of previous studies that often focused on ASEAN only.*

Keywords: *foreign direct investment, gross domestic product, labour productivity, population growth, panel data analysis, ASEAN-5, CLMV*

Introduction

ASEAN is an acronym for The Association of Southeast Asian Nations, a regional corporation of ten most inclusive emerging and developing Asian countries with each distinguished by a significant influence in global economy. It consists of Malaysia, Indonesia, Thailand, Philippines, Vietnam, Cambodia, Myanmar, Laos, Singapore and Brunei Darussalam. ASEAN has applicable policies to promote the flow of FDI into their respective countries, especially to sectors with multiple investments. Strong investments inflows on manufacturing, services and infrastructure industries were came from China, the Netherlands, Germany, Switzerland and Australia. In 2017, the ASEAN countries attracted 20 percent of the global FDI and contributed 25 percent of global GDP. If ASEAN is form as a single country, it would be the third largest market in the world behind India and China with 630 million of population (ASEAN, 2017). FDI flows to ASEAN rose from USD 123 billion in 2016 to USD137 billion in 2017 with a rise in investments in five member states namely Indonesia, Thailand, Philippines, Singapore and Malaysia.

This ASEAN-5 countries share several common features. First, these five member states are working together to form the ASEAN Exchanges that aims to promote ASEAN capital markets and to offer more opportunities to investors in the region. Second, these countries have relatively huge amount of young populations as compared to other developed countries and its labour market is evolving towards more mobility for skilled professionals in the region. On the other indicator, combined FDI inflows to the four CLMV countries (Cambodia, Laos, Myanmar and Vietnam) grasped a greatest level in 2017, increasing by 21 per cent to USD23 billion, accounting for 17 per cent of total FDI flows in ASEAN. Vietnam was the third largest recipient within ASEAN behind Indonesia and Singapore. This hike contributed by these region rapidly growing industry clusters include health care, research and development (R&D) activities, e-commerce, automotive and the electronics. For example, Apple from United States established its first Indonesian R&D facility, Denka from Japan operate a chemical R&D operation in Singapore, Dyson from United Kingdom developed a technology centre in Singapore, Nissan from Japan developed R&D facility in Thailand, Osram Opto Semiconductor from Germany an R&D operation in Malaysia and Samsung from Republic of Korea developed an R&D centre for mobile phones in Vietnam (ASEAN, 2018).

This article intends to provide significant insights and to answer the question, 'What are the features that fascinate FDI to ASEAN countries?'. Given the different performance level of each countries, this empirical analysis will cover three different samples which are ASEAN-5, CLMV and all ASEAN countries. The article contributes to the literature concerning the factors influence FDI by extending the scope of former studies, many of which focused on ASEAN only. This article also examines whether the determinants of FDI in all ASEAN countries are the same as for ASEAN-5 and CLMV. The results of this article can provide framework to policy makers of other developing countries that would like to increase investment inflows.

Related literature

A huge amount of empirical studies was done to explore the determinants of FDI inflows to countries. Studies on multiple countries frequently employed panel data analysis while time series analysis were often been used to study a single country. However, the choice of dependent and independent variables was varied depending on the countries observed. As for dependent variable, Kimura & Todo (2010), Ucal (2014) and Encinas & Villegas (2015) used the total amount of FDI inflows to the recipient country. Brada, Drabek, & Perez, M (2019) prolong the finding of Blonigen & Piger (2014) by using FDI stocks as the dependent variable and employed gravity equation to estimate bilateral FDI stocks.

Macroeconomic variables have been used consistently as independent variables. For instance, many empirical studies used GDP growth to represent changes in countries' output (De Mello Jr 1999; Adhikary 2010). Other independent variables often used include GDP and GDP per capita to represent market size, trade openness, inflation, corruption to capture political aspect, technology gap, number of populations, and labour productivity. Trade openness (XM) means that trade barrier has been relaxed by the host country and it is an opportunity for investors to fully utilized the comparative advantage. Studies done by Hoang (2015) and Asongu (2018) found a significant positive impact of trade openness and FDI.

Labour productivity (LP) represent the labour efficiency in the economy and it is a significant indicator to attract foreign investors to the host country. Minimizing cost of production is one

of the important indicators to answer basic economic problems: How to produce? Thus, inflation rate (INF) always been chosen as a proxy for cost of production as it shows the fluctuation of the price level in host country. Population growth (PG) might influence investment in several aspect such as average propensity to consume and stock of human capital. In this study, relationship between population growth and FDI aspects to be positive.

Data and methodology

Data used in this article were obtained from the World Bank databases to analyse factors influence FDI in CLMV and ASEAN-5 countries for the twenty-year period 1998-2018. Dependent variable is net FDI inflow expressed in US dollar as represented by LFDI and this value was transformed into logarithm value to allow comparability with other variables. As mentioned by ASEAN (2017), factors influence FDI to ASEAN countries was GDP (proxy for market size), labour productivity, trade openness, cost of production and population density. GDP reflects the economic conditions and it gives positive impact to FDI as it reflects potential of the host country as validated by Blonigen (2014 & 2019).

Table 1: Variables with its symbol and definition.

Symbol	Variable	Definition
FDI	Foreign direct investment inflow	Annual amount of FDI, natural log
GDP	Gross domestic product	Annual growth of GDP, natural log
LP	Labour productivity	Annual growth of labour productivity
XM	trade openness	Annual amount of net export over import
PG	population growth	Annual amount of population growth
INF	Inflation rate	Annual amount of inflation rate, GDP delator

Following Asongu (2018), the model specification for this article is as follows:

$$FDI_{i,t} = \alpha + \beta_0 + \beta_1 GDP_{i,t} + \beta_2 LP_{i,t} + \beta_3 XM_{i,t} + \beta_4 PG_{i,t} + \beta_5 INF_{i,t} + \varepsilon_{i,t}$$

i represents the i th country and t represents the year.

This article employed two types of panel data statistic namely static and dynamic model. Static panel data analysis studies time series and cross-sectional data at once. There are two types approaches for static panel data models variation which are random and fixed effect model. In the random effect model, the error term ε_{it} is serially correlated within a unit and λ_i are drawn independently from probability distribution. This is because all observations within a unit have a common component λ_i and its error term become $\varepsilon_{it} = \lambda_i + \mu_{it}$. Meanwhile for fixed effect model, λ_i is treat as a constant/ fixed for each individual. It means, individual specific effects are assumed to be individual specific intercepts, or more crucially when $Cor(\lambda_i, x_{it}) \neq 0$. In the fixed effect model, some unobservable variables are correlated with the independent variables,

Thus, each equation will be as follow:

Random effect model:

$$FDI_{i,t} = \alpha + \beta_0 + \beta_1 GDP_{i,t} + \beta_2 LP_{i,t} + \beta_3 XM_{i,t} + \beta_4 PG_{i,t} + \beta_5 INF_{i,t} + \lambda_{i,t} + \mu_{i,t}$$

Fixed effect model:

$$FDI_{i,t} = (\alpha + \lambda_{i,t}) + \beta_0 + \beta_1 GDP_{i,t} + \beta_2 LP_{i,t} + \beta_3 XM_{i,t} + \beta_4 PG_{i,t} + \beta_5 INF_{i,t} + \mu_{i,t}$$

Results and discussions

The descriptive statistics for ASEAN-5 and CLMV were present in Table 2. From observation, FDI inflow to ASEAN-5 ranged from USD-4.55 billion to USD94.80 billion between 1998 and 2018, with an average of USD13.60 billion and a standard deviation of USD9 billion. While FDI inflow to CLMV ranged from USD0.0045 billion to USD14.1 billion between 1998 and 2018, with an average of USD2.32 billion and a standard deviation of USD3.38 billion. For other significant descriptive statistic can be seen in Table 2.

Table 2: Descriptive statistics for ASEAN 5 and CLMV

	FDI	GDP	INF	XM	LP	PG
ASEAN 5						
Mean	13.6000	285.00	4.06	97.18	46008.66	1.48
Standard deviation	19	225.00	6.28	12.93	43606.51	0.83
Minimum	-4.5500	72.20	-0.90	62.00	11128.88	-1.47
Maximum	94.8000	1040.00	58.45	132.90	152417.9	5.32
CLMV						
Mean	2.3200	40.30	10.92	101.98	6732.50	1.30
Standard deviation	3.3800	55.90	18.68	16.18	2764.54	0.43
Minimum	0.0045	1.28	-1.71	68.13	2208.86	0.61
Maximum	14.1000	245.00	125.27	133.95	13251.36	2.64

Note: List of countries used in this descriptive analysis: Malaysia, Singapore, Indonesia, Thailand, Philippines, Vietnam, Cambodia, Myanmar and Laos.

Table 3: Fixed effects model estimation results

Dependent variable:LFDI						
	CLMV		ASEAN-5		CLMV, ASEAN-5 combined (CA-5)	
	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.
Constant	-19.7051	0.0000	-11.4996	0.0880	-13.2078	0.0000
LGDP	2.0273**	0.0000	1.3577**	0.0020	1.5191**	0.0000
INF	0.0093**	0.0010	0.0410	0.2870	0.0059	0.1520
XM	-0.0235**	0.0000	0.0196*	0.0730	-0.0026	0.6290
LLP	-0.7668**	0.0410	-0.3124	0.8310	-0.2976	0.5030
PG	1.0496**	0.0010	-0.0705	0.5180	0.0198	0.8280
R-squared		0.9203		0.4720		0.6740

*Note: **significant at 5% level, * significant at 10% level*

Hausman test were carried out to determine the appropriate specification either random effect or fixed effect in estimating the model. The p-values of the Chi-square value from the Hausman

test for random effect were less than 0.05. Thus, fixed effect model specification was employed to estimate the panel models. Table 3 represent a summary of the results.

From Table 3, coefficient for GDP was a positive and significant proven that GDP was an important factor attracting FDI inflows to CLMV and ASEAN-5. It also can imply that, if the GDP in CA-5 increased by USD1 billion, the amount of FDI inflows would increase by USD1.5 billion. The sign of INF for these three observations were positive shows that the higher the inflation rate would attract FDI inflows. However, it only shows a significant impact to CLMV. Trade openness, XM had different impact on CLMV and ASEAN 5, where it shows significantly negative impact to CLMV but positively impact on ASEAN-5. XM provide negatively insignificant impact to CA-5. Labour productivity (LP) proved to be negatively influence FDI in CLMV, ASEAN-5 and CA-5, while it only shows a significant impact on CLMV. As expected, population growth, PG had significantly positive impact on CLMV.

Conclusion

Based on observation, gross domestic product, inflation rate, trade openness, labour productivity and population growth provide the most influential role in attracting FDI to CLMV countries while only gross domestic product play important roles to ASEAN-5 countries. In achieving a sustain increase in FDI inflows, the government of CLMV and ASEAN-5 need to guarantee that their countries persistently being attractive for investment. This implies that in each country must develop attractive policies and investment incentive. Population growth by means of labour supply is one of important aspects to influence FDI, at the same time it provides a high amount of consumption to promise a bigger market size. Uncontrol amount of population growth will bring to high dependency to public expenditure. Thus, family planning should be included in government policy to attract more FDI in the future.

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Corruption in Private Schools in Liberia: A Case Study of a Private Secondary School in Bushrod Island Area, Monrovia, Liberia

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Abstract

One of the most destructive acts by man, which dominates and affects all aspects of the human community, is corruption. It attacks the social fabric and harms everyone in its path. Personal growth and national development are suppressed by acts of corruption. Corruption is so ingrained in the moral consciousness of the Liberians' society that only strong moral leadership can make a dent in its eradication. This study investigates the causes in private secondary schools in Bushrod Island in Monrovia, Liberia. The study performed intensive interview as well as observations with the school workers and the community members including principle, teachers, students, parents, community members and community leader. After coding the data and performing a thematic analysis using the Educational Accountability Model the findings reveal that the teachers are the main participants in the acts of corruption. The teachers are considered the main participants in the act of corruption because of the lack of accountability process in the school. As observed in the thematic analysis, Educational Accountability Model helps the workers to correspond with the rules and regulations of the school which, in turn, enables the students to obtain their dreams. The implications of this finding as it relates to other contexts are discussed on Page 3:5

Keywords: *Corruption in Private Secondary Schools, Monrovia, Liberia*

Introduction

Corruption is said to be one of the unconsecrated trinitities of contaminated money and criminal behaviors. [3]It is a very bad practice in our society; because it causes people in the country to stay suffering, miserable, and illiterate. Corruption also causes high dropout rate in school System in Liberia [17; [13]. In addition, corruption causes low income in the country. [19], lack of excellent infrastructure [21], plus efficiency [18], corruption is a thoughtful problem that poor people are facing [9]: and the citizen haven't experience any good expectation from corruption. As [21] suggested that corruption is a world-wide problems. To date, the World Bank has carried out over 600 anti-corruption programs dealing with corruption since 1996 [4].

The Ministry of Education (MOE) delivers the funds and supplies to schools sometimes directly or through district education officers. In that, we experience major shortcomings in the accountability and transparency practices that lead to corruption and leakages.

Corruption in the Liberian school system is considered normal. Teachers demand bribes from students for better grades while a large percentage of girls have sexual encounters with their teachers or administration in exchange for better grades. [12]; - [1]

Corruption in educational sectors had affected many people in Liberia; there is a high illiteracy rate in the country. Parents also give bribe to their kids for them to pass an examination and the Liberia educational system lack of accountability in the school's administration.

Corruption in educational sectors has affected many people in Liberia; there is a high illiteracy rate in the country. Therefore, my study will be providing insight into the phenomena that exist in Liberia's private secondary education system with empirical evidence. Moreover, this research will help to contribute to others researches, in solving the problem of corruption in the educational sectors. Finally, it will raise the awareness of the different stakeholders involve in Liberia's educational system of the existing problem, its effects, possible reforms in curbing this problems that is destroying her educational quality and standards. Because the education system in Liberia has been described as appalling and of poor quality [7].

Literature review

Definition and form of corruption in the school

[16] Corruption is defined in education as “the systematic use of public office for private benefit, whose impact is significant on the availability and quality of educational goods and services as a consequence on access, quality or equity in education”.

According to [20] there are some forms of corruption practices that are available in the Liberian private secondary schools. Some form of corruption practices are as follow;

Parents' Corrupt Practices

This form of practice is functioned via the parents or guardians. They give money to teachers or school's administration for their kids to pass exam and have better grade or be promoted to the next class.

Students' Corrupt Practices

This form of corruption is practice by most students whose uses money to bribe their teachers or supervisors while some female students have sex with school principle, school administrators, teachers or supervisor to expect good grades.

Examination Councils' Corrupt Practices

This form of corruption practice involves the examiners or supervisors. During exam most especially the external examinations, the examiners or the supervisor organize what we call extra time in exam. Student will now put money together and give to them in order for them to have that extra time. [20]

Teachers Corrupt Practices

This type of corruption practice is by the teachers. Teachers demand money from students in order for them to pass exams. In this practice of corruption, teachers also give exam that student will not pass so that students will fail and pay money to them.

Addition form of corruption is where teachers are not being given good salary and teacher will have end of year exam and students must pass this exam in order to be promoted to the next class [11].

Police/Security Officer/Gatekeeper Corrupt Practices

This form of corrupt is mostly practices by the uniform officers, who when assigned to schools or centers for official observing the examination, they take that as an advantage to harass the school or students to settle them with bribes [6].

