

Educational Research & Development
A Closer Look at Indonesia and Malaysia

Undang-Undang Nomor 19 Tahun 2002, tentang Hak Cipta

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Educational Research & Development

A Closer Look at Indonesia and Malaysia

Editors

Mahdum

Suarman

Aliza Alias

Abdul Razaq Ahmad

Mohd Mahzan Awang



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Sampul dan Tata Letak: UR Press

Alamat Penerbit

Badan Penerbit Universitas Riau

UR PRESS Jl. Pattimura No. 9, Gobah Pekanbaru 28132,

Riau, Indonesia

Telp. (0761) 22961, Fax. (0761) 857397

e-mail: unri_press@yahoo.co.id

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Cetakan Pertama: November 2015

ISBN 989-979-792-635-9

PREFACE

From the Dean

The book entitled *Educational Research & Development: A Closer Look at Indonesia and Malaysia* was motivated by the academic cooperation between two universities namely the Faculty of Education, University of Riau Indonesia and the Faculty of Education, National University of Malaysia. A lot of academic activities have been carried out from this cooperation such as seminar proceedings, research collaboration, human capital development, and academic publication (books and journal). Now, this cooperation has reached more than one decade and it is my hope to see this academic networking will be strengthening by organizing more academic activities. This book is the first English book publication. By having this version, I hope that the book can be referred internationally, especially for those who are not get in-depth knowledge on Indonesian and Malaysian educational development. Congratulation to those who are involved in this publication!

Prof. Dr. H. M. Nur

The Dean of The Faculty of Education
The University of Riau
INDONESIA

From the Desk of Editors

This book focuses on the empirical research in education in various perspectives. It provides a lot of information and data on educational development in Indonesia and Malaysia. The compilation on the various educational researches in this book is based on the conference papers that have been presented in the several series of Regional Conferences organized by the Faculty of Education, University of Riau Indonesia and the Faculty of Education, National University of Malaysia. The Regional Conferences are organised in every two years. The conferences focused on various issues and development in education and human development. We believe the use of educational knowledge will assist educationists to improve the quality of education as well as their skills in disseminating knowledge. While the book emphasises statistical and narrative findings from the empirical research, perhaps, it provides effective strategies for educators to carry out educational activities in various fields. The book centres on empirical research in education for development. We think you will find this book to be a starting for carrying out comparative research in the future. We banded together to write this book because too little is written about educational research for a country development especially in Malaysian and Indonesian context. Specifically, this book is a main source for educators who seek to improve their understanding on the academic culture, students' achievement in academic and non-academic, subject-matter education, sociological and psychological aspects. We hope the book can be a useful reference for those who have interest in education for development.

Editors

Mahdum

Suarman

Aliza Alias

Abdul Razaq Ahmad

Mohd Mahzan Awang

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CHAPTER 1

The Role of Headmasters as a Manager of Change in the Implementation of Standard Curriculum for Primary Schools in Malaysia

Mohd Izham Mohd Hamzah

Jamallulail Abd Wahab

Mahani Md. Hashim

Zanariah Tabi`ie

Introduction

Change often takes place in every organisation. Change is also related with transforming towards better in order to achieve success. Change also happens to cater the need of the immediate surroundings, local organisation or globalisation. Findings, latest innovation and technological advancement also influence the organisation to change further. This concept paper will look into the role of schools in managing change in schools generally and specifically in overcoming the issues related to the implementation of Standard Curriculum for Primary Schools (SCPS) in primary schools in Malaysia. Headmasters' role and changes in school are closely related and need collective involvement of all the members in the organisation. In schools, the roles of Headmasters are very important whereby the leadership style can influence and improve the degree of changes and various developments. The active role of a Headmaster as a leader in teaching can increase the level of academic achievement in a school. Headmasters are considered as an agent of change in schools and as a role-model for some changes which will be going to take place. Changes in schools are something which is very complex. The processes of change need action and careful planning whereas steps and strategies need to be premeditated to overcome any upcoming problems. The function and the role of a successful Headmaster who can execute any form of changes will definitely create an effective school environment. Headmasters should be proactive, innovative and be prepared to upgrade themselves with the highest level of knowledge in various dimensions in line with the changes in the era of world of borderless globalisation and the drastic development of information technology.

The world of education is not something static but is a dynamic process. Changes will happen in every aspect of education system whether to the individuals or the organisation itself. The process of change takes place as a result of fulfilling the rapid development of global needs which cannot be denied. The process of change is a basic concern to stabilise and to maintain the school environment itself. It is a complex process but specifically focused on the school environment (Blase 2005). Change has the similar connotation to transformation, innovation, adaptation or reformation and all these refer to a changed situation from an existing situation to a better and developed situation (Sufean 2004).

The Characteristics of Changes

The world has progressed into the new era and several hot issues have been highlighted. Some of the issues are life related to the demands in our lives as a result of the rapid development of external environmental changes. Changes are normal in an organisation in order to manage changes effectively (Malek Shah 2006).

Morrison 1998 (cited in Mohammed Sani, Mohd Izham & Jainabee 2008) explains that changes have the following characteristics:

- i. Change is structural, systematic and has interference effect to the system.
- ii. Change is a dynamic process and is not an event.
- iii. Change is non-linear (Carnal 1995). It can be related to Chaos theory of complexity.
- iv. Change is a multidimensional phenomenon (has objective, function, organisation, administration, structure, knowledge, skills, habitual, values, trust, roles, relationship, aims, curriculum, pedagogy, source, assessment and measurement).
- v. Change depends on various perspectives.
- vi. Change needs investment in the form of structure, institution, human power, technological and psychological support.

Change is required to overcome the needs and demands of life which often changes. The same goes to education which involves changes in organisation and changes involving stakeholders. Due to the frequent changes in education, it can be said that 'something which is permanent in education is the change itself' (Fauzi 2006).

The Concept of Changes in Schools

There are many terminologies that are related to change. From the perspective of school management, the concept of change is seen from different aspects. According to Karin Lukk, Marika Veisson and Loone Ots (2008), changes are the planning for changes and are very important to success. Fullan (1991) (cited in Mohammed Sani & Mohd Izham 2012) claims that the real content of educational changes are by forwarding something which can be practiced. Thus,

changes are made to fulfil the immediate competition needs and global needs. The pattern will slowly and continuously change and this result in long term effect, compared to those who make changes and expect immediate return. The definition 'change' means 'the act of change', 'the movement', 'change to something else (Kamus Dewan Third Edition 1994).

Changes which happen in organisations such as schools should involve continuous features (Kaizen), happen gradually and overall towards better improvement. Changes also involve introducing a new behaviour or practices which can improve the existing practices in schools. Hence, changes cannot be separated from the concept of 'transformation', 'innovation' and enhancement.

The concept of change is conversion from something which already exists and it is a continuous process. From the school perspectives, whatever changes made by school head as the leader or the manager are related to the implementation of changes. So, the school head is the fully responsible individual towards the change.

The concept of change also can be seen from the aspect of its purposes and aims. In short, the main reason for a change is to increase the effectiveness. In other words, changes should be aimed to improvise the quality and the excellent management of the organisation. In the context of education, changes are made to increase the quality and the function of the management and the administration so that the school can become a social organisation which is truly effective and efficient.

The implementation of change in schools is a complex process (Karin Lukk, Marika Veisson & Loone Ots 2008). The process or the flow of change can be seen as below. Figure 1 shows the process of change from the previous situation to a new situation based on the Three Steps Model by Lewin 1058 (cited in Mohammed Sani, Mohd Izham and Jainabee, 2008). Which is (1) unfreezing, (2) movement, (3) refreezing, whereas the state of change is (i) existing situation (ii) state after the change of situation (iii) new situation.

School Heads and the Changes in Schools

According to Shahril (cited in Abdul Razak Wahid, 2001), the headmaster is the agent who is in charge of transformation, meaning that they act as an important figure that control and modify the organization of the school. A headmaster should make necessary changes in certain fields so that it can suit the changes that occur in their surroundings. This will help the school to function efficiently.

A headmaster's leadership plays an important role in determining the success of the school. Leadership is a concept which is hard and complex because it is not related with productivity and giving orders but it is more to bringing changes (Abdul Ghani, Abd. Rahman & Mohamed Zohir 2008). According to Shahril (2000), a headmaster is an agent who brings transformation and is referred

to as an important individual who modifies the organization of the school. If the principal is good and creative, the management of the school will blossom (Yahya Don, Aziah & Yaakob, 2007). But the question is, is the headmaster capable enough to fill the role as an administrator and a leader in teaching which can bring changes in the school?

One of the headmaster's jobs in school is to make sure all the policies and rules are obeyed. Headmasters have limited power as they have to receive orders from their superior officers such as implementing KBSR and KBSM. Other than that, a headmaster should be excellent in introducing changes and solving all the problems that arises (Mohammed Sani, Mohd Izham & Jainabee, 2008). A headmaster's role can be listed as below:

1. The Headmaster as the leader of the school.

In the modernized world now, the education system is becoming more challenging. So the headmaster plays an important role in school in accordance to the education system today. The headmaster has great responsibilities in the school system. Leadership is also accepted as the main factors that differentiate the success and failure of an organization or a school. A leader should be an individual that leads and organizes in an organization. Leadership is also defined as the capability, efficiency and capacity of a leader in managing an organization.

2. The Headmaster as the leader of curriculum and co-curriculum

As the leader of curriculum and co-curriculum, a headmaster is responsible to make the school as a learning organization. The field is so wide and need people to always improve their leadership so that every action of theirs will obey the national education principles.