1. Purposes

- 1) To investigate the factors that contributes to the leakages and accountability failure in the Bushrod Island private school.
- 2) To suggest guideline in order to reduce or eliminate corruption in the private secondary schools in the bushrod island.

2. Conceptual Framework

Conceptual framework is being developed based on the concepts, theories, books, and related research on this study through the review of literature. Using Anderson Model of Educational Accountability as an analytical framework, this study had investigated the accountability failures in details in the selected schools in the Bushrod Island, Liberia. School principal, teachers, and community members including community leaders, parents and students had been interviewed in order to achieve the objectives of this research. The study had investigated corruption in school through bribery, fraud, extortion and favoritism. Not only considering the school's program, school's structure, school's staff and school's strategy rather, it consider also the four form of Anderson educational accountability model;

1. Professional accountability: to ensure that teachers have good integrity and also have good professional skill as a teacher.

2. Hierarchical accountability: to force the principal as the head of the school to stress the employee accountably.

3. Market accountability: to allowed the consumers (parents) to check on the product that they are buying, how the students inquiring good education by constant visiting the school.

4. Public accountability: to involve both parents and community member's participation in the accountability of the school in order for the schools to meet their goals.

These types of accountability will help improved the school with proper accountability in the school's administration within the selected area.

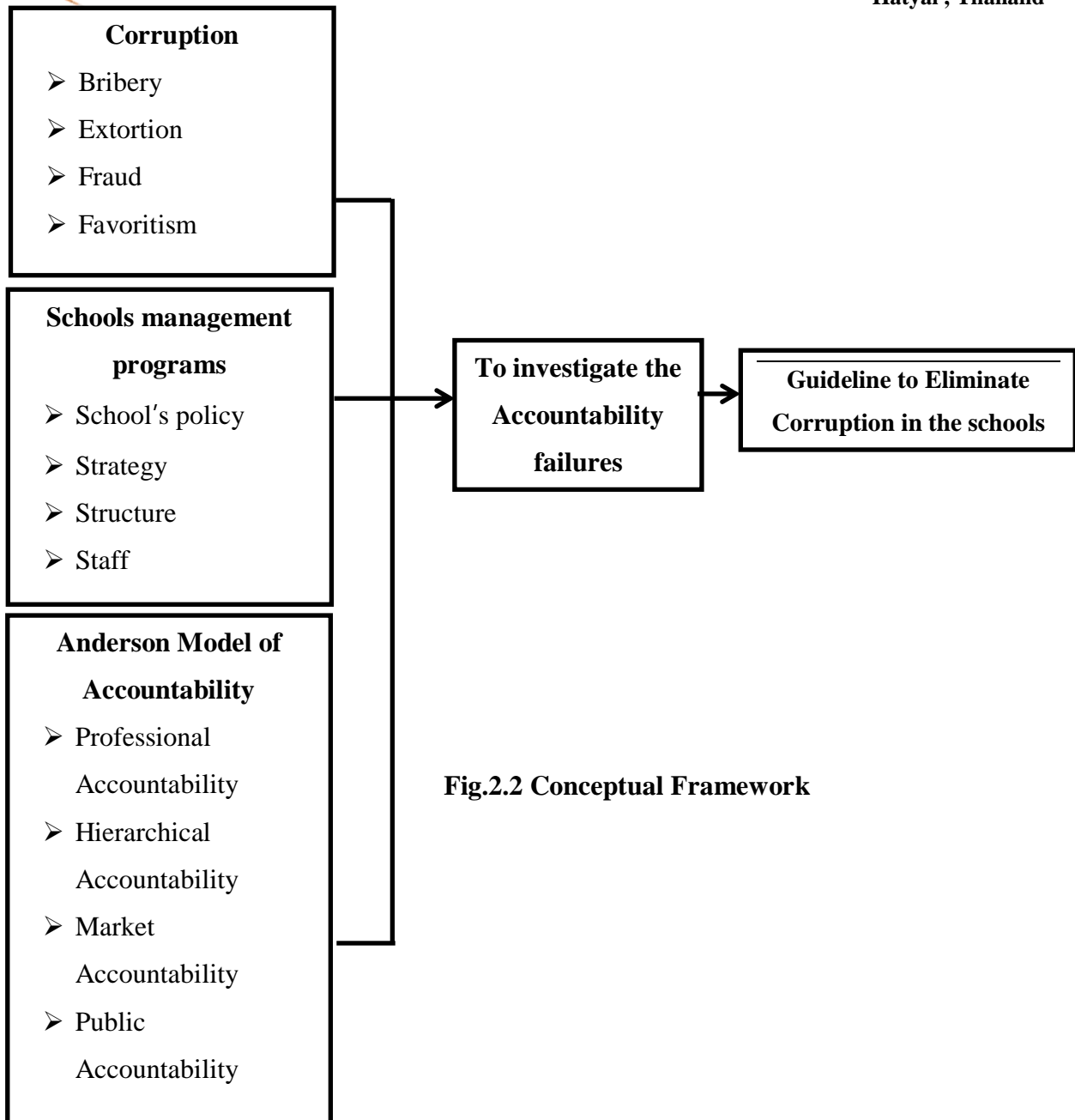


Fig.2.2 Conceptual Framework

3. Benefit of the study

Corruption in educational sectors has affected many people in Liberia; there is a high illiteracy rate in the country. Therefore, my study will be providing insight into the phenomena that exist in Liberia’s private secondary education system with empirical evidence. Moreover, this research will help to contribute to others researches, in solving the Problem of corruption in the educational sectors. Finally, it will raise the awareness of the different stakeholders involve in Liberia’s educational system of the existing problem, its effects, possible reforms in curbing this problems that is destroying her educational quality and standards. Because the education system in Liberia has been described as appalling and of poor quality.

4. Research methodology

This single case study employed a qualitative method research.

Participants

The research used specific selection to provide set of informants who can properly give concrete and necessary information in order to address the problem of corruption in the selected school. There are six (6) groups: 1) school principle, 2) teachers, 3) students, 4) parents, 5) community members and 6) community leader. The total participants are 27 (ten parents, ten community members, five teachers, one community leader, and one principal), including 30 students.

Data collection instruments

As a qualitative method approach was employed, in-depth interview and observation were conducted to collect primary data .The interviews were conducted by interviewers in accordance with the researcher questionnaire base on the objective of the study. In-debt interview are used for in-dept. interviews. Observations involve participation. The method of observation of the researcher is to understand the purpose of observed phenomenon. When researcher was in the school, observe the context of the general condition in the school and community and also observed the social behaviour associated with the study.

After data were collected, interview was conducted with the selected sample size to reinforce primary data .Documents and records were used to collect the secondary data.

First, interview form, second, group discussions, and program activities were used to collect data from the students.

Data analysis Procedures

In this study, the qualitative data was analysed and interpreted based on Anderson Model of Education Accountability analysis .After conducting the interviews, the researcher wrote up the notes, listens to the recorded tapes, and transcribed the Liberia colloquia English

Conversations of the interview .The transcribed materials were then translated into Standard English .The data from interviews, documents and record were coded, and then themes were created for data interpretation .

5. Results

The interviews with the school principle, teachers, parents, community members, community leader and students were essential to carry out the study in the selected school in the Bushrod Island area. The results reveal several causes of corruption in the school which have been grouped into different themes. These include: (i) low salary received by teachers, (ii) teacher's

greed, (iii) parent's participation in the act of corruption, (iv) administration failure to run the school properly, and (v) lack of accountability process in the school.

During the study, one of the main causes of corruption prescribed by the participants was the low salary received by teachers. When teachers receive low salary, there will be a high chance to act in a corrupt way. The principal stated that the government is not supporting private schools in Liberia. The school fees paid by parents cannot run the school and satisfy teachers as well. For this reason, teacher's corrupt practice is high in the school. In order to reduce teacher's corrupt practices, teacher's salary needs to be increased in order to avoid teacher's corrupt practices in the school. [2].

Teachers are very important in student's life. The teacher's job is to give good and quality education to the students. For this reason, they need to be satisfied so that students can obtain their dreams.

Another cause of corruption in the school is greed of teachers. This cause of corruption is far away from the previous one. This one shows the irresponsibility of the teachers. Because teachers are employed to prepare the students for the future, instead, they destroy the students. When teachers demanding money from students in order to pass exams, they are not preparing the students rather destroying them. Since the study proposes Educational Accountability Model and it four types to help reduce corruption in the school. The study suggests Professional Accountability to be implemented in the school. This type of Educational Accountability looks at the behaviour of the teachers. When professional accountability is implied in the school, teachers will have good integrity and responsibility as a teacher.

During the interviewed, it was revealed that parents also involve in the act of corruption in the school. The reasons for involving parents in the act of corruption in the school were, parents give money to students without proper investigation and some parents pay money to teachers in order for their children to pass exam.

The principal's perspective on who is the main participant in the act of corruption. The principal stated that, the main participant in the act of corruption in the school is the teachers alongside the parents. He stated that, teachers are the main participant in the act but parents contribute towards the act. Parents give money to students without proper investigation. Parents need to play major roles in student's education.

Finally, the result reveals administration failure as one of the main causes of corruption in the school. The parent's perspective on the cause of corruption is that the school is run poorly by the administrators of the school. From the parent's perspective on the cause of corruption in the school, it indicated that if the school is run properly by the administrators and accountability process is totally practice in the school, the teachers will have no room in the act of corruption. To avoid administrator's failures, the study suggests the second types of Educational Accountability Model to be implemented to reduce corruption in the school; the Hierarchical Model of Accountability involves the exercise of the principal, community leaders or administrators to stress the employers. It is described as a responsibility to focus on account of the employer. This type of accountability helps the principal to act superiors in the school and also to take legitimate action against any co-workers who is catch in the act of corruption.

The principal needs to observe all process in the school. Mainly, the principal needs to observe the hiring of staff or teachers in the school [10].

6. Recommendations

The organizational structure and administrative procedures in the education system need to be built on principles of accountability and transparency. In order to eliminate corruption in the school, the researcher recommends the following recommendations.

1. Since the study found out that teachers are not satisfied with their salary in the school, the study suggests the Increasing of teacher's salary in the school. According to [2]; [10] When teachers or administrators are satisfied with salary, corruption will be limited in the school system.
2. Parents and Community involvement. To help limit or eliminate corruption in the school, parents and community members involvement is very important in school [2]; [14]; [8]; [15].
3. As head of the institution, the administrators need to run the school properly and take legal actions against any doers in the act of corruption.
4. The school needs to implement accountability process in the school as to allow every workers or students to be accountable for their doing. According to the research, Educational Accountability Model suitable to implicate in all schools in Liberia in order to limit or eliminate corruption in the school system.

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TAHAP DAYA TAHAN PELAJAR SEKOLAH MENENGAH DI MALAYSIA

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Norasmah Othman²

Abstrak

Pendidikan di Malaysia memberi penekanan dan tumpuan terhadap usaha mempersiapkan sikap dan set minda pelajar. Pelajar hendaklah disediakan secukupnya kemahiran-kemahiran untuk menyahut secara efektif dan cerdas kepada apa sahaja cabaran yang timbul pada masa hadapan. Antara agenda yang diberi perhatian adalah berkaitan dengan agenda pembangunan keusahawanan, berdaya tahan, kecerdasan emosi, dan kemahiran berkomunikasi dengan berkesan. Namun, kajian ini membincangkan elemen daya tahan sahaja. Untuk itu, satu kajian telah dijalankan bagi tujuan mengenal pasti tahap daya tahan pelajar sekolah menengah. Kajian ini dilaksanakan secara tinjauan dengan menggunakan soal selidik sebagai instrumen. Seramai 442 pelajar sekolah menengah harian yang dipilih secara rawak telah dilibatkan dalam kajian. Hasil kajian melaporkan bahawa tahap daya tahan pelajar sekolah menengah adalah pada tahap sederhana tinggi. Daripada enam konstruk daya tahan yang diuji, konstruk kerohanian mencatatkan skor min tertinggi sementara konstruk yang mempunyai skor min terendah ialah konstruk penyelesaian masalah. Hal ini menunjukkan bahawa secara purata pelajar sekolah menengah memiliki daya tahan dan mampu untuk mengatasi cabaran dan halangan dalam kehidupan sebagai seorang pelajar.

KataKunci: *Daya Tahan; Pelajar Sekolah Menengah; Sekolah Menengah Harian, Soal Selidik.*

PENGENALAN

Transformasi kurikulum pendidikan dalam Pelan Pembangunan Pendidikan Malaysia (PPPM) 2013-2025 memberi penekanan utama terhadap konsep kemahiran berfikir aras tinggi (KBAT) yang berupaya melahirkan generasi berdaya tahan dan berkeupayaan dalam pemikiran kritis dan kreatif. Namun, kajian yang dilakukan oleh Nasyimah & Zamri (2016) menunjukkan bahawa guru banyak mengemukakan soalan yang tertumpu kepada aras rendah sahaja, iaitu pengetahuan dan kefahaman sahaja. Guru didapati kurang mengemukakan soalan aras tinggi dalam menguji kemahiran berfikir pelajar. Hal ini secara tidak langsung menunjukkan bahawa guru tidak menekankan komponen KBAT dan kurang menyediakan peluang bagi pelajar untuk menguasai kemahiran berfikir sedangkan KBAT dapat membantu pelajar membina keupayaan pelajar berfikir secara kritikal (Siti Nurliyana, 2015). Masalah ini jika dibiarkan berterusan menyebabkan pelajar yang dihasilkan tidak mencapai matlamat seperti yang diharapkan oleh pihak Kementerian Pendidikan Malaysia.

Masalah pelajar berpunca daripada keluarga bermasalah, ketiadaan sokongan dan galakan afektif untuk membangunkan autonomi, harga diri yang rendah, gangguan kognitif yang tinggi, sokongan sosial yang rendah dari rakan-rakan dan masalah pembelajaran dalam akademik (Marcotte, Villatte & Potvin 2014). Pelajar-pelajar ini adalah individu yang mempunyai tahap daya tahan psikologi yang rendah (Wang, Nan, & Zhang, 2017). Ini disebabkan kekurangan pembangunan kompetensi dan daya tahan dalam kalangan pelajar melalui kesihatan mental (Yamamoto, Matsumoto, & Bernard, 2017). Terdapat lima set utama kecekapan kognitif dan tingkah laku yang saling berkaitan untuk pelajar, termasuk kesedaran diri, pengurusan diri, kesedaran sosial, kemahiran hubungan, dan membuat keputusan yang bertanggungjawab

(CASEL, 2015). Justeru itu, pelajar perlu diterapkan dengan kemahiran-kemahiran yang meningkatkan daya tahankerana daya tahan adalah benteng kepada pelajar dalam mengharungi cabaran dunia kini.

Ketahanan merupakan keupayaan untuk mengatasi kesukaran (McAllister & McKinnon 2009). Selain itu daya tahan juga dapat melihat kemampuan seseorang untuk terus komited dalam melaksanakan tugas walaupun menghadapi kesukaran dan halanagan (Indeks Belia Malaysia 2015). Werner & Smith (1982) berpendapat individu yang berdaya tahan sebagai seorang yang melawan jangkaan, bertahan dan menjaga diri dari pelbagai peristiwa buruk yang berlaku di sekitarnya. Justeru itu, daya tahan diperlukan oleh pelajar masa kini agar mereka dapat bertahan dengan cabaran yang dihadapi seterusnya menukarkan sesuatu perkara secara positif.