3. The Headmaster as the manager of the curriculum.

The headmaster as the manager of the curriculum acts as the supervisor and controls the policy and objectives of the school in accordance to the education ministry's policy. Other than that, a headmaster has all the rights to set the target for the school, planning the improvement in the school's public examinations results. For example, targeting 100% pass or at least 10 students scoring straight A's in UPSR for that particular year. The headmaster also has the responsibility of ensuring teachers are teaching according to the syllabus given and also according to the lesson plan at the given period of time. The wide coverage of the curricular sector requires the headmaster to supervise the quality and quantity of the work produced both by teachers and the students, checking students books, setting the evaluation system for the examination and monitoring the teaching and learning process that is being used in school and checking the teachers record book often, students' progress report, time table, profile book, attendance book, subject committee and

continues checking of the co-curricular book. A headmaster is also required to teach at least six periods in a week.

4. Headmasters, Parent-Teachers Associations and the Community

Schools should operate with the help of parents in all the programs which have been planned. PTA is the medium between parents and teachers to discuss about daily school operation. Headmasters should be smart in building the network between the parents and community so that they can support all the school activities.

Ahmad Fauzi (2006) explains that the role of headmasters as sponsors generally can be seen as follow:

- a. Explains the result of the wanted change
- b. Ensures that there is a proper planning to manage change
- c. Identifies the impact and the apparent cost and non-apparent cost which involves as a result of change
- d. Ensures the source of implementation for changes so that the purpose of change can be realised
- e. Remain committed with the expected change
- f. Appreciate the expected behavioural changes even though in a small scale
- g. Overcome all the obstacles and barriers towards change

SCPS and the Issues in Implementation in Schools

SCPS means Standard Curriculum for Primary Schools and is being carried out since 2011. It is a New Examination Format Strategy. The aim of SCPS is to produce knowledgeable, skilled and with good behaviours human resource. This announcement was made by our Deputy Prime Minister, Tan Sri Muhyiddin Yassin with the aim of excellence in education. The problems arises when the teachers complaint of the hassle in carrying out SCPS in schools. Year 1 and Year 2 teachers face problems with the new format as they feel that it is burdening them and they are heavily loaded with many tasks. The problem consists of the required document standard such as evident, reference books and students' online marking scheme and the compilations of students file. All these require careful preparation, allocation of time which is usually long and tiring. This is to determine each students band based on their achievements. The online network which requires filling in marks/band is always busy and difficult to access, technical problems and many other information collecting task. More importantly, does this assessment at school level is reliable and has validity?

Suggestions in Solving the Implementation of SCPS

Though faced with numerous challenges and complex problems to cater the changes in implementing the SCPS, there are ways to face the obstacles which may arise. Some of the suggestions are to have in depth discussion between the

headmaster and the teachers and should also take considerations of the short term and long term effects.

- The headmaster should also give his fullest cooperation in executing changes in SCPS. Motivation, driving forward and inspiring words should be given to teachers so that the implementation of SCPS will be successful.
- Besides, headmasters should always monitor and request for feedback from teachers regarding the problems and weaknesses of SCPS. The observation will help to overcome all the weaknesses and setbacks faced by teachers.
- To strengthen the implementation of SCPS, the headmaster can request the help of the experts in the field involving SCPS such as Expert Trainers at school, district or state level. In-house training can be carried out in schools so that the SCPS based activities such as workshops, meetings or post-mortems can be discussed together.
- To fulfil the various needs of evidence, headmaster should give cooperation to teachers. The headmaster should allocate and pass the required financial budget to prepare students' files such as the SCPS files, questions and band/achievement related information files. This will enhance the SCPS system in schools is well taken care of.

Conclusion

In conclusion, change is very dominant in education world due to the dynamic features. Education acts as a catalyst to prepare human resource in the future and it always needs changes. As a social institution, the education caters for demands in line with the latest development in life-style. The foundation of a country begins at school level in order to prepare the Malaysian society towards multi-racial country. The rationale to implement the SCPS is to abolish examinations whereby students will not burden with exam-oriented system. As for teachers, the SCPS will enhance their teaching professionalism by having better efficiency and skills in teaching and learning process without being bound by examinations. In order to excel in education system, it is vital to have better human resource with solid education, skills and good morale. To have educated human needs long term studies and so that they can be balanced physically, emotionally, spiritually and intellectually. Besides, the education system has to produce humans with moral and religious values. The involvement, leadership and the influence of the school head is very vital in managing changes in schools.

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CHAPTER 2

A Study of Characteristics Application of Successful Entrepreneurs for Administrator with Characteristics Effective School

**D. Ayub
Norasmah Othman**

Introduction

Current phenomena have seen the increasing awareness of the importance of entrepreneurship and social field in the school management which have been preserved as two sides of significant development (Kyeyune 2008). Sudarwan (2006) revealed that schools should have gained lesson from the entrepreneurship field as it has been both global and local trend and that it may serve as an inspiration and motivation in designing and managing a great deal of educational programs. Furthermore, Hoy & Miskel (2001) acknowledged that owing to the entrepreneurship spirit, head teacher as an administrator have capacity to encourage themselves and teachers to accomplish achievements, besides, he/she may establish a clear negotiation with the teachers regarding the work minimum standards imposed on them.

School as a formal organization in Indonesia in the national educational system- has born a paramount role to formally operate education, and in accordance with the school based management context, all of the programs at school should be managed by the empowerment of all of the available resources in order to effectively achieve the goal (Depdiknas 2009). The effectiveness in accomplishing the school missions should be supported by an instructional process which is aimed at producing smart and highly qualified graduates (Deal et al. 1999).

School is a place where the transfer of knowledge occurs formally between teacher and students (Kuncel, Hezlett & Ones 2004). To allow the process of this formal place operate smoothly, Azman (2001) and Marzano, Waters and McNulty (2005) argued the concept of school will be more complex than usual when it is connected with the management concepts for in this current global world, the development of management has become apparent providing something new and

fresh and is subject to change any time and in any conditions exist in an organization.

An effective school is the expectation of all components in community, either the internal components comprising students, administration staff, head teacher and the vice head teacher, or the community at large (Fitri 2009). The public have recently payed scholarly attention to the quantity and quality of the school leavers because instead of being salaried employee with their competence opportunity to develop new business is widely open (Gronn 2003). Furthermore, Harris (2002) and, Marzano, Waters and McNulty (2005) stated that as an educational institution, school is utilized as a place to implement an instructional process. Hallinger and Heck (2010) argued that school owns a severely complex and dynamic system rather than merely as an assembling point for students and teachers meet. Muchtar (2001) and Normore (2004) described that school in its own right is a forum to produce educated people regardless the social background of students involve in it either socialy or economically. School according to Kyeyune (2008) is an organization which has been designed in such a way to give contribution for the improvement of community life. Depdikbud (2009) suggests that alot of efforts need to be made to realize an effective school.

Administrators' competent to effectively implement certain characteristic of school managements, may create an effective shool followed by hard work and highly commitment in managing the school (Rohiat, 2008). Alvy and Robbins (2005) concluded that a school will become effective when the administrator has capability of applying certain characteristics which lead its students to be successful entrepreneur. Jadi, tujuan utama penelitian ini adalah untuk mengidentifikasi hubungan pengamalan ciri wirausahawan sukses dalam kalangan administrator dengan ciri sekolah efektif di Kota Pekanbaru Provinsi Riau. The objective of this study is therefore to identify the correlation between the application of the characteristics of successful entrepreneurship among school adminstrators and the characteristics of an effective school in Pekanbaru City, Riau Province.

Literature Review

The concept of an effective school may be evident in the school management (Cavallo et al. 2004). Poster (2000) said that the defenition of an effective school may be apparent in the typical of effective school proposed by experts. Several studies on an effective school had identified some characteristics of effective school as reported by Salfen (2004) and Syaiful (2009) on effective schools in United States and England. They had proposed various basic factors contribute to the emergence of effective school; However, these factors according to them are related to each other rather than as a whole.

Mortimore et al. (1995) discovers that effective schools typically in the admission process have competent and more progressive students than others. This implies that effective schools have been provided with prior value-added in the

output compared with those which gained inputs of the students who basically have the same competency and potential. This also suggests that the different performance among schools caused by varied competency or the early deficit when students enter schools should also be taken into account in deciding the effectiveness of a school one to another. Meanwhile, Taylor (1999) believed that an effective school is a school where all of the resources are organized and used to guarantee all students regardless ethnic, gender, economy-social status enable to get access and learn the provided essential curriculum at the school.

Sergiovanni (1987) also defines effective school in the school-based development. He identifies eight criteria to measure the effectiveness: (1) test score improvement; (2) attendance improvement; (3) increasing number of homework and written assignment; (4) the added allocated time for Math, English, Science and History subjects; (5) the active participation of parents and community; (6) students' participation in the curriculum program; (7) rewards and acknowledgement for students and teachers; (8) Quality support for the extraordinary students. Edmonds (1979) mentioned that there are five characteristics of an effective school: (1) Good leadership and care of the head teacher towards the teaching quality; (2) Comprehensive understanding on the teaching methodology; (3) comfortable and secure atmosphere during the instructional process; (4) expectation that all of students minimally enable to acquire certain disciplines and (5) students' assesment based on academic achievement results.

According to Depdikbud (1999), an effective education may be observed from its quality with the following characteristics: First, students demonstrate high level competence towards any assignments they require to master and are in line with the goals and objectives of education, i.e. academic achievement which is proven in the academic results; Second, the learning outcome meet the students' need and daily experience so that students not only enable to "know something" but also know how to "do something" which will be profitable for their life; Third, education outcome appears to be relevant to the work environment. Depdikbud (2002) stated that the effective dimensions of a school are as follows: Learning service for students; (b) the service management; (c) the affordable equipment and supplies; costing and program; (e) community participation; and (f) school culture.

Sergiovanni (1987) also reveals the basic concept of an effective school: (i) teachers prepare the students well and make organized and systematic report. In addition, they are satisfied with the school achievement due to their endless efforts.