LATAR BELAKANG KAJIAN

Kegagalan dalam hidup boleh menjadi pengalaman yang sukar untuk dihadapi seseorang. Ini akan menyebabkan perubahan yang ketara dan tindak balas yang tidak menentu. Hal ini menjadikan para penyelidik semakin berminat untuk memahami bagaimana seseorang dapat menyesuaikan diri serta bangkit dari situasi sukar dalam kehidupan. Perkataan daya tahan berasal daripada perkataan Latin *resilio* yang bermaksud untuk bangun semula (Klein et al. 2003). Menurut Tugade, Fredrickson & Barrett (2004) daya tahan adalah keberkesanan menghadapi penyakit dan membuat penyesuaian walaupun berhadapan dengan kehilangan, kesusahan atau kesukaran. Manakala Zolkoski & Bullock (2012) pula menyatakan ketahanan adalah satu kesimpulan dan pembinaan kontekstual yang memerlukan dua jenis punca utama. Pertama, mesti ada ancaman kepada perkembangan individu. Kedua, mesti terdapat bahaya semasa atau masa lalu yang berpotensi untuk mengganggu perkembangan normal. Dengan kata lain, terdapat sesuatu risiko yang berlaku dahulu untuk menguji ketahanan individu.

McAllister & McKinnon (2009) mendefinisikan daya tahan sebagai keupayaan untuk mengatasi kesukaran dan bagaimana seseorang belajar untuk bertambah kuat dari pengalaman lalu. Ketahanan merupakan keupayaan untuk menghadapi kesukaran dengan menghasilkan tindakan yang positif (Guihard et al., 2017). Selain itu, daya tahan dapat melihat kemampuan seseorang untuk terus komited dalam melaksanakan sesuatu walaupun menempuh pelbagai cabaran atau halangan (Indeks Belia Malaysia 2015). Oleh itu, seseorang yang berdaya tahan dapat bertahan, melawan dan dapat menjaga diri dari pelbagai peristiwa buruk yang berlaku di sekitarnya. Justeru itu, daya tahan diperlukan oleh pelajar masa kini agar mereka dapat bertahan dengan cabaran yang dihadapi seterusnya menukarkan sesuatu perkara secara positif.

Aspek daya tahan perlu difokuskan kerana elemen ini mempunyai kepentingan dalam melahirkan modal insan yang mampu bersaing di arus global. Berdasarkan Indeks Belia Malaysia (2015) tahap daya tahan (belia awal 15 hingga 18) berada pada tahap sederhana dengan skor min daya tahan (72.20). Elemen daya saing dan daya tahan perlu dibina dalam diri pelajar pada peringkat awal menerusi aktiviti-aktiviti pembelajaran (Norasmah, Khairul Khairiahyah, & Hariyaty, 2015). Penerapan nilai daya tahan perlu diterapkan dari peringkat sekolah agar pelajar tidak ketinggalan dan bermasalah apabila mengikuti pengajian di peringkat lebih tinggi atau menceburi bidang kerjaya selepas tamat pelajaran di peringkat sekolah. Ketahanan diri diperlukan untuk pembentukan modal insan (Nurazimah & Kamin, 2013) yang seharusnya menjadi agenda utama dalam menangani isu kualiti generasi pelajar yang semakin hari semakin membimbangkan.

METODOLOGI

Kajian ini berbentuk tinjauan dengan menggunakan pendekatan kuantitatif. Kajian ini melibatkan pelajar tingkatan empat di sekolah menengah harian di negeri Selangor, Malaysia.

Berdasarkan perangkaan pendidikan negara tahun 2017, populasi bagi pelajar tingkatan empat di negeri Selangor adalah seramai 68,308 pelajar (Kementerian Pendidikan Malaysia, 2016). Pemilihan sampel dibuat secara dua peringkat. Peringkat pertama adalah sekolah distratakan mengikut Pejabat Pendidikan Daerah (PPD). Seterusnya, peringkat kedua, sampel kajian diambil secara rawak seramai 442 responden. Bagi menjamin kutipan data mencukupi, jumlah sampel yang terlibat dengan kajian ini melebihi saiz yang dicadangkan oleh Krejcie and Morgan iaitu seramai 382 responden.

Instrumen yang digunakan dalam kajian ini merupakan instrumen daya tahan yang telah dibina oleh Norasmah et al. (2014). Ia terbahagi kepada dua bahagian, iaitu Bahagian A: (empat item), bertujuan mengumpul maklumat latar belakang responden. Bahagian B (29 item) yang terdiri daripada enam konstruk. Konstruk pertama kemahiran sosial (5 item). Konstruk kedua ialah penyelesaian masalah (5 item). Konstruk ketiga ialah autonomi (4 item). Konstruk keempat ialah optimis (5 item). Konstruk kelima ialah humor (6 item) dan konstruk terakhir ialah kerohanian (4 item). Soal selidik ini diukur dengan menggunakan skala Likert lima mata iaitu dari 1 = Sangat Tidak Setuju kepada 5 = Sangat Setuju. Instrumen daya tahan yang diadaptasi ini ialah instrumen yang telah memperoleh kesahan dan kebolehpercayaan item yang tinggi iaitu nilai kesahan melebihi 0.4 dan nilai Cronbach Alpha 0.89. Bagi menganalisis tahap daya tahan pula, Jadual 1 adalah dirujuk.

JADUAL 1. Interpretasi skor min

Bil	Skala Skor Min	Interpretasi Tahap
1.	1.00 hingga 2.00	Rendah
2.	2.01 hingga 3.00	Sederhana Rendah
3.	3.01 hingga 4.00	Sederhana Tinggi
4	4.01 hingga 5.00	Tinggi

Sumber: Norasmah & Sabariah (2005)

Profil Responden

Jadual 2 menunjukkan profil demografi responden. Seramai 442 responden terlibat dalam kajian. Taburan responden berdasarkan kategori jantina menunjukkan jumlah responden lelaki adalah sebanyak 181 orang (41.0%) dan responden perempuan sebanyak 261 orang (59.0%). Bagi kategori aliran subjek pula, responden yang berada dalam aliran Sains Tulen adalah sebanyak 141 orang (31.9%), aliran Sains Sosial sebanyak 257 orang (58.1%) dan aliran teknikal dan lain-lain adalah sebanyak 44 orang (10.0%).

JADUAL 2. Profil demografi responden

Profil Demografi	Kategori	Frekuensi	Peratus (%)
Jantina	Lelaki	181	41.0
	Perempuan	261	59.0
Aliran Subjek	Sains Tulen	141	31.9
	Sains sosial	257	58.1
	Lain-lain	44	10.0

DAPATAN DAN PERBINCANGAN

Dapatan kajian ini membincangkan tahap daya tahan pelajar sekolah menengah bagi menjawab objektif kajian.

OBJEKTIF PERTAMA: TAHAP DAYA TAHAN PELAJAR SEKOLAH MENENGAH

Bagi menganalisis tahap daya tahan pelajar sekolah menengah, enam konstruk daya tahan telah digunakan. Konstruk tersebut adalah kemahiran sosial, penyelesaian masalah, autonomi, optimis, humor dan kerohanian. Jadual 3 menunjukkan hasil analisis tersebut.

JADUAL 3. Tahap daya tahan pelajar sekolah menengah

Item	Pernyataan	Min	Sp	Interpretasi Tahap
1.	Kemahiran Sosial	3.94	0.57	Sederhana Tinggi
2.	Penyelesaian Masalah	3.58	0.58	Sederhana Tinggi
3.	Autonomi	3.76	0.63	Sederhana Tinggi
4.	Optimis	3.85	0.63	Sederhana Tinggi
5.	Humor	3.73	0.72	Sederhana Tinggi
6.	Kerohanian	4.21	0.80	Tinggi
	Keseluruhan	3.84	0.48	Sederhana Tinggi

Berdasarkan jadual 3, secara keseluruhan tahap daya tahan pelajar sekolah menengah adalah pada tahap sederhana tinggi dengan nilai min 3.84 dan sisihan piawai 0.48. Hasil kajian ini selari dengan dapatan kajian Hariyaty (2014) dan Norasmah (2017) apabila hasil kajian mendapati daya tahan pelajar juga berada pada tahap sederhana tinggi. Secara amnya, kesemua konstruk dalam jadual 3 menunjukkan skor min di antara 3.58 (sederhana tinggi) hingga 4.21 (tinggi). Konstruk yang mempunyai skor min yang tertinggi ialah konstruk kerohanian dengan skor min = 4.21 manakala skor paling rendah ialah konstruk penyelesaian masalah dengan skor min 3.58.

JADUAL 4. Konstruk kerohanian

Item	Pernyataan	1	2	3	4	5
26.	Saya bergantung kepada Tuhan untuk mengawal kehidupan saya.	102 (2.3 %)	26 (5.9 %)	108 (24.4 %)	143 (32.4 %)	155 (35.1 %)
27.	Saya tahu Tuhan sentiasa ada memberi pertolongan	5 (1.1 %)	12 (2.7 %)	67 (15.2 %)	122 (27.6 %)	236 (53.4 %)
28.	Saya yakin apa yang berlaku pada saya, ada hikmahnya.	2 (0.5 %)	11 (2.5 %)	69 (15.6 %)	121 (27.4 %)	239 (54.1 %)
29.	Selepas berdoa kepada Tuhan, saya rasa kuat/bersemangat.	41 (0.9 %)	12 (2.7 %)	72 (16.3 %)	120 (27.1 %)	234 (52.9 %)

Jadual 4 memperincikan item didalam konstruk kerohanian. Item yang paling menyumbang kepada nilai peratus tinggi adalah item 27, "Saya tahu Tuhan sentiasa ada memberi pertolongan" dengan 70% responden sangat bersetuju diikuti dengan item 28 dan item 29 dengan nilai 67.5% dan 62.5%. Hal ini bermakna pelajar mempunyai kekuatan jiwa yang tinggi dalam pegangan kepada kepercayaan dan agama. Kekuatan yang dimiliki dapat mendorong pelajar untuk bertindak ke arah positif bagi mengembangkan potensi diri untuk berjaya. Dapatan ini juga selari dengan kajian Nordiyana Athirah (2015), apabila beliau juga mendapati bahawa pelajar berada pada tahap yang tinggi dalam konstruk Kerohanian. Mohd Zain, Asyraf & Mohd Rafi (2015) menjelaskan ketahanan diri pelajar yang tinggi akan menjadi benteng

yang kukuh bagi mengengkang diri pelajar terjerumus kepada masalah sosial. Selain itu, ia juga mempengaruhi motivasi serta membina keyakinan dan ketahanan diri seseorang. Justeru, dapatan kajian ini mendapati pelajar yang berpegang kepada prinsip akhlak dan kepercayaan akan lebih bertanggungjawab sehingga membawa kejayaan kepada kehidupan mereka.

JADUAL 5. Konstruk penyelesaian masalah

Item	Pernyataan	1	2	3	4	5
6.	Saya bertindak cepat apabila berhadapan dengan krisis.	3 (0.7 %)	22 (5.0 %)	200 (45.2 %)	168 (38.0 %)	49 (11.1 %)
7.	Saya bertindak pada masa yang sesuai.	1 (0.2 %)	16 (3.6 %)	159 (36.0 %)	215 (48.6 %)	51 (11.5 %)
8.	Saya sentiasa merancang aktiviti yang saya lakukan.	3 (0.7 %)	25 (5.7 %)	177 (40.0 %)	171 (38.7 %)	66 (4.9 %)
9.	Saya sentiasa memiliki keyakinan untuk bertindak meskipun kemungkinan idea saya ditolak oleh pihak lain.	2 (0.5 %)	27 (6.1 %)	180 (40.7 %)	175 (39.6 %)	58 (13.1 %)
10.	Saya sentiasa menyempurnakan sesuatu tugas dengan segera walaupun tiada tekanan.	4 (0.9 %)	33 (7.5 %)	199 (45.0 %)	158 (35.7 %)	48 (10.9 %)

Jadual 5 konstruk yang menunjukkan nilai skor min yang paling rendah adalah konstruk penyelesaian masalah yang mencatatkan nilai min = 3.76. Dengan merujuk jadual 5, item dalam konstruk penyelesaian masalah yang mencatat nilai peratus paling rendah ialah item 10 "Saya sentiasa menyempurnakan sesuatu tugas dengan segera walaupun tiada tekanan" dengan 12.5% pelajar memilih tidak setuju. Manakala tiga item lagi iaitu item 6, Item 7 dan item 9 (2.5%) mencatatkan 2.5% pelajar tidak setuju. Namun, pelajar yang menjawab setuju dan sangat setuju masih tinggi berbanding tidak setuju dan sangat tidak setuju. Oleh itu, pelajar masih mempunyai tahap penyelesaian masalah yang tinggi dan dapat membuat interprestasi serta menilai secara berkesan sesuatu tindakan yang dilakukan. seterusnya, ia dapat mempengaruhi tingkah laku pelajar secara positif. Ini selari dengan dapatan Nordiyana athirah (2015) iaitu keputusan kajian beliau menyatakan pelajar berada pada tahap sederhana tinggi bagi konstruk penyelesaian masalah. Pelajar perlu ditekankan dengan proses penyelesaian masalah bagi meningkatkan kefahaman dan memperkukuhkan proses pembelajaran. Pelajar yang mahir berfikir akan dapat memindahkan kemahiran yang dipelajari dengan mengaplikasikan kepada situasi sebenar dalam kehidupan (Nasyimah & Zamri, 2016). Oleh itu, pelajar perlu ditekankan dengan pendekatan pembelajaran yang pelbagai untuk meningkatkan tahap penyelesaian masalah bagi menjana kemahiran insaniah pelajar seterusnya melahirkan modal insan negara yang berkualiti.

JADUAL 6. Konstruk optimis

Item	Pernyataan	1	2	3	4	5
15.	Saya merasa hidup saya sungguh bermakna.	10 (2.3 %)	15 (3.4 %)	119 (26.9 %)	189 (42.8 %)	109 (24.7 %)
16.	Saya boleh menyesuaikan diri dengan persekitaran sosial yang baharu.	4 (0.9 %)	26 (5.9 %)	124 (28.1 %)	204 (46.2 %)	84 (19.0 %)
17.	Saya mampu memotivasikan diri untuk mencapai prestasi cemerlang.	2 (0.5 %)	14 (3.2 %)	129 (29.2 %)	213 (48.2 %)	84 (19.0 %)
18.	Saya mencari pelbagai alternatif untuk mencapai matlamat.	2 (0.5 %)	16 (3.6 %)	133 (30.1 %)	197 (44.6 %)	94 (21.3 %)
19.	Saya yakin bahawa semua perkara akan menjadi baik.	1 (0.2 %)	15 (3.4 %)	101 (22.9 %)	195 (44.1 %)	130 (29.4 %)

Skor min yang dipaparkan oleh item optimis adalah di antara 3.98 hingga 4.13 (Jadual 3). Manakala jadual 6 memaparkan semua item yang terdapat dalam dimensi optimis. Secara keseluruhannya, nilai peratus yang dipaparkan menunjukkan kesemua item bagi dimensi optimis berada pada tahap tinggi iaitu 77.5% ke atas apabila pelajar memilih bersetuju dan sangat bersetuju dengan item 15 (85%), item 16 dan item 17 (77.5%), Item 18 (80%) dan item 19 (87.5%). Hal ini membuktikan bahawa pelajar sekolah menengah mempunyai wawasan masa depan dan bermotivasi serta positif dalam menerima kehidupan mereka.