Mortimore et al. (1995) identifies 11 characteristics of an effective school: (i) Professional leadership; (ii) sharing the experiences and objectives; (iii) Conducive learning climate (vi) commitment to gain high achievement; (vii) positive reinforcement; (viii) progress evaluation; (ix) the establishment of students' rights and responsibilites; (x) good home-school relation; (xi) Effective learning management

According to Depdikbud (1999), The typical of an effective school viewed from the duties an administrator must perform are as follows: (1) strong commitment for the school development; (2) guarantee for any test students will get satisfied academic achievement; (3) encouraging parents and community participation in the school development program; (4) striving for producing highly qualified graduates.

Furthermore, Hasbullah (2006) supports Depdikbud (1999) saying that the characteristics of an effective school is that all parties are to have commitment to the school development, preparing students to gain good academic outcome, solid cooperation between community and school where the community strongly support the school's objectives and achievement, and highly qualified graduates who meet the job market's need and for pursuing higher education.

According to Alberti, Sciascia & Poli (2004), Eman (2008) and Heflin (2011), entrepreneur is someone who organize, manage and is ready to take risks to create a new business and business opportunity. Zimmerer & Scarborough (2005) acknowledge that an entrepreneur acts as both manager and actor. Dion (2008) emphasizes that such characteristics of entrepreneur is also observed in non entrepreneurs, who are also enable to implement it in order to achieve outcomes and the objective of their organization.

Eddy (2009), Hoe (2005) and, Zafir and Fazliah (2006) stated that an entrepreneur is a coordinator and supervisor in the course of the production process and the fourth agent in the production's factors. (the other three factors are land, capital and worker). Schumpeter (1934) as quoted by Buchari (2008) defines an entrepreneur as a creative inovator where he is a someone who is higly committed to do reforms and changes towards the quality of product, creating a new method in the production process, opening a new market; receiveing new offers or forming a new organization (Rambat, 2007). Drucker (1994) as quoted in Suharyadi (2007) said that an entrepreneur is someone who enable to create something new, ready to take the risk, optimistic, like challenges, responsible for any decisions, creative and capable of running a business.

The application of the characteristics of a good entrepreneur from school administrator may establish and realize an effective school, as quoted in Zimmerer & Scarborough (2005) suggest the typical of attitudes and behaviour of a successful entrepreneur: (1) having commitment and devote his time and attention to the business; (2) having good a sense of responsibility in controlling the available resources and be responsible to get success with effective self controlling; (3) willing to seek opportunities; (4) being strong to face risks and uncertainty; (5) to be self-confident, optimistic, and strongly believe in his/her capability to gain success; (6) productive and flexible; (7) demanding feedback and advice for any accomplished work and activities; (8) possessing high level energy; (9) having stimulus for being superior; he/she want to do more for everything he/she has done by exeeding beyond the existing standards; (10) Futuristic; (11) Learning from failure; (12) having competence in leadership. Furthermore, Norasmah (2002)

suggests some characteristics to develop entrepreneurship spirit which are classified into four categories: (1) greedy to be superior; (2) seriousness for business; (3) having strong self-controlling and (4) innovative

This study tries to shed light on the current phenomena occurs to school administrators, particularly at Senior and Vocational school. The data were gathered by means of questionnaires which were designed to have inquiries on the application of the characteristics of successful entrepreneur performed by school administrators. School administrators here refer to the head teacher and his four assistants.

To know the application level of the characteristics of successful entrepreneur implemented by the school administrators, the total population in this research consist of 360 person from 72 high school that covers 15 states schools and 21 private high schools; 6 states vocational high school and 30 private vocational high school. The fixed sample of this study are 180 by making use of sampling technique of Isaac and Michael (1981) with 5% of the error level.

Before distributing the questionnaires, the validity and reliability had been tested. The validity level of the application of characteristics of successful entrepreneur performed by the school administrators consist of 58 items and 40 items on the characteristics of effective school had been tested to 60 respondents. Whereas, the reliability of the questionnaires examined by the *Cronbach Alpha* and the result is above *Alpha* 0.90 which had surpassed the minimum standard score (Sugiyono, 2008).

The MANOVA analysis was conducted to observe the distinctions of each independent variables based on the administrators' demography factors, are: gender, age, types and status of schools, length of employment, inside and outside of town and the accredited schools. The findings suggests that there was a significant difference in terms of the characteristics of successful entrepreneurs practice ($F = 0.997$, $\text{sig} = 0.0511$), $\text{Sig} > 0.05$ and characterize effective school administrator perception ($F = 1085$, $\text{Sig} = 0.0358$) $\text{Sig} > 0.05$, based on demographic factors administrator are: gender, age, types and status of schools, length of employment, inside and outside of town and the accredited schools. This implies that there is no positive effect difference and significance between the administrators' demography factor towards the application of the characteristics of successful and the features of effective school which refer to the administrator's perception. This finding suggests that the pattern of the application of the characteristics for successful entrepreneur are not different on the administrators factor.