Dapatan ini disokong oleh kajian yang dibuat oleh Singh & Jha (2013) apabila mereka mendapati sikap optimis mempunyai hubungan positif dengan keyakinan dan pencapaian akademik pelajar. Oleh itu, pelajar perlu terlibat dengan motivasi dan komitmen yang tinggi supaya tahap optimis mereka lebih tinggi dan dapat bertahan menghadapi kesukaran dan kegagalan seterusnya mengembangkan potensi mereka agar terus berkembang. Dengannya nanti pelajar lebih berdaya tahan terhadap kehidupan dan mengambil pandangan yang lebih positif terhadap sesuatu perkara (Ayala & Manzano, 2014).

JADUAL 7. Konstruk kemahiran sosial

Item	Pernyataan	1	2	3	4	5
1.	Saya boleh bekerjasama dengan sesiapa sahaja tanpa mengira bangsa dan agama.	2 (0.5 %)	14 (3.2 %)	82 (18.6 %)	204 (46.2 %)	140 (31.7 %)
2.	Saya bekerjasama dengan orang sekeliling saya.		13 (2.9 %)	78 (17.6 %)	239 (54.1 %)	112 (25.3 %)
3.	Saya selalu memaafkan kesalahan orang lain.	4 (0.9 %)	13 (2.9 %)	117 (26.5 %)	205 (46.4 %)	103 (23.3 %)

4.	Saya mempunyai hubungan yang baik dengan orang lain.	8 (1.8 %)	115 (26.0 %)	216 (48.9 %)	103 (23.3 %)	
5.	Saya mudah mendapatkan kerjasama daripada orang lain.	4 (0.9 %)	10 (2.3 %)	143 (32.4 %)	205 (46.4 %)	80 (18.1 %)

Jadual 7 memaparkan semua item yang terdapat dalam dimensi kemahiran sosial. Bagi item 2 dan item 3 sahaja pelajar memilih tidak setuju namun dengan peratus yang rendah iaitu 2.5%. secara keseluruhan pelajar memilih setuju dan sangat setuju dengan nilai peratus melebihi 62.5%. Hal ini membuktikan bahawa pelajar mempunyai kemahiran sosial yang memberansangkan dan dapat disimpulkan bahawa pelajar boleh berhubung dengan orang lain secara positif. Nordiyana athirah (2015) mendapati pelajar mempunyai keupayaan untuk bekerjasama dan berhubung dengan orang persekitaran mereka dengan berkesan. Keupayaan bekerjasama dalam kumpulan pelajar boleh meyelesaikan permasalahan dan konflik yang timbul (Lee, Huh, & Reigeluth, 2015). Selain itu, kemajuan teknologi komunikasi masa kini juga menjadikan kemahiran sosial lebih mudah untuk kekal berhubung dengan rakan-rakan dan orang sekeliling. Justeru itu, Kemahiran sosial perlu dilatih dikalangan pelajar agar dapat meningkatkan tahap daya tahan seterusnya menggalakkan prestasi akademik pelajar.

JADUAL 8. Konstruk autonomi

Item	Pernyataan	1	2	3	4	5
11.	Saya tabah menghadapi setiap kesusahan.	3 (0.7 %)	16 (3.6 %)	131 (29.6 %)	205 (46.4 %)	87 (19.7 %)
12.	Saya memiliki ketabahan diri yang tinggi.		28 (6.3 %)	174 (39.4 %)	171 (38.7 %)	69 (15.6 %)
13.	Saya seorang yang berdikari.	1 (0.2 %)	20 (4.5 %)	139 (31.4 %)	200 (45.2 %)	82 (18.6 %)
14.	Saya tidak mudah patah semangat jika berlaku kegagalan	2 (0.5 %)	23 (5.2 %)	124 (28.1 %)	195 (44.1 %)	98 (22.2 %)

Seterusnya, Jadual 8 merupakan item-item yang terdapat dalam dimensi autonomi. Peratus pelajar yang bersetuju dan sangat bersetuju yang dipaparkan oleh item autonomiadalah di antara 67.5% hingga 70%. Kesemua item menunjukkan tahap sederhana tinggi. Ini bermaksud pelajar sekolah menengah mempunyai efikasi sendiri, kesedaran diri dan berkeupayaan untuk bertindak sendirian pada tahap sederhana tinggi. Dapatan ini selari dengan dengan kajian Griffin (2016) bahawa pelajar yang mempunyai sokongan autonomi yang tinggi boleh membawa kepada peningkatan persepsi tentang pengajaran dalam kelas serta meningkatkan motivasi pembelajaran mereka. Seterusnya pelajar berupaya berdikari dalam kehidupan mereka (Nordiyana athirah 2015). Oleh itu, pembentukan sikap autonomi pelajar perlu diterapkan dalam kelas dengan membina keyakinan diri pelajar melalui proses pembelajaran berpusatkan pelajar. Selain itu, pelajar dapat menentukan matlamat pembelajaran dan menilai kemajuan ke atas matlamat yang ingin dicapai. Apabila pelajar diberikan pilihan untuk menentukan

pengalaman pembelajaran yang bermakna kepada mereka, pelajar akan mendapat rasa tanggungjawab serta merasa harga diri mereka dihargai.

JADUAL 9. Konstruk humor

Item	Pernyataan	1	2	3	4	5
20.	Saya kerap membuat orang lain ketawa.	11 (2.5 %)	24 (5.4 %)	138 (31.2 %)	151 (34.2 %)	118 (26.7 %)
21.	Saya boleh meredakan keadaan yang tegang dengan mengatakan sesuatu yang lucu.	5 (1.1 %)	32 (7.2 %)	157 (35.5 %)	150 (33.9 %)	98 (22.2 %)
22.	Saya boleh bercakap dengan gaya tersendiri sehingga membuatkan orang lain ketawa.	5 (1.1 %)	25 (5.7 %)	139 (31.4 %)	147 (33.3 %)	126 (28.5 %)
23.	Saya selalu memikirkan perkara humor untuk mengurangkan tekanan.	3 (0.7 %)	30 (6.8 %)	132 (29.9 %)	181 (41.0 %)	96 (21.7 %)
24.	Penggunaan humor membantu saya mengatasi keadaan sukar.	7 (1.6 %)	25 (5.7 %)	143 (32.4 %)	172 (38.9 %)	95 (21.5 %)
25.	Orang lain mengatakan bahawa saya bercakap perkara-perkara yang melucukan.	8 (1.8 %)	36 (8.1 %)	180 (40.7 %)	126 (28.5 %)	92 (20.8 %)

Jadual 9 memaparkan semua item yang terdapat dalam dimensi humor. Lebih 50% pelajar memilih bersetuju dan sangat bersetuju. Hal ini membuktikan bahawa pelajar sekolah menengah mempunyai kebolehan meminimumkan rasa kesukaran dan tekanan dengan humor. Pelajar berkebolehan meredakan keadaan yang tegang dengan mengatakan sesuatu yang lucu serta dapat menghiburkan orang lain. Savage et al. (2017) mendapati humor apabila digunakan secara berkesan, ia boleh membina hubungan dan meningkatkan prestasi. Khususnya, humor meningkatkan prestasi pelajar dengan menarik dan mengekalkan perhatian, mengurangkan kebimbangan, meningkatkan penyertaan, dan meningkatkan motivasi. Ini menunjukkan bahawa humor membolehkan pelajar berdepan dengan sebarang cabaran dan tekanan Nordiyana athirah (2015). Selain itu, humor juga meningkatkan diri supaya cenderung untuk mewujudkan manfaat yang konsisten dalam mencapai daya tahan terhadap tekanan (Cheung & Yue 2012). Gaya humor akan cenderung mempengaruhi penyesuaian atau ketahanan dalam cara yang sangat berbeza seperti memikirkan sesuatu yang lucu. Menurut Ford, Lappi & Holden (2016) seseorang yang bahagia biasanya terlibat dalam penggunaan humor yang positif dalam kehidupan seharian. Justeru pelajar yang mempunyai tahap humor yang tinggi dapat menghalangi suasana yang tertekan dan cenderung mewujudkan suasana yang lebih selesa.

KESIMPULAN

Secara keseluruhan, hasil kajian ini mendapati bahawa tahap daya tahan pelajar sekolah menengah berada pada tahap sederhana tinggi. Dapatan ini menunjukkan bahawa daya tahan pelajar adalah pada tahap yang boleh dibanggakan, namun masih terdapat ruang yang boleh diperbaiki agar peningkatan tahap daya tahan dapat menjadikan warga pelajar lebih berdaya saing dan berdaya maju dalam menghadapi dunia kian mencabar. Daya tahan yang tinggi akan membantu pelajar menyerap tekanan dan gangguan kemurungan. Dengan menyediakan pengalaman yang meningkatkan daya tahan kepada pelajar. Mereka akan mampu menyesuaikan diri walaupun konteks kesukaran yang dihadapi adalah besar. Dapatan yang diperolehi daripada enam konstruk yang diperolehi, konstruk kerohanian memainkan peranan penting dalam melahirkan generasi yang mampu berdaya tahan dengan cabaran dan halangan yang dihadapi dan bangkit dari kesulitan dan kesukaran hidup. Justeru, elemen daya tahan perlu dibina dalam diri pelajar pada peringkat awal lagi seperti di peringkat sekolah rendah kerana ini diyakini mampu menyuntik sikap daya tahan dalam diri pelajar, terutamanya dalam aktiviti-aktiviti pembelajaran yang menerapkan elemen ketahanan mental dan fizikal.

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CONCEPTS AND ISSUES ON INCLUSIVE EDUCATION BY THE TEACHERS AT FRANCISCO ORINGO SR. ELEMENTARY SCHOOL

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Abstract :

This study determined the perception of the teachers at Francisco Oringo Sr. Elementary School on the concepts and issues of inclusive education which served as the basis in formulating an intervention plan. Using descriptive and quantitative methods, thirty six respondents were asked to fill out a three-part questionnaire that determined their socio-demographic profiles (age, gender, educational attainment, number of years in teaching, number of years in teaching students with disabilities, and seminars/trainings attended related to special education), level of implementation of the inclusive education in teaching, relationship between the respondents' identified profiles and their perception on the implementation of inclusive education in teaching, and challenges faced by the teachers in inclusive education. Descriptive and inferential statistics were used to aid in the analysis and interpretation of the data that were gathered. The hypotheses were tested at 0.05 significance level. Descriptive statistics including rank, frequencies, and percentage were used to describe the profile of the respondents. For the level of implementation on inclusive education, weighted mean was used. For challenges faced in an inclusive class, each item was tallied separately. Hence, only frequencies and percentages were used. On the relationship of profile and perception, the Chi-Square test was used. Results revealed that the respondents generally agreed with the statements related to inclusive education, with 12 of the 20 statements on the positive side. It also revealed that there was no significant relationship in each of the six demographic profiles identified and the perception of the respondents on the concepts and issues on inclusive education in teaching. Finally, some challenges in inclusive education were revealed. It includes lack of special education teachers, facilities for special care, special education classes and appropriate resources.

Keywords: *Special Education, Inclusive Education, Experimental Research, General Santos City, Philippines*

Introduction

Although there are different viewpoints, inclusion is a philosophy that implies the complete acceptance of a student with a disability in a regular class. Many academics and professionals have argued that inclusion is necessary in a modern classroom setting. Foreman and Arthur-Kelly (2008) described inclusion as an effective way to promote an inclusive, welcoming, non-discriminatory, and open education for each student.

Almost 30 years of research and experience has demonstrated that the education of children with disabilities can be made more effective by having high expectations for such children and ensuring their access to the general education curriculum in the regular classroom. This was one of the bases in passing the Individuals with Disabilities Education Act (IDEA) as a law in the United States in 2004. The law requires that the student be placed in the least restrictive environment, or LRE, and has high priority on the student's participation in the general education curriculum, alongside students without special needs (Rosenberg, Westling, & McLeskey, 2008).

Inclusion of students with disabilities in general education classrooms has stimulated great debate in education (Algozzine, et.al, 2012). Some researches revealed the benefits of an inclusive classroom setting for students with disabilities. The percentage of students making comparable or greater than average academic progress when compared to students without disabilities indicates a pattern in favor of inclusive settings (Waldron, N., et al, 2004). In contrary, Siperstein, et al., 2007 said that studies have shown that even though students are being placed in the same classroom, their opinions and social interactions outside of the classroom has not changed.

Teachers also have varied perceptions on inclusive education. Downing and Peckham-Hardin (2007) revealed that there is willingness on the part of 61% of classroom teachers to work in an inclusion classroom, but the teachers campaigned for appropriate preparation and resources to know how to work with students who had severe or moderate disabilities.

In a study conducted by Newton, N., et al., 2014 on the perception of teachers in Bahamas on special education, the results were mixed. At the primary level, 60% of the teachers demonstrated negative attitudes towards the implementation of inclusive education within primary schools. In contrary, teachers at the high school level demonstrated moderately positive attitudes toward inclusion.

Both special and general education teachers are required to "fundamentally shift" their roles in an inclusive school" (Dukes & Dukes, 2005). These teachers need to work together to create the best possible setting, not only for the special education student, but also for all the students in the classroom.

Among the problems faced by general education teachers in an inclusive classroom is confusion. Many educators asked questions about the responsibilities of those who taught in inclusion classrooms and expressed feelings of concern for what was best for all students (Pugach & Winn, 2011). Teachers generally lacked confidence as they attempted to include students with disabilities into classes. There is no progress if there are challenges encountered and this leads to a negative attitude of teachers towards the program. (Thawala, S., 2015).

In the Philippines, the Department of Education is the implementing arm of all programs related to special education. "In line with the Department's thrust in providing quality and inclusive basic education for all, the Department of Education (DepEd) continues to provide the necessary educational interventions for learners with certain exceptionalities through its Special Education (Sped) program. To date, DepEd has recognized a total of 648 Sped Centers and regular schools offering the program—471 of which are catering to elementary students

and 177 are catering to High School students (Lacson, M., 2017 <https://www.sunstar.com.ph/article/128141>).

The Special Education program of the Department of Education provides a holistic approach in catering to the needs of various learners with exceptionalities to address their individual needs.

Francisco Oringo Sr. Elementary School adheres to the idea of inclusive education as a government school under the umbrella of the Department of Education. The school also adheres to the mission of the Department of Education which is to have Filipinos who passionately love their country and whose values and competencies enable them to realize their full potential and contribute meaningfully to building the nation. The Department is also mandated to formulate, implement, and coordinate policies, plans, programs and projects in the areas of formal and non-formal basic education in all elementary and secondary education institutions, including alternative learning systems, encompassing special education.

Given these reasons, it was imperative to take a closer look at the teachers of Francisco Oringo Sr. Elementary School, and determine their perception on the concepts and issues on inclusive education. Furthermore, the teachers were asked to provide information on the most common challenges they face while teaching in an inclusive classroom setting. The results of the study were then used as a basis in determining an intervention program.