Referring to the results using ANOVA analysis, it is discovered that the difference between the application of the successful entrepreneurship and effective school, the score gained with the formula $F=15.729$ and the score $\text{sig}=0.000$, $\text{sig} < 0,05$, and it is concluded that there was a difference between the application of the characteristics of successful entrepreneurship and the effective school according to the administrators' perception. Besides, based on the tukey test, that the application

of the characteristics of successful entrepreneur among the school administrators gained the Mean difference (I-J) (1.70878) and the error standard is Error (0.34783) and sig=0.000 > 0.05, meaning here that the implementation of the characteristics of successful entrepreneurship, according to the administrators' perception, has contributed to the positive effect on the effective school.

Referring to the correlation test of the product moment between the application of successful entrepreneurship and effective school based on the administrators are as follows: $r_{xy}=0.608$, $Sig=0.000 < 0.05$, there has been a significant difference between the application of successful entrepreneurship (X1) and effective school (Y). The evident and strong connection between these two variables occurs in the high interpretation level.

This model summary in Table 1 demonstrates the contribution value provided by the application of the characteristics of successful entrepreneurship among the administrators against the characteristics of effective school is 36.90% ($R=0.608$, $R^2=0.369$). In this respect, there is probability of the other rest of percentage about 63.00 which have been contributed by the other factors of this study.

Table 1: Model summary between the correlation characteristics application of successful entrepreneurs for administrator with characteristics effective school

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.608	0.369	0.366	2.60738

a. Predictors: (Constant); X = Application of the characteristics of successful entrepreneurship

b. Dependent Variable: Y = Characteristics of effective school

Level of significance = $p < 0.05$

Furthermore, based on the regression test, the obtained results indicates the larger contribution given by independent variable than dependent variable. The following Table 2 demonstrates the regression test results to identify the influence of the application of the characteristics of successful entrepreneurship against the characteristics of effective school based on the administrators' perception.

Table 2: Regression test results between the application of the characteristics of successful entrepreneurship and the characteristics of effective school

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	708.361	1	708.361	104.195	0.000 ^a
Residual	1210.123	178	6.798		
Total	1918.484	179			

a. Predictors: (Constant); X = characteristics of successful entrepreneurship

b. Dependent Variable: Y = characteristics of effective school

Level of significance $p < 0.05$

Furthermore, to measure the reliability of positive effect and significant difference of the independent variable against dependent variable, t test had been administered. The apparent effect between the application of the characteristics of successful entrepreneurship and effective school is demonstrated in table 3 below:

Table 3: The Impact of the application of the characteristics of successful entrepreneurship among administrators on the characteristics of effective school

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta		
(Constant)	32.116	5.774	-	5.562	0.000
Pengamalan wirausahawan sukses	ciri 0.635	0.062	0.608	10.208	0.000

Dependent Variable: Y = Effective school

Level of significance $p < 0.05$

Based on the analysis result, the gained math equivalent for regression model is as follows:

$$\hat{y} = 32.116 + 0.608x$$

Referring to the math equivalent, when the application of the characteristics of successful entrepreneurship established by the administrators can be interfered 0.608 percent, consequently, the characteristics of effective school, according to the administrators' perception will increase about 32.116 percent. In addition, the t score for the characteristics of effective school is 10.208 with the significant score

<

=0.000, Sig = 0,05, where the test result shows the significant difference between the application of the characteristics of successful entrepreneurship against the effective school. The results indicated that the application of the characteristics of successful entrepreneurship (X) has provided large contribution towards the characteristics of effective school (Y), the x variable therefore appears to be the most essential variable in deciding the level of the characteristics of effective school based on the administrators' perception.

Implication

This study stated that the school administrators (state and private SMA and SMK), in Pekanbaru city, Riau province have implemented the application of the characteristics of successful entrepreneurship and develop perception towards the high characteristics of effective school in managing and leading the schools. The school administrators, as the key actors at a school are required to arise the awareness of the potential of the application of the characteristics of successful entrepreneurship and establish the perception towards the characteristic of effective

school, and enable to implemented as best as possible as a good way of improving their school management. The administrators therefore should design a strategies in encountering any problems of the school. All schools (state and private SMA and SMK) in Pekanbaru city, Riau province can be managed by school administrators whose competence on the application of the characteristics of successful entrepreneurship in their administration teams and effectively operate school administration. These school administrators in Pekanbaru city, Riau province can be trained to possess the skills on the application of the characteristics of successful entrepreneurship in the context of the management of their own institutions through a particular series of course and special training for the education entrepreneur.

Each of administrator, individually should initiate with his/her progressive and positive thinking applying the characteristics of successful entrepreneurship and continuously develop their mindset in participating any programs and courses related to the consolidation of the application of the characteristics of successful entrepreneurship and entrepreneurship culture. The institutions that are in charge of organizing such trainings to the candidates of head teachers and school administrators are the Educational Service of Riau Province, the Educational Service of Pekanbaru City, and local colleges and universities. Besides, all relevant institutions which are engaged in educational sectors can also cooperate with some institutions such as Small and Medium Scale Business and Cooperative Department, Commerce and Industry Department, The Chambers of The local and provincial Commerce and Industry to realize the special trainings and programs, as a smart step to achieve effective schools.