Literature Review

Inclusive Education. The Wisconsin Education Association Council (WEAC) defines inclusion as “a term which expresses commitment to educate each child, to the maximum extent appropriate, in the school and classroom he or she would otherwise attend.”

In the Index for Inclusion (Booth and Ainscow, 2002), inclusion is seen as an ideal, something for schools to aspire to and move towards. Inclusion in education is defined as valuing all students and staff equally, increasing the participation of students in, and reducing their exclusion from, the cultures, curricula and communities of local schools, restructuring the cultures, policies and practices in schools so that they respond to the diversity of students in the locality, reducing barriers to learning and participation for all students not only those with impairments or those who are categorized as 'having special educational needs', fostering mutually sustaining relationships between schools and communities and recognizing that inclusion in education is one aspect of inclusion in society.

In special education contexts, inclusion means that approaches to teaching, leadership and school organization will have to be re-conceptualized. Although there are different viewpoints, inclusion is a philosophy that implies the complete acceptance of a student with a disability in a regular class. Inclusion as an educational concept negates special education as a segregated placement. Furthermore, education is seen as inclusive insofar as it minimizes selection. To defend this ambition, authors often draw on unquestionably important social values such as solidarity, equality, social justice or democracy (Haug, 1998).

Inclusion Versus Mainstreaming

Mainstreaming was an effort to return students in special education classrooms to general education classrooms. Most people assumed that formerly mainstreamed students would be able to generally keep up and fit in. Some people also argued for moving, or “mainstreaming,” the assistance and support that students had received in separate classrooms to general education classrooms. But for the most part, such specially designed assistance and support stayed in separate classrooms. Integration first focused on moving students from separate schools to local schools. Usually, they moved to spend most of their time in separate special education classrooms. When this move didn’t result in more frequent interactions between students with and without disabilities, or much difference in learning, integration advocates sought to move students with disabilities into general education classrooms. But just getting to be in a general education classroom was not sufficient to ensure and improve students’ learning. Teachers needed to arrange their teaching to meet the needs of each student. Schools of the future need to ensure that each student receives the individual attention, learning accommodations, and supports that will result in meaningful learning to high standards of achievement. In fact, our schools need to be inclusive schools, using inclusive schooling practice (National Institute for Urban School Improvement, 2000).

The integration movement strongly advocated the placement of children in the ‘least restrictive environment’ but with no expectation that every pupil with special needs would be functionally integrated. In other words, children would be integrated in a manner and to an extent appropriate to their needs and circumstances. Integration was seen as an assimilationist process, viewing a full mainstream placement as depending on whether the child can assimilate to a largely unchanged school environment (Thomas, 1997).

Functional integration is the most advanced level and relates most closely to concepts of inclusion, nevertheless integration as a generic term conveys a sense that pupils must adapt to school, with no assumption that the school will adapt to accommodate a greater diversity of pupils (Mittler, 2000). The principles of integration as shown in the Education Act 1981 continued to inform practice through the eighties and led to the development of LEA policies on integration (Gibson and Blandford, 2005).

The concept of need is insufficient on its own for meeting special needs in education and a discourse of equal opportunities and rights, with an emphasis on entitlement, provides a more effective basis for policy and practice. It was suggested that the ‘need’ remains deficit based and still reflects an individualistic approach to difficulties and handicaps which also clouds issues of values, power and function (Roaf and Bines, 1989).

Teachers’ Attitude Towards Inclusion

Attitudes are an important area to study because they influence so much of our personal lives. Attitudes include desires, convictions, feelings, opinions, views, beliefs, hopes, judgments and sentiments. It is thus important to consider attitudes because human behavior and actions are influenced by attitudes – attitudes are seen as the cause and behavior as the consequence (Mushoriwa 1998). Thus teachers’ attitudes may affect the way they perceive, value, judge, interact with and teach children with special educational needs and/or disabilities.

Research suggests that teachers’ attitudes are the key to successful inclusion, based on the assumption that successful implementation of any inclusion policy is largely dependent on

educators being positive about it. Shade and Stewart (2001) note that in America the intention is to place the responsibility for educating all students on the general classroom teacher, and to do that requires major changes in teachers' attitudes and expectations.

Furthermore, Tait and Purdie (2000) argue that if teachers do not develop positive attitudes towards people with disabilities during their training, these attitudes will be difficult to change and inclusive schooling will be more difficult to achieve. Murphy (1996) also suggests that if teachers emerge from initial teacher training programs without a positive attitude to inclusion, their attitudes would be difficult to change, particularly if they are exposed to "information-based courses rather than greater contact with disabled people on an interpersonal level". Short and Martin (2005) suggest that the acknowledgement of the connection between educators' attitudes and the success or failure of an inclusionary program is significant. They also argue that although the beliefs of educators play a major role in the success or failure of inclusion, a major concern of educators is the time element, particularly where there is no team teaching or collaboration.

Campbell et al (2003) surveyed 274 trainee teachers in Australia at the beginning and end of a one-semester unit on human development and education, which combined formal instruction with structured fieldwork experiences. They found that by the end of the semester, students had significantly less discomfort, sympathy, uncertainty, fear and vulnerability, and significantly greater capacity to cope. Booth and Ainscow (1998) contend that in any study of inclusive education it is necessary for the researcher to specify the type of special educational needs because teacher attitudes have been found to vary with the type of disability and the extent of institutional adaptations required to accommodate the students.

Mushoriwa (2001) studied the attitudes of primary school teachers in Harare towards the inclusion of blind children in regular classes. Four hundred teachers were 54 involved in the study, which found that the teachers had a negative attitude towards the inclusion of blind children. The research suggested that although a blind child may be included physically, s/he may remain socially and academically excluded because of the attitudes of the teachers. Hastings and Oakford (2003) summarize previous research on teachers' attitudes towards inclusion. Children with less severe special educational needs, who are less demanding in terms of teachers' input, are generally viewed more positively in terms of inclusion than children with severe disabilities. Typically children with intellectual disabilities or emotional or behavioral problems are rated less positively by samples of teachers and student teachers (Avramidis et al, 2000).

Another study by Vaughn et al (1996) examined mainstream and special teachers' perceptions of inclusion. The majority of these teachers, who were not currently participating in inclusive programs, had strong negative feelings about inclusion and felt that decision makers were out of touch with classroom realities. The teachers identified several factors that would affect the success of inclusion, including class size, inadequate resources, the extent to which all students would benefit from inclusion and lack of adequate teacher preparation (Avramidis et al, 2000).

Studies where teachers had active experience of inclusion produced contradictory findings. Villa et al (1996) found results which favored the inclusion of children with SEN in ordinary schools. The researchers found that teacher commitment often emerges at the end of the implementation cycle, after they have mastered the professional expertise needed to implement

inclusive programs. Similar findings were reported by LeRoy and Simpson (1996) who studied the impact of inclusion over a three-year period in the state of Michigan. Their study showed that teachers' confidence to teach children with SEN increased in line with their experience. Reynolds (2001) argues that this makes two demands of education: "First, the education system itself must involve inclusive practices and ensure equality of opportunity; secondly schools must promote the kind of pupils who believe in and are capable of participating in inclusive societies, and this involves education for inclusion

Challenges Faced in Inclusive Classrooms

Some challenges were identified in an inclusive class based on various studies conducted. According to Hadebe (1993), the instructional demands of meeting the academic and behavioral needs of students with learning disabilities create a burden that decreases the teachers' ability to meet the academic and the social needs of other normal students. In the same vein, Polloway, Parton and Serna, (2008), note that students with special needs often require services and instructional support services because they are not dealing well with traditional methods and materials. This may have the implication that, giving the extra supports and services to students with learning disabilities in the mainstream classes impinges on the progress of the average and above average in those classes.

According to Vaughn, Bos and Schumm (2006), teachers must be very adept at instructional management if they are to create better learning opportunities in the class. Frederickson and Cline (2003), purport that competence in the classroom events are organized to enable or disable their participation. This is a call for teachers to give equal opportunities to all the students in their classes as well as using instructional methods that address the diverse needs of the said students. Teachers should use instructional methods that strengthen and compensate for deficits in perception comprehension, memory and retrieval. Remediation of the problems of learning in disabled children is a highly specialized subject area which demands specific Knowledge and skills from practitioners (Schaik 2000).

Methodology

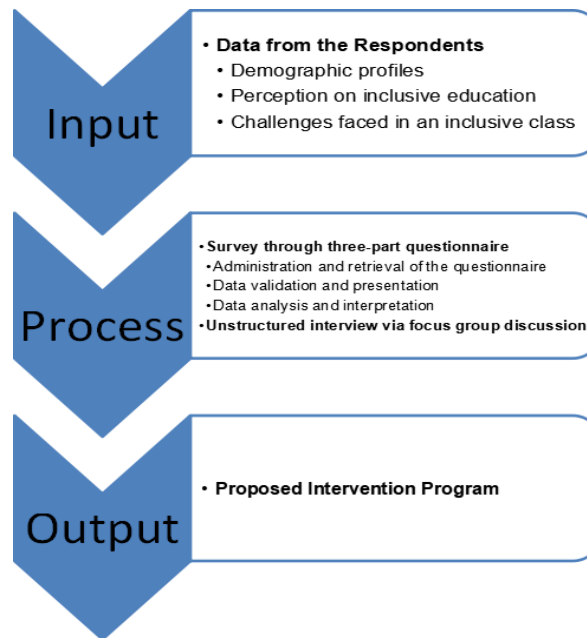
This study used quantitative research method which is a fact-finding study with adequate and accurate interpretation of the findings. Since the present study was concerned with the perception of the respondents on inclusive education and the challenges faced, the descriptive method of research was the most appropriate method to use. This method answered the questions who, what, where, when, and how.

The research flow followed the input-process-output (IPO) continuum, which served as the structure and guide for the direction of the study.

The inputs of this study included the demographic profiles, perception on the concepts and issues on inclusive education and the challenges faced in teaching an inclusive class based on the responses of the teachers at Francisco Oringo Sr. Elementary School. These inputs were obtained using a three-part questionnaire and the results were supplemented through unstructured interviews, via focus group discussion.

The process included assessment or evaluation of the perception on inclusive education and the challenges faced in an inclusive class. It covered the administration of the questionnaire, validating the data, presenting the data including the statistical treatment thereof, and analyses and interpretation of the data.

Outputs of this study included recommendations and measures from the respondents on dealing with the specified challenges for possible adoption and implementation. The research flow is presented in a diagram below.



Environment

The locale of this study is Francisco Oringo Sr. Elementary School located at Oringo Subdivision, Barangay City Heights, General Santos City, Philippines. It is a public institution established 1991 by Adela C. Anfone. The school started out as a small public school serving only about 200 students and with four teachers. At that time, the school was only had one section each from Grades 4 to 6. Over the years, the school grew and currently has 1,218 students from Kindergarten to Grade 6 (Male = 593, Female = 625). According to DO 26. S. 1997 entitled the Institutionalization of SPED Programs in All Schools which is in support of the implementation of the Republic Act 7277 (Magna Carta for Disabled Persons), public school in the Philippines need to provide services and accommodate students with special needs. Furthermore, the Department Order states that the institutionalization aims to provide access to basic education among children with special needs, namely, the gifted/talented, the mentally retarded, the visually impaired, the hearing impaired, the orthopedically handicapped, the learning disabled, the speech defectives, the children with behavior problems, the autistic children and those with health problems through the formal system and other alternative delivery services in education. As such, it was imperative for Francisco Oringo Sr. Elementary Schools to provide services to these students. Since its establishment, the school has catered to students with learning and behavioral disorders. However, the school currently does not have a special education program or a special education center. Students who have special needs may or may not have an official diagnosis from medical experts regarding their condition.

Based on their academic performance, the teacher may decide who among the students need to undergo a remediation program. Each teacher has an identified schedule for remediation and will also determine the appropriate supplementary lessons or activities to improve learning.

Instruments

The research instrument used in this study was composed of three parts:

Part 1 featured six questions on the socio-demographic profile of the respondents: age, gender, educational attainment, number of years of teaching experience, number of years teaching students with disabilities, and special education related seminars/conferences.

Part 2 was a modified version of the Teacher Attitudes Towards Inclusive Education obtained from Survey of Teacher Attitude Regarding Inclusive Education Within an Urban School District study conducted by Kern E. (2006). The questionnaire is composed of 42 items containing a mixture questions related to teachers' perceptions on inclusive educations, factors affecting inclusive education and the current status of inclusive education in the respondents' corresponding workplaces. Of these 42 items, only 20 most pertinent questions that could determine the respondents' perceptions on inclusive education were included.

Part 3 was a modified version of Section B- Challenges Facing Teachers in the Implementation of Inclusive Education based on the study conducted by Khoaeane, T. (2012), entitled The Challenges Facing Teachers with Regard to the Implementation of Inclusive Education in the Maseru District of Lesotho.

For the focus group discussion, a set of seven (7) questions were asked to the respondents. The questions were meant to extract more information from the respondents on their perception on the implementation of inclusive education and the explanation on the specific challenges they faced.

Validity Of The Instruments

Since the questionnaire was composed of standard instruments that have been consistently found to be valid and reliable, further validation and reliability testing was not necessary.

Procedures For Data Gathering

Upon the finalization of the research instruments, the researcher sought for permission from the Principal of Francisco Oringo Sr. Elementary School to conduct the study with the teachers as the respondents. When permission was granted, the questionnaires were personally administered to all the respondents. Respondents were guaranteed confidentiality of information. The researcher retrieved the questionnaires as soon as respondents have completed their response.

For the focus group discussion, the researcher set one session that included a representative of every level from Kindergarten to Grade 6. The location of the focus group discussion was the Faculty Room at Francisco Oringo Sr. Elementary School. The researcher facilitated the discussion using the seven (7) validated questions.

Scoring Procedure

Data obtained through the questionnaire was scored and described according to the following:

Perception on Inclusive Education. All twenty (20) components of this part of the questionnaire were separately scored. Weighted means were obtained and the perception on inclusive education were determined and interpreted using the following scale:

Weighted Mean	Verbal Description
4.21 – 5.00	Strongly Agree (SA)
3.41 – 4.20	Agree (A)
2.61 – 3.40	Neither agree nor disagree (N))
1.81 – 2.60	Disagree (D)
1.00 – 1.80	Strongly disagree (SD)

Challenges in Inclusive class. There are ten (10) items in this section. The respondents checked if they agree that they are facing the said challenge in their current job.

Sampling

For the survey questionnaire, all the teachers at Francisco Oringo Sr. Elementary School who served as the respondents were asked to answer and all of them returned the said questionnaire. For the focus group discussion which provided supplementary information, the convenience sampling method was used to determine the respondents for this discussion. Convenience sampling is a specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate in study (Dudovskiy, J., 2018). Seven (7) respondents were asked to join.