Beside the head teachers as the head administrators, the other school committee, i.e. school supervisors, Counseling teachers, Economic and Cooperative teachers, Entrepreneurship/Accounting/Economic/Business Study/Trade Class teachers are encouraged to implement the application of the characteristics of successful entrepreneurship in school administrators and the characteristics of effective school as an effort to improve the instructional process and the school management. In addition, they can also introduce the implementation of the characteristics of successful entrepreneurship to the learners in the beginning level. It is aimed at producing a creative school which is not as easy as people think, and continuously encourage all school community to develop a sense of good perception towards the characteristics of effective school. Currently, the job of a school is getting harder, more challenging and more critical than before and it therefore needs academical and critical head management team who are creative, innovative to manage things efficiently as the achievement of an effective school should go together with an effective administration.

Teaching staff development division of the Educational Service and the Quality insurance agency both in the local and provincial level should be held responsible for paying scholarly attention to the preparation of the programs: well organized trainings and courses to develop teachers and community motivation

towards the application of the characteristics of successful entrepreneurship. Enabling to produce many competent administrators and school community to implement the application of the characteristics of successful entrepreneurship may contribute to the more progressive and smart state private SMA and SMK as well as primary school which accomplish achievements due to their effectiveness and efficiency.

From this study, it is expected that there will be more researchers experts in educational field in the future who stand in the front line to continue efforts exploring the knowledge related to the issues on the application of the characteristics of successful entrepreneurship and characteristics of effective school widely-particularly that may contribute to the establishment of effective school in the regional national and international education areas.

The application of the characteristics of successful entrepreneurship among school administrators and the positive perception towards the characteristics of effective school in the course of the establishment of effective school program is a scientific study and dynamic invention and also ample field to explore and learn scientifically. The application of the characteristics of the successful entrepreneurship among school administrators and perception towards effective school can be executed in any jobs such as education, entrepreneurship and the other fields which of course should be conducted with positive perception to any program we are working on it. In order to obtain the benefits from each of employment place, it is recommended to design paradigms by applying the characteristics of successful entrepreneurship in exploring any job.

The application of the characteristics of successful entrepreneurship and characteristics of effective schools conducted by school administrators appears to have provided apparent contribution to the effective school. It therefore may be used to create a solid organization, and the result of this study directly can be applied by any party which deal with the school management field including school community and the learners. This study result deserved to distribute for the sake of the development of educational institutions to accomplish effective school as an effort to produce highly skilled graduates who are ready to compete in the job markets. It is also important source to administer the test tools in selecting head teacher and school administrators including the head teachers of primary school and the class teachers in order to measure their competence and their understanding towards the importance of the application of the characteristics of successful entrepreneurship among school administrators and perception towards effective school.

Conclusion

This study sheds light on the correlation of the application of the characteristics of successful entrepreneurship among school administrators and the characteristics of effective school in Pekanbaru City, Riau Province. This study result concludes that the administrators of state and private SMA SMK have succeeded in adopting the

application of the characteristics of successful entrepreneurship and perception towards the characteristics of effective school which result in positive impacts on managing and leading the school. School administrators as the key actors at a school are required to arise their awareness of the potential of applying the characteristics of successful entrepreneurship among the school administrators and as best as possible enable to make use of them for the improvement of the management climate of each school.

The key point underlying in the application of the characteristics of successful entrepreneurship among school administrators are knowledge, art, behaviour, attitude and character of someone whose capability in accomplishing innovative ideas into the real world creatively. Furthermore, to get success, an entrepreneur is required to enable in exploiting mind, imagination and intuition. So, the application of the characteristics of successful entrepreneurship among administrators is constantly adaptive to seek any opportunity the others cannot discover; never satisfied with accomplished achievement and always to make reformation.

The potential of the application of the characteristics of successful entrepreneurship and the perception towards the characteristics of effective school in producing creative and innovative ideas, good risk management and administrator leadership in managing schools in Pekanbaru city, Riau province may be developed. However, it should be polished periodically and is guaranteed will not disappear as time flies. The application of the characteristics of successful entrepreneurship among school administrators and the characteristics of effective school which had been indoctrinated to state and private SMA and SMA in Pekanbaru city, Riau Province need to be related to the scenario of national education and it is also used as a consistent effort in achieving effective school. So, all of efforts made by any parties in improving the prestige and pride of the administration and management professions at schools in Pekanbaru city, Riau Province should be implemented in accordance with the cultivation of the application of the characteristics of successful entrepreneurship among educators.

This sincere effort is expected to enrich the culture of the application of the characteristics of successful entrepreneurship among the administrators and positive perception toward the characteristics of effective school in educators' mind to establish more effective schools than before in participating in the national education aspiration, particularly in Pekanbaru city, Riau Province.