Results

Summary on the Test of Significant Relationship

Test of Significant Relationship Between Respondents' Perception on the Implementation of Inclusive Education in Teaching	Level of Significance	Degrees of Freedom (df)	Computed x2 Value (Average)		Critical x2 Value	Decision	Remarks
Respondents' Age	0.05	28	21.39	<	41.34	Accept H0	Insignificant
Respondents' Gender	0.05	4	3.34	<	9.39	Accept H0	Insignificant
Respondents' Educational Attainment	0.05	8	6.08	<	15.51	Accept H0	Insignificant
Respondents' Number of Years in Teaching	0.05	44	36.24	<	55.76	Accept H0	Insignificant

Respondents' Number of Years in Teaching Students with Disabilities	0.05	36	27.24	<	43.77	Accept H0	Insignificant
Respondents' Seminars or Trainings Attended Related to Special Education	0.05	4	2.85	<	9.49	Accept H0	Insignificant

The table summarizes the test of significant relationship between respondents' identified socio-demographic profile and to their perception on the implementation of inclusive education in teaching. From the results reflected in Table 15, the respondents' age, gender, educational attainment, numbers of years in teaching, numbers of years in teaching students with disabilities and seminars or trainings attended related to special education have no significant relationship on the respondents' perception on the implementation of inclusive education in teaching. The average computed values are all lesser than the set critical values. This leads to the acceptance of null hypothesis.

Although the study did not reveal significant differences in the perception of the respondents on inclusive education based on their demographic profiles, it is important to note that their positive attitude towards this philosophy is a key towards successful implementation. Based on the researches of Savage and Erten (2015), Stewart (2001) and Tait and Purdie (2000), teachers' positive attitude has an impact to the success on the implementation of inclusive education. Indeed, many experts suggest that the success of inclusion depends on the knowledge, instructional skills, and in particular on the attitudes and beliefs of general education teachers toward the integration of students with disabilities (Cook, 2001; Friend & Bursick, 2006)

Boyle, C. et al (2013) took it further by concluding that it is essential that teaching staff are involved in the implementation of the inclusion policy at school, local authority, and arguably also governmental level, if the policy is to be properly accepted and thus implemented effectively throughout schools.

Al-Zyoudi (2006) argued that a different factor could have an impact on the views of the teachers. His study revealed that a greater willingness among the participants to include students with certain types of disabilities such as physical disabilities rather than students with mental retardation that affect reading, writing and arithmetic, behavioral problems. In addition to the type of disability, the severity of the disability also seemed to have an influence on acceptance levels. The said results were consistent with other studies (Al-Khateeb, 2002; Forlin et al., 1996, Soodack et al., 1998; Clough and Lindsay, 1991), which Al-Zyoudi, M. also cited.

Challenges Faced by the English Teachers in Inclusive Education

Rank	Problems Encountered	Frequency	Percentage	Cumulative Percentage
1	Lack of special education teachers	32	21.19	21.19
2	Lack of facilities for special care	30	19.87	41.06
3	Lack of special education classes	27	17.88	58.94
4	Lack of appropriate resources	20	13.25	72.19

5	Inappropriate allocation of learning materials	13	8.61	80.80
6.5	Lack of understanding of inclusive education	9	5.96	86.76
6.5	Inadequate program for teacher's development	9	5.96	92.72
8	Absence of working relationship between parents and school	6	3.97	96.69
9	Lack of communication with parents	4	2.65	99.34
10	Unsupportive school board/school governing council	1	0.66	100.00
Total		151	100.00	

Challenges faced by the teachers in inclusive education are presented in Table 16. As to Pareto analysis, the vital few on which they compose eighty percent of the distribution are: lack of special education teachers, lack of facilities for special care, lack of special education classes, lack of appropriate resources and inappropriate allocation of learning materials. Their corresponding frequencies and percentages are 32 or 21.19 percent, 30 or 19.87 percent, 27 or 17.88 percent, 20 or 13.25 percent and 13 or 8.61 percent. On the other hand, the trivial many on which they compose twenty percent of the distribution are: lack of understanding of inclusive education, and inadequate program for teacher's development on which their frequency are the same, 9 or 5.96 percent. Completing the list are absence of working relationship between parents and school, lack of communication with parents and unsupportive school board/school governing council. Their corresponding frequencies and percentages are 6 or 3.97 percent, 4 or 2.65 percent and 1 or 0.66 percent, respectively.

These findings support the argument of Sklaroff (1994) that inclusion efforts fail, it is frequently due to "a lack of appropriate training for teachers in mainstream classrooms, ignorance about inclusion among senior-level administrators, and a general lack of funding for resources and training". If students with disabilities can be served in regular classrooms, then the more expensive special education service costs due to additional personnel, equipment, materials, and classrooms, can be reduced.

Thorpe, A. (2010) also revealed that the teachers reported that teacher assistants, or adult support in the classroom were an essential support in the inclusion of children with special needs. These assistants helped the students in terms of behaviour, and understanding the lessons. Specialist support or Inclusion manager, occupational therapists and physiotherapists, psychologists, behaviour consultant, among others provide additional support for the students in terms of additional programmes such as counselling group, reading recovery, literacy support, speech and language therapy, among others.

The challenge in fourth rank in this study is the lack of appropriate resources. This results is similar with the results of the study conducted by Arrah, R. and Swain, K. (2014) as there was an overwhelming negative response (78.3%) to the question of sufficient resources for working with students with special education needs. The researchers further argued that the results of the study indicated that lack of resources is a great challenge for the teachers. Obiakor and Offor (2011) as cited in the said study, noted that lack of funding, educational philosophy, and high illiteracy rate in Nigeria could be contributing factors to the problems of lack of resources for special education.

Furthermore, Avramidis, E. et al (2000) argued that “as far as the issue of resources is concerned, we do recognise that resources are essential; successful inclusion depends on resources, both human and material, but also on their successful implementation. Simply more people or more computers are not enough; rather, how the resources are being utilised is of importance and this issue has to be addressed in the school level within a whole-school policy and at the LEA level through a reorganisation of the support services.”

On the issues of lack of understanding of inclusive education, Mngo and Mngo (2018) stated that literature on special education and the treatment persons with disabilities in Cameroon indicate that the negative attitudes toward the concept of education could also be attributed to factors such as cultures, norms, and traditions of Cameroon. The Cameroonian cultures, for the most part, see the bringing up and education of children with disabilities as the responsibility of the parent. This belief explains why the local cultures in Cameroon are both helpful and harmful to the condition of persons with disabilities.

To further determine how the respondents felt about the challenges faced in inclusive education, a focus group discussion was conducted.

Summary

This study evaluated the inclusive education practices and the challenges faced by the teachers at Francisco Oringo Sr. Elementary School for School Year 2018-2019 as a basis in formulating an intervention plan.

Specifically, this study determined the socio-demographic profile of the respondents, their perception on the level of implementation of the inclusive education in teaching, the relationship between the respondents' identified profiles and their perception on the implementation of inclusive education in teaching, and the challenges faced by the teachers in inclusive education.

Three null hypotheses were tested in this study: respondents have negative perceptions on the level of implementation of the inclusive education in teaching, there is no relationship between the respondents' identified profiles and their perception on the implementation of inclusive education, and the respondents have not experienced any challenges in teaching in an inclusive class.

Furthermore, the study employed the descriptive and quantitative research methods. The respondents of the study were thirty-six (36) teachers at Francisco Oringo Sr. Elementary School, South District, Division of General Santos City. Moreover, the researcher utilized a three-part questionnaire as instrument in data gathering. Data gathered from the questionnaire were then tallied and analyzed through the assistance of a statistician. Descriptive and inferential statistics were generated to help interpret the gathered data.

Findings

The following are the findings of the study:

1. Profile of the Respondents

The respondents were between mostly 36 years old and above, composed almost entirely of females, mostly are college graduates or with Masters' units, taught for around 9 years and above, more than half with at least a year of teaching experience to students with disabilities, and mostly without special education related training or seminar.

2. Level of implementation of the inclusive education in teaching as to respondents' perception
The respondents generally agreed with the statements related to inclusive education, with 12 of the 20 statements on the positive side.

3. Relationship between socio-demographic profile and perception on the implementation of inclusive education in teaching

There was no significant relationship in each of the six socio-demographic profiles identified and the perception of the respondents on the implementation of inclusive education in teaching.

4. Challenges faced in inclusive education

The respondents identified some challenges in the implementation of inclusive education, which includes, but not limited to, the lack of special education teachers, facilities for special care, special education classes and appropriate resources.

Conclusion

In view of the foregoing findings the following conclusions are advanced: Teachers at Francisco Oringo Sr. Elementary School generally agreed with the level of implementation of inclusive education in teaching. There is no significant relationship in any of the identified profiles with the respondents' perception on the implementation of inclusive education. There are challenges in the implementation of inclusive education that need to be addressed.

Recommendations

Based on the findings and conclusion of the study the following recommendations are advanced:

1. The Department of Education along with the administrators of Francisco Oringo Sr. Elementary School should provide facilities and supplies necessary to help the teachers deal with students who have special needs in an inclusive class. It also includes training and seminars to help boost their knowledge on teaching strategies and classroom management as it pertains to inclusive education.

2. The teachers at Francisco Oringo Sr. Elementary School should encourage an environment where they share knowledge with each other, especially those who have experiences in special education, to help those who are without experience. It could be through seminars, open forums and meetings.

3. The school principal should consider adopting and implementing the proposed intervention program to help the teachers be more effective in helping students with special needs cope up in an inclusive classroom.

4. Future researchers should consider including the perception of parents on inclusive education, or even the students with disabilities themselves to determine their preferences in learning. Other researches could also compare the perception of teachers from different schools within the Division of General Santos City.

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Demonstrating the Factors Influencing the Dairy Industry Development and Milk Production Level in Malaysia: A Hybrid Approach of Inductive and Deductive Coding and Theme Development

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Abstract: *The Malaysian dairy industry does not produce a sufficient quantity of dairy products to satisfy domestic market needs. As a result, Malaysia is one of the highest milk importing countries in the world. This article focuses on the factors influencing the dairy cattle industry development and milk production in Malaysia. The population of this study covers the whole of Malaysia's dairy industry which includes dairy cattle farmers, supporting industries, universities, government veterinary department, and all direct and indirect related organizations. Semi-structured open-ended interviews were conducted with twelve participants. Porters' Diamond model was used to inform the qualitative hybrid analytic process of inductive and deductive thematic analysis, which was applied to interpret raw data from interview transcripts. The authors integrated the theory-driven and data-driven codes using Nvivo 10 software. Analysis of the raw data resulted in the identification of overarching themes or elements that influence the production of the dairy industry. The results showed that the problems have spread to all aspects of the industry such as factor condition, related and supporting industries, companies' structure rivalry and organization, government's role, and accessibility and costs of the resources. In fact, this study provides a roadmap for the future dairy industry development plan in Malaysia. Therefore, all stakeholders should contribute together to address the mentioned challenges one by one with the aim to improve this industry.*

Keywords: *Nvivo 10, Porter's Diamond, Qualitative, Thematic Analysis, Cow, Farm, Milk, Dairy Cattle*

Introduction

In the global milk and dairy product markets, Malaysia is one of the greatest milk importer countries after China, Mexico, Algeria, Russian Federation, Indonesia, Saudi Arabia, and Philippines (FAO, March 2019). However, the fluid fresh milk production had increased by

48.32% from 2007 to 2016, due to the population growth, higher income, and rapid urbanization, this industry did not grow and develop rapidly in line with the increasing market demand for dairy products during the current decade (FAO, March 2019; DVS, 2018; Sim & Suntharalingam, 2015; Dong, 2006). Malaysian dairy cattle industry has faced many different challenges over the last decades. Although the Malaysian government, dairy farmers and other industry stakeholders have attempted to increase the local milk production level, it remains undeveloped. The aim of this study is to explore the factor influencing this industry and find a practical roadmap to improve dairy cattle production in Malaysia. The hybrid qualitative approach method of thematic analysis was used for this research. It integrates both the deductive and inductive approaches. Then, the data-driven inductive coding practices for extracting the extra themes from the data out of Porter's diamond structure.

This paper is organized as follows; the next section discusses the literature reviews on the overall situation and challenges of the dairy cattle industry in Malaysia. The third section discusses the materials and methods follows by findings. The last part covers the discussion and conclusion.

Literature Review

During the last decade (2007-2016), the fluid fresh milk production in Malaysia had increased by 48.32%. According to the DVS report in the year 2017, the milk production in Malaysia increased to 36.9 million kg compared to 24.77 million kg in the year 2007 (DVS, 2018). Despite that rise in production and productivity during the last decade, the FAO statistic report shows that Malaysia is still one of the major importers of milk and dairy products globally. According to table 2.1, Malaysia imported 9.7% more dairy products in the year 2018 compared to the year 2017 (FAO, 2019, March; DVS, 2018). One of the important indexes related to food production is the self-sufficiency level (SSL) which indicates the domestic production compare to the local demand. The Malaysia SSL for dairy products was only 3.04% in the year 2016 (FAO, 2016, June; DVS, 2018). This indicates that local production needs more development to satisfy the Malaysia market

The Malaysian government has supported the dairy cattle farming industry for more than five decades. The Department of Veterinary Services (DVS) as the body of the government has tried to provide technical consultation, veterinary services, and breeding advice to farmers and the farmers only needed to prepare the land and labor (Boniface, Gyau, Stringer, & Umberger, 2010). However, the Ministry of Agriculture's agencies were not able to approach the targets and develop the industry (Sim & Suntharalingam, 2015). According to the last National Agro-Food Policy (NAP) for the period of 2011-2020, the government and policymaker focuses are more on the SSL, food safety, and security. Therefore, the Malaysian government has the vision of reducing further the level of the dairy products import and at the same time increasing the domestic dairy production. They also have a plan to get better access to the market information by using communication technologies (NAP, 2011).

Moreover, Panandam & Raymond, (2005) said that the Mafriwal is the dairy breed for Malaysia. This is a crossbreeding between Friesian and the Sahiwal breeds. In fact, this breed with 60-75% Friesian genes has created for the semi-intensive dairy cattle management system. The desired characteristics of this breed include improvement of the milk production, easily manageable, adaptable to the local climate, resistant to the local diseases and able to consume local animal feed resources. The average milk yield is around 2337 kg per lactation and the

lactation period is 260 days. This breed is the most popular cattle for both semi-intensive and intensive system in Malaysia. More recently, Suntharalingam et al., (2015b), stated that the imported breeds show better genetic traits in adapting the tropical environment condition in the future because the productivity of the imported breeds is higher than the local cattle normally. However, the genetic resources of the local animals should be conserved and inventoried because they would eventually become extinct if all of the farmers shift to the imported breeds.

Furthermore, milk categorizes as a highly perishable product and should send to the market after production immediately. This condition makes limited marketing flexibility for the milk compare other livestock products (Suhaimi, Mey, & Lansink, 2017). There are many local and foreign brands and dairy processing factories in Malaysia. However, the market almost is dominated by foreign brands (93.9% market share) which owned by the giant international companies such as Nestlé, Friesland Campina, and Fonterra. With 43.1% market share, Bear Brand (Nestlé SA) led the market in the year 2017, followed by Alaska (Royal FrieslandCampina NV), Nido (Nestlé SA), Anchor (Fonterra Co-operative Group Ltd), and Anlene (Fonterra Co-operative Group Ltd), with 26.3%, 10.2%, 7.6% 6.7% market share respectively (Euromonitor International A, 2017; AAFC, 2019).

In fact, the Malaysian dairy industry has faced many different challenges during the last few decades until the current time. According to the literatures, some of the most important factors influencing the dairy cattle farming process and development in Malaysia are insufficient number and dispersed distribution of the pure imported dairy cattle, low level of the lactation of the dairy cattle among local and imported cows, low record of the reproductive and calving performance of the local and imported cattle, inconsistent supply of suitable quality feed, high feed cost, poor dairy farm management, tropical and inappropriate climate and environmental conditions, inadaptability of the imported animals to local environmental conditions, lack of skills workers, Lack of knowledge, skills, and training, low productivity, lack of proper farm infrastructure, poor technical support service providers such as Artificial Insemination (AI), high level of investment risk (Suntharalingam & Ahmad, 2015a; Suntharalingam, Shanmugavelu, Graff, & Nor, 2015b; Suntharalingam, et al., 2015c; Sim & Suntharalingam, 2015; Jeyabalan, 2010; Shanmugavelu & Azizan, 2006; Abdullah, et al., 2017).

Materials And Methods

Design

Qualitative approach method of thematic analysis search for the themes is important to describe the phenomenon (Fereday & Cochrane, 2006; Daly, Kellehear, & Gliksman, 1997). The process contains careful reading and rereading the date until categorization is done by emerging the themes for analysis (Fereday & Cochrane, 2006; Rice & Ezzy, 1999). In the thematic analysis, the researcher considers the latent variables as the manifests and uses them to categorize data (Vaismoradi, Jones, Turunen, & Snelgrove, 2016). Therefore, the theme is the main yield of thematic data analysis (Green, 2007; Krauss, 2005; Vaismoradi, Jones, Turunen, & Snelgrove, 2016). The analysis method of this study is a hybrid qualitative approach method of thematic analysis. It integrates both the deductive and inductive approaches. In the deductive part, Porter's diamond method was used as the theoretical model and a prior template of codes approach. Porter's Diamond Model is an analytical indicator whereby each factor or element of the model can be evaluated, analyzed and compared in order to reach the goal of the target strategies (Pei & Wang, 2002). This model provides a structural framework for analyzing

national competitiveness of different industries (Jin & Moon, 2006). Moreover, the Porter's Diamond model is a comprehensive model, which can determine the state of competitiveness of an industry not only at the national level but also at the organization level as well (Bobirca & Cristureanu, 2008). Therefore, it has the capability to cover the objective of this study at the national level. Porter's diamond has six categories which are 1- Factor Condition; 2- Demand Condition; 3- Related and supporting industries; 4- Firms' strategy; 5- Chance; and 6- Government (Peng, 2013). Figure 1 illustrates the conceptual framework of this study. In the inductive approach, the data-driven inductive coding practices were used to extract the extra themes from the data out of Porter's diamond structure.

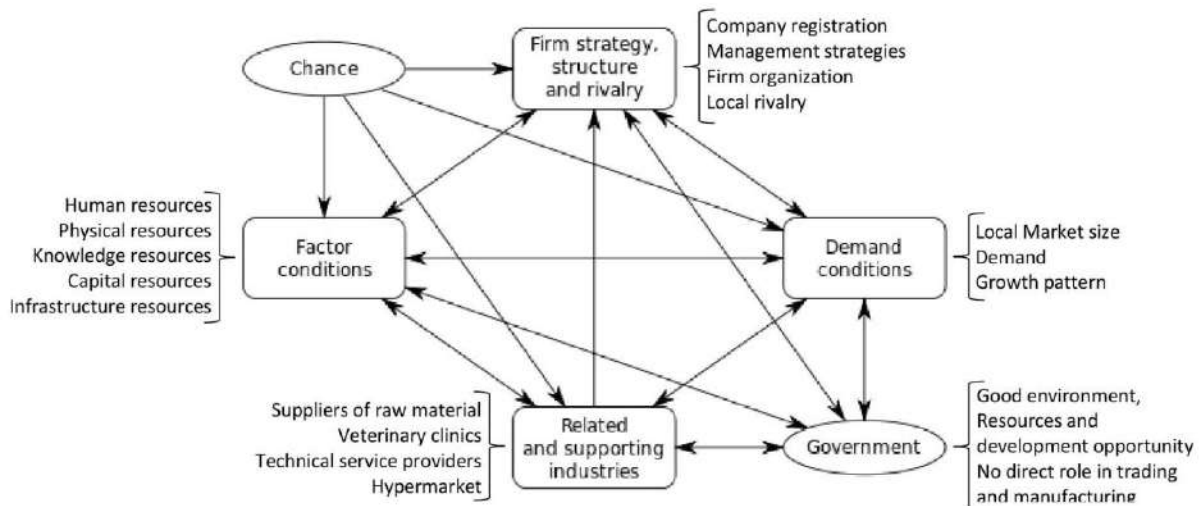


Figure 1: Conceptual framework based on Porter's Diamond model

Participants

The data were collected by individual semi-structured interviews, verbatim taking notes of the interviews, and voice recording. They were open-ended interviews and the participants could discuss the factors that have positive and negative effects on the industry. Each interview took around 30 to 45 minutes. The population of this study covers the whole of Malaysia's dairy industry which contains dairy cattle farmers, supporting industries, universities, government veterinary department, and all direct and indirect related organizations. The snowball sampling was implemented for the semi-structured interviews. In the snowball sampling, the researcher found a few participants from the population of the study first. Then, they introduced other interviewees (Bryman, 2001; Latham, 2013). In qualitative research, the sample size depends on the situation should be changed. The decision to stop sampling must take into account the research goals, the need to achieve depth through triangulation of data sources, and the possibility to increase further examination by exploring a variety of sample sites (Hoepfl, 1997). Sampling process and interview should continue to occur until one of the points of saturation conditions are achieved, which include resources exhaustion, regularities emergency, and overextension, or being too far from the research main objective and topic (Guba, 1978). Therefore, the sampling process was continued until the resources are exhausted and the point of saturation is achieved. The interviewees were four dairy farmers, one animal feed whole seller and manufacturer, one lecturer from university (Animal husbandry and veterinary), and six managers and technical officers from the Department of Veterinary Services of Malaysia (DVS).

Procedures and interview guidelines

The thematic analysis contains 6 major phases. The initial phase includes familiarisation with data and providing the start list of potential codes (Miles, 1994). The author transferred the audio files, transcripts, and other documents into the NVivo 10 (64-bit software for Windows) software after each data collection. The theory of learning patterns was used for identifying the codes (Abu Bakar & Ali, 2017). Thus, the deductive prior template of codes approaches were applied to the data based on the diamond model (Crabtree & Miller, 1999; Fereday & Cochrane, 2006). The authors tried to find the possible codes and prepared the reflexivity journal and fitted them in the primary template. Next, the researchers applied the open coding methodology implements to develop the themes out of the prior template (Strauss & Corbin, 1990). The interviews were continued until the pattern of the issues became overt (Braun & Clarke, 2006). The reflexivity journal guided the researchers to diversifying the interviewees from the government staff to farmers, university lecturer, and animal feed supplier. The diversification of the participants helped to uncover a lot of relevant information.

In the second phase, data reduction and complication were done. Three ways of data reduction used in this part are 1- noticing the significant phenomena, 2- gathering the example for each phenomenon, and 3- evaluating the phenomena to find and refine the differences, similarities, overlying structure and patterns (Seidel & Klaus, 1995). Additionally, decontextualizing and contextualizing the data used was done once again to simplify the data (Coffey & Paul, 1996). After finalizing the codes, the third phase is searching for themes. As mentioned previously, the researchers had the primary template of the themes based on the diamond model. However, the authors found that Porter's diamond model did not cover all the codes and thus, they generated the initial themes list among the codes by using the data-driven inductive approach (Boyatzis, 1998). In the fourth phase, the initial themes generated from both the deductive and inductive approaches were reviewed for clarity and relevancy (Braun & Clarke, 2006). The next phase was defining and naming each theme. In this phase, the author defined the content of each theme and explained each theme in a few sentences. In fact, the definition of the theme should go beyond the surface meaning of the data and the author made an attempt to explain the real meaning of the data (Braun & Clarke, 2006). In the last phase, the author reviewed the themes again and chose the validated themes most relevant to the topic of the study and the questions (Guest, MacQueen, & Namey, 2012). The peer debriefing technique was used in each step of the study to carry out rational decisions and provide a more reliable and valid final result (Ely, et al., 1991; Abu Bakar & Ali, 2017). The peer debriefing technique was implemented in research design, interview guideline, sampling, data collection, and analysis. The peer debriefing technique checked and controlled the techniques, methods, and progress of the research step by step.

The initial interview guideline was prepared based on Porter's diamond model structure and the literature review. In fact, the current challenges of the dairy industry development were listed down and fitted under each category of Porter's diamond model to develop the interview guideline. Additionally, this guideline has reviewed and improved after each interview during the process of data collection and analysis.

Findings

The findings of this study are reported according to the conceptual model and its components. The results showed that most of Porter's diamond elements have effects on the dairy cattle production in Malaysia; these include factor condition, related and supporting industries, firms'

strategy, and the government. Nonetheless, the demand condition and chance do not have any effect on the development of this industry. Additionally, there are two more elements (accessibility and costs of some factors) which are not listed in Porter's diamond model although they play a vital role in the development of this industry. The following excerpts show the factors influencing the dairy industry and milk production in Malaysia based on the hybrid thematic analysis. The first six items are the diamond model's elements and the last two are accessibility and cost.

The factor Conditions

It is a very vast category. It covers capital resources, knowledge resources, human resources, infrastructure resources, and natural resources.

Capital resources: Sam Lau (2019) highlighted the importance of capital resources in the dairy cattle industry in Malaysia. He suggested that the government allocated fund for dairy industry development should be used as collateral for securing bank loans, particularly from the commercial banking services providers. All the participants agreed that capital resources are very important and vital factors for the development of dairy industry. For example, farmer 3 stated that "I have been using the private fund to settle off all the farm set up. They will be no initial capital for the farm by the bank unless you start the project and secondary the bank will start financing you."

Knowledge of farming: the participants stated that knowledge of doing farming is a very important factor. Farmer 4 stated that "We believe that knowledge is very important and is totally lacking." In fact, knowledge is one of the most key factors in the dairy farming process which contains many areas such as farm management, animal nutrition, genetics, Artificial Insemination (AI) and so on (International Dairy Federation, 2019).

Human resources: The participants in this study mentioned the importance of human resources as one of the critical challenges of the dairy cattle industry development in Malaysia. Farmer 1 said that "I think; it (human resource) is absolutely important. But in the contexts of where we are, we find this very lacking in Malaysia. So, we struggle to find farm managers, we struggle to find a veterinarian familiar with big animals and we also struggle to find people who are familiar with the basic aspects of dairy farming. So, I believe, this is a very important function and it is lacking in Malaysia in my opinion."

Infrastructure resources: The infrastructure in dairy farming consists of a farm building, logistics, and utilities. It is the most significant factor is to provide the best environment for animals and meet their needs and requirements to increase the level of the production, productivity and animal welfare (International Dairy Federation, 2019). All interviewees agreed the importance of these factors. The farmer 4 said that "You (farmer) bring a breed from Australia, you (farmer) can't farm them in the local climate and you have to put them in climate control barns that we tried currently do." Additionally, the dairy farming process needs logistics facilities and utilities. Fortunately, there is no issue pertaining to the road and utilities (electricity and internet) and most of the farms have access to them in Malaysia.

Natural resources: Malaysia is a tropical country with a high level of temperature and humidity which is not ideal for dairy cattle farming. Thus, the climate situation is one of the important factors that should be considered during the farm building design (International Dairy Federation, 2019). The participants mentioned about their challenges with the tropical climate in Malaysia. For example, farmer 3 said that “we are in a tropical country where the humidity is very high, and the temperature index is too high for the cows.” According to interviewees, another key factor in natural resources is the land. Expert 1 stated that “due to the development, much of the land had been taken over by industries and all those things. So, we have some problem (to find proper land for dairy farming and planting grass for animal feed).” The last natural resources in water resources which do not have any problem in Malaysia. For instance, farmer 2 said that “I think there is no issue on the water at all.”

Demand Conditions

Demand condition is one of the main elements in Porter’s diamond model. As mentioned, Malaysia is one of the greatest dairy products importer countries in the world. Expert 1 added that “Definitely, there is a lot of demand for this type of product (dairy products). Local milk cannot match and are not enough.” Therefore, there is a huge demand for local fresh dairy products in Malaysia.

Related And Supporting Industries

In this research, the cluster of related and supporting industries was evaluated according to the suppliers of raw material (animal feed and cow breed), veterinary, and technical service providers. In fact, improper nutrition program affects animals productivity, health, behavior, and welfare (International Dairy Federation, 2019; FAO, 2012; FAO, 2013). Additionally, it is necessary for farmers to have access to the veterinary clinic and technical services. In fact, Veterinary Services Department (DVS) under the Ministry of Agriculture has the main role to provide technical services for the dairy farmers in Malaysia (Nizamuddin, 2019). The participants agreed with the importance of these factors and highlighted their challenges in this sector. Farmer 4 said that “the farmer (who) does not have feed so he will sell the cow.” Moreover, farmer 1 mentioned that “We (Malaysian dairy farmers) do not have the local breed. (so) I think the breed of the animal is another (big problem).” He added that “A lots of vets are for the small animal, not a big animal.”

Firm’s Strategy, Structure, And Rivalry

This part covers the quality of the farm’s management system, strategy and KPI (Key Performance Indicator), farm organizational chart and job distribution, qualification of the applicants (technical and experience) before starting the farm, positive rivalry (cow festival and competition), and positive rivalry (milk price based on the quality). The modern and successful farm should have a proper management system. In fact, the dairy farm will not succeed unless the right management system applies to it. The farm management system includes 1- animal feed, 2- biosecurity and health, 3- breeding and genetic, and 4- organization management (Department of Agriculture Sarawak, 2019; FAO, GDP, & IFCN, 2018).

The interviewees stated that the dairy farm management system is very poor in Malaysia. They believed that this is an important factor. But only the corporate farms apply the KPI system on their farm which many of them cannot reach their targets. For example, Farmer 3 agreed with stated that “Like small farmers, we will have difficulties in having this kind of structures. But

for big farmers yes, they do have this kind of organization structures. It is also one of the important factors.”

According to all interviewees in this study including the government officers, there is no needed qualification (technical and experience) before applying for a farm license in Malaysia. Farmer 1 elaborated that “dairy farm (project) no need license (in Malaysia) and They (government) don’t go down to the specifics of what’s required to run the farm.” Moreover, the participants believed that positive rivalry such as cow festival, competition, and milk pricing system based on the quality support the development of the industry. They can meet one another during the festivals and exchange ideas and experiences with each other. Moreover, these will encourage the production of high-quality milk to have better milk price and income. Nonetheless, these activities are not being practiced in Malaysia. Farmer 3 said that “That will be another kind of learning process. We actually (can) talk to them (other farmers) and (find out) what is wrong what is good what is bad.

Government Policy

According to Porter (1998), the government has an essential role to play in providing good business environment, resources, and development opportunity for the industries and they should not have any direct role in the trading and manufacturing processes. All participants agreed that the government has a major role in the development of the industry. Expert 2 discussed the role of the government in knowledge resource and explained that “It (knowledge) most related to the government. In fact, they (government) should give the guideline to the importer companies. They must provide a guideline for the companies who import food as well because big animals need more food. Additionally, a guideline for farmers to build the appropriate barn for these animals because the imported animals need better building and ventilation to survive.” In fact, they suggested that the government implements long-term industry development policies rather than short term plans and projects.

Chance

Chance is always a part of life. It also can affect a company’s or even an industry’s performance (Porter, 1998). All participants agreed that dairy farming is a very scientific process and there is no place for the chance to play a role in it. Farmer 4 highlighted that “it is not luck, or something involved in this (dairy farming).”

Accessibility

Accessibility is the theme out of Porter’s diamond model. It was created based on the thematic data-driven inductive approach. All participants agreed that the access to capital resources, knowledge of farming, land, animal feed, vet clinics and technical services has the vital roles in the development of the dairy industry and milk production in Malaysia. Moreover, the bank loan for dairy farming is not available or accessible by many farmers. In fact, it is not easy to get approval for dairy farming loan in Agro Bank Malaysia, and many farmers were relying on their own capital rather than the government grant or bank loan. Farmer 1 mentioned that “access to capital for agriculture, it is quite difficult.”

Furthermore, Faez, et al. (2017), revealed that the lack of knowledge of dairy farming, technical skills, and awareness of the animal health management are the important elements for the constraints in the dairy industry development in Malaysia. The participants mentioned same thing about this factor. For example, Farmer 1 stated that “We believe that the knowledge is

very important and totally lacking and what we have done. Developing things by our won, internally training people and never receive any resources of knowledge.”

Although there is a different choice of land for a dairy farming project such as buying, leasing, and temporary ownership from the local land office (Department of Agriculture Sarawak, 2019), Malaysian dairy farmers have the issue of finding a proper land for dairy farming. Much of the land is used for urbanization, oil palm, and rubber planting. According to the expert 1 “due to the development, much of the land had been taken over by industries and all those things. So, we have some problem (to find proper land for dairy farming and planting grass for animal feed).” Additionally, tropical forage and grass contain less amount of nutrition for animals. Therefore, the dairy cattle feeds are basically supplemented with high protein, energy and mineral concentrate to support the milk production (Moran, 2012). The participants agreed that Malaysian dairy farmers do not have access to high quality and affordable animal feed in Malaysia. Farmer 3 mentioned that “The biggest raw material is grass and the concentrate. Supplement for animals is another big challenge because many of the raw materials going into the concentrates are imported. Thus, we have difficulties in getting a good feed.”

Cost

Cost is also another factor outlined in Porter’s diamond model which emerged from the thematic inductive data-driven approach. As the participants in this research had mentioned, not only access to the factors but also their cost is also important. There are some factors which are crucial, and they have access to them easily. However, the farmers cannot bear the cost because those factors such as logistic, land, animal feed and cow breeds are very expensive. For instance, farmer 1 said that “I think land is the big one (problem). as I mentioned land is very expensive.” He added that “we find that land price in Malaysia is very high because of that I cannot plan my own grass.”

Conclusion

In conclusion, there are plenty of different challenges involved in the development of the dairy industry in Malaysia. The findings of this study showed that the current environment of the industry is not suitable, while the farmers and government have made attempts to find the solutions to solve the issues faced by the industry. Indeed, the problems have spread to all aspects of the industry such as factor condition, related and supporting industries, company’s structure, rivalry, and organization, government’s role, accessibility, and costs.

In fact, the results of this study provide a roadmap for the future development plan. Therefore, this is very important that all major players in the industry such as the government, farmers, universities and other supporting and related industries work more closely together and make the attempt to find the proper plans and policies to address the mentioned challenges one by one and improve the industry condition step by step in the future.

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Developing 'Smart Technical English' to Enhance English Language Teaching in Polytechnic

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Abstract

Students of Shipbuilding Institute of Polytechnic Surabaya (PPNS) get difficulties and are less motivated in learning English, which can be seen from their low score on TOEIC. Therefore, we develop an Android-based 'Smart Smart Technical English' application to improve their English skills. The software used in this research is React Native, and the development method is System Development Life Cycle (SDLC) prototyping model. Designed exclusively based on the English curriculum in PPNS, 'Smart Technical English' comes with interesting images, videos, quiz, and vocabulary enrichment to trigger students motivation in learning English. By developing and applying 'Smart Technical English', students are expected to be more motivated and really into learning English, thus boost their skills.

Keywords: *Smart Technical English, Android Application, SDLC*

Introduction

Graduates of polytechnics are demanded to be highly competitive in the AEC era. Therefore, they must impose good command of English as international language, to get qualified jobs. However, most polytechnic students think that English is not as important as their subject matter. This is also worsened by the fact that the students do not have sufficient time and energy to learn English outside of the classroom as they have hectic schedule with a lot of homework from their major courses. Thus, carrying the mission to answer these kinds of problems and challenges in English teaching, polytechnic teachers should come with appropriate and powerful approach, method, or tools. The latest emphasis should be in the concept of interactive learning which focuses on the use of mobile phone and social network. According to [1] interactive learning and perfect interaction between students and their teachers requires a technological engagement. Students can use the gadgets such as mobile phones and tablets as a learning device that makes m-learning a new solution in enhancing learning activities. Nowadays almost all Smartphone come with the Android operating system which allows users to communicate with anyone at any time everywhere almost instantly and without obstacles. Most students nowadays have Android phones where they can download a variety of interesting and useful applications. [2] [3]

Actually, there is a great opportunity to make learning English more fun and interesting, considering that the majority of students in Shipbuilding Institute of Polytechnic Surabaya have been using Smartphone with android operating system. They have even used apps from Play

Store to simplify their learning activities such as calculator, English dictionary, and document scanner. With this technological developments, it is possible to develop Android-based applications that support students to learn

English wherever and whenever they want. Some students have familiarized themselves with Android apps like DuoLingo, Engineering Dictionary, and Learn English Conversation to help them improve their English. In DuoLingo, students can learn about English vocabularies and phrases in a very fun way. [3] There are options about how long the students want to learn using the application. However, this application does not include English Engineering vocabulary. In other application, namely Engineering Dictionary, students are exposed with lists of words related to engineering. Nevertheless, this app covers definition only and it does not facilitate students to learn about processes related to the technical terms. As for Learn English Conversation, it does not specifically provide engineering or technical vocabulary that are needed by Polytechnic students. Therefore, we develop Android-based 'Smart Technical English' applications to support the students in learning ESP (English for Specific Purpose), enhance their skills and at the same time improve their TOEIC score. This app does not only cover Engineering vocabulary in general, but specifically to the field of Maritime, Electrical, Safety, and Manufacturing. It is expected to be a great tool for students to be proficient in communicating using the terms in the field of Engineering. This “Smart Technical English” is also equipped by attractive images and videos, and even more interesting, the menu or content is designed specifically to each study program in PPNS.

The PROTOTYPING PROCESS

We use SDLC model as the method for developing “Smart Technical English” application. It comes with a set of development phases in which each phase uses the results of the previous one [4]. The phases are analysis phase, designing phase, programming phase, testing phase and maintenance phase. As SDLC has been around for a long time, many variations have been created, starting from Waterfall, prototyping, to the newest model [5]. However, for this research, prototyping model is used based on certain considerations related to its advantages.

Prototyping model offers the best approach since we are unsure of the efficiency and the adaptability of “Smart Technical English”. [6] The prototyping paradigm begins with requirements gathering. Here we meet the English teachers and students as users to define the overall objectives for the software, identify the requirements, and determine some areas where further definition is mandatory. The prototype is evaluated by the teachers and students and then used to refine the needs of “Smart Technical English” to be developed. Iteration is needed as the prototype is built to satisfy the needs of English teachers and students. Meanwhile, it also enables us to better understand what requirements to be done.

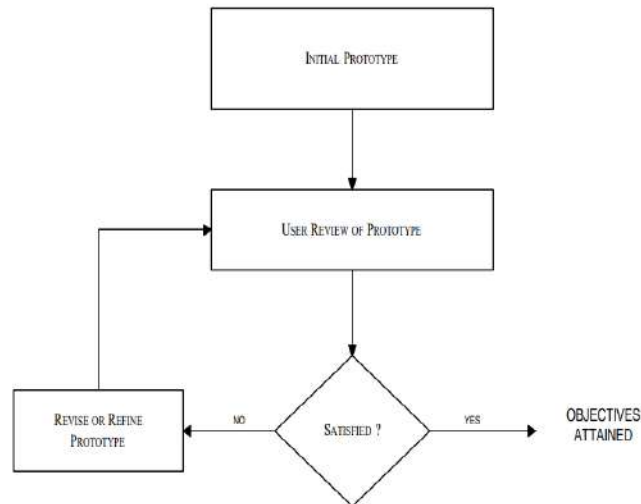


Fig 2.1 The prototype model adapted from [7],[8]

The software used by We to develop the “Smart Technical English” app is React Native. React is an open source Java Script library used by developers to create web user interfaces. React Native assists developers to build mobile apps by using only JavaScript. It uses similar design as React, enabling developers to compose a rich mobile user interface by combining fundamental user interface building blocks together with the assistance of JavaScript and React.

A. Analysis of Requirements

At this stage, we gained information regarding the students, lecturers and the materials taught in every study program. In order to obtain this information, observations and interviews were conducted toward subject matters lecturers and students. Need analysis of the English vocabulary that are presented in Smart Technical English android application was conducted. Several aspects of learning were also planned, starting from determining the Competency Standards, Basic Competencies, indicators and learning objectives.

B. Developing the Prototype

When the need analysis of the materials is completed, the next step is develop the prototype of the Smart Technical English application. The software used to develop the “Smart Technical English” app is React Native. React is an open source Java Script library used by developers to create web user interfaces. React Native assists developers to build mobile apps by using only JavaScript. It uses similar design as React, enabling developers to compose a rich mobile user interface by combining fundamental user interface building blocks together with the assistance of JavaScript and React. This initial product is then validated by media experts and materials experts. The purpose of the validation is to obtain input and justification from experts related to the validity of the material and strategy for presenting material through the application.

C. User Testing and Feedback

This stage is a trial phase of Smart Technical English app. The app was applied to 120 students in 4 different study programs, namely Safety Engineering, Marine Engineering, Electrical Engineering, and Shipbuilding Engineering. This process also involved at least 4 English

lecturers. Lecturers send students responses were obtained through interview and questionnaires to determine the feasibility of the application in the English learning process. Moreover, through questionnaires and interviews, suggestions for improvement of the app were also obtained.

D Product Revision

This stage is the stage of improvement based on the response and suggestions from lecturers and students.

SMART TECHNICAL ENGLISH APPLICATION

'Smart Technical English' Quiz

We set the menu of "Smart Technical English" app by considering the level of vocabulary and also TOEIC. When the app is started students are presented with 2 options: Quiz and Vocab. When they click Quiz, they are directed to Quiz and TOEIC practices. Meanwhile, when they choose Vocab, they will be directed to 4 different majors where they can choose based on theirs: Shipbuilding engineering, Electrical Engineering, Marine Engineering and Safety Engineering. When students choose one of the departments, they will come to a Quick Guide menu where a set of terms related to their study program is presented. When they choose one of the term, they will be provided with a definition along with the image,video, as well as related words. Here they will learn about making definition.

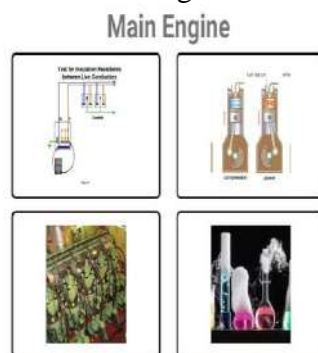


Fig. 2.2 The Quiz on vocabulary

When students come to the Quiz on vocabulary, they will see some pictures. They must select the best picture representing the title. In the next level of the Quiz on vocabulary the students are given some pictures and they are asked to type the definition of the object/tools shown in the picture. In this part, the students will learn how to write good sentences and good definitions.

TOEIC Practices

The next option on the Quiz menu is TOEIC Practices. Here students are provided with a variety of TOEIC listening practices starting from Photo Section or Picture Description to Short Talks and reading practices including Incomplete Sentence, passage Completion, and Short Reading.

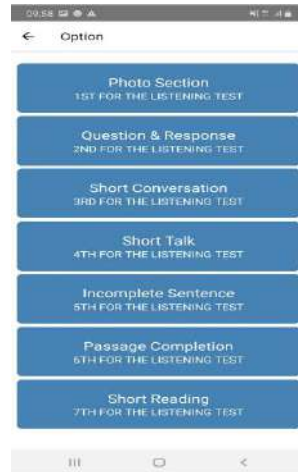


Fig 2.3 TOEIC Practices

When students click photo section, they will find some pictures and listen to the description of the pictures. They must select correct picture that is described through the audio. The TOEIC Listening Practices including the images are depicted on Fig 2.4 and Fig 2.5.

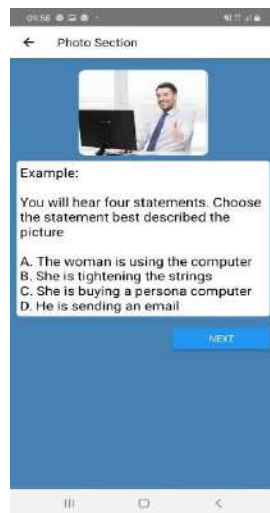


Fig 2.4 Photo Section

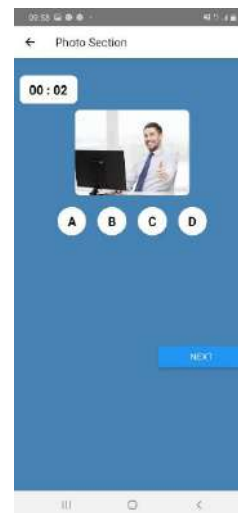


Fig 2.4 Photo Section

After the students finish listening to the photo section or pictures description, the student can continue the next part by choosing the 'next' button until they finish all parts of the test.

Students' Perception and Discussion

The next step in the Prototyping process is testing the application. In this stage students give their perception on the the prototype of 'Smart Technical English. Students give feedback on it and are interviewed in order to know the usability of the application. Here we use Likert scale items of the questionnaire. The questionnaire is proven to be reliable ($p= 0.76$). On the other hand, questionnaires are analyzed by using coding method of content analysis. Positive orientations are found.

Positive orientations of ‘Smart Technical English’

No	Aspect	Score	Category
1	Design	31.80	Good
2	English Materials and Activity	34.84	Good
3	Learning Improvement	25.19	Good
4	Ease of Use	12.68	Good

When we analyze the students’questionnaires, it was found that most of the students thought using “Smart Technical English” helped them revise their improve their english. Other students had the opinion that this application has appropriate English vocabulary they need related to their major. Some other students highlighted that the application is easy to use and has entertaining design.

CONCLUSION

Mobile learning has proven to be effective to enhance students learning. When it comes to teaching Polytechnic students, smart android application is considered an effective tool to motivate them to learn English. By using SDLC prototyping model, We develop an Android-based 'Smart Technical English' application to support English teaching and learning process in PPNS. This application is also equipped with attractive visual images, videos, dictionary and quiz designed specifically for each study program in PPNS. Students’ perception on the application leads to positive orientations of the application. Hence, in the future it can help students improve their English skills.

Acknowledgment

We would like to use this opportunity to thank PPNS for funding this research. Special thanks are also sent to teachers and students who helped evaluating the needs of developing Smart Technical English app. We really hope that the application can be applied and help improve the Students’ TOEIC score. In the future, we expect that this application can be developed and enhanced more with interactive features.

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