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CHAPTER 3

A Study of Indonesia's High School Teachers' Competency

M. Nur Mustafa

Introduction

Teaching profession requires specific knowledge and skills. Therefore, the curriculum of teachers' education should be designed to ensure that teachers are competent in content knowledge and pedagogical skills. By mastering these two main elements, teachers are able to face challenges in school. Norlander (2009) suggests that an effective teacher should be able to carry out his duties and responsibilities successfully. Society assumes that being a teacher is an easy job. Indeed, teacher trainees also assume that the duties of a teacher are easy, manageable and could be carried out successfully. Due to this paradigm, most teacher trainees are not serious in gaining knowledge during teaching training. As a result, it brings adverse effects to the teaching profession. In reality, being a teacher is not an easy task. Teachers have to fulfil parents' expectations and they need to ensure that children are well-educated. Therefore, all teachers have to improve their teaching skills and content knowledge. The following elements and domains are supposed to be fulfilled by all teachers: personality, intellectual, emotion, inter-personal skills, intra-personal skills and creativity in teaching.

Teaching profession is a professional designation which requires resilience, competitiveness and good leadership skills. These come from individual talent and abilities. Good teachers are those who are expert in teaching subject content and able to manage personnel, teaching aids and classroom effectively. Teachers who have undergone training should possess the competencies based on the theoretical knowledge, practical training and soft skills.

Huberman's research (1992) has discovered that teaching implementation depends on the involvement and versatility of teachers in establishing an interesting and effective learning environment. How well a teacher adopts all the knowledge and involvement could be seen in the implementation process? According to Kearsley (1997), teachers' dedication in carrying out the activities to inculcate teaching content is greatly influenced by the mastery of teaching aids and in making changes in students' behaviour. Hence, teachers have to be sensitive

towards the latest development in education world today. Teachers have to be positive and strive to improve the standard of education so that the quality of teaching and learning is improved.

According to Sutadipura (1985), constant thinking and acting which is consistent and continuous could develop a competent person who possess knowledge, skills, values and basic attitudes towards accomplishing something. Professional career requires thinking outside the box and away from mundane routines as required by professionalism via effort and training. Competencies will influence a person's work performance in carrying out his duties as a social agent to the students. The 14th rule of the Republic of Indonesia in 2005 defines professional competencies as a set of knowledge, and behavior which have to be possessed, observed and mastered professionally. Teachers are educational managers and leaders in a classroom. Therefore teachers who are competent would be able to carry out his teaching successfully, making full use of resources and materialise teaching process successfully.

Teachers are expected to work systematically, consistently and creatively (Arifin 2002). According to Blanton et al. (1998), professional competencies are crucial skills which determine the success of a teacher in carrying his duties as professional. Teachers' competencies are aligned with the ability to manage information, framing duty solving and active communication with students. Teachers also have to possess the knowledge about subject curriculum and syllabus through accurate testing procedures. In other words, teachers should be able to integrate the use of technology compatible with the standard technology for undergrads in developing curriculum. Teachers have to know how to make use of technology and cognitive thinking process which is complex. Teachers should also be able to know how students learn and understand the difficulties faced by the students. According to Soedijarto (1989), professional teachers have to master:

- knowledge discipline as teaching resources,
- teaching content that is going to be delivered,
- knowledge about undergrads' characteristics,
- knowledge about the philosophy and aims of education,
- mastery of teaching methods and models of teaching,
- mastery of technological principles of learning, and
- ability to lead and direct learning environment.

In an Indonesian context, professional competencies refer to the mastery of education in depth which enables teachers to guide students and manage teaching activities (National Education Standards, phase 28, line 3, clause c). Abdul Karim (1989) agreed that competent teachers would make the effort to relate teaching content with students' background knowledge and provide effective learning experience through assignments, exercises and homework which are of high quality. Mortimore (1995) and Zigmond (1997) also realized that there was a

relationship between the steps taken by teachers to simplify and master teaching content with their competencies.

Issues

Many studies on professionalism in teaching profession found that most teachers have a lack of professionalism. Three contributing factors identified to the low level of teachers' professionalism are many teachers who failed to carry out their duties, low level of loyalty towards the norms and teaching ethics, and unsatisfactory acknowledgement of teachers towards educational knowledge in implementing the policies to the involved parties (Arifin 2000). Past studies also revealed that teachers' integrity and accountability are often questionable including matters regarding the school milieu and teachers' competency in managing classroom and delivering lesson. A teacher should be accountable to his duties and therefore will work hard and show sense of responsibilities and subsequently will be proud of the profession (Cruickshank et al. 2006). There is no excuse for a teacher especially of the higher ranking to be less proud of their duties and responsibilities. This is because they take a vow on their work responsibilities before they even start working, like any other government officers (Mulyasa 2005, Arikunto 1990).

The effort to improve teachers' quality actually continues even though after the have started teaching assigned in the school. It is also continues for the rest of their teaching profession. It is observed that the quality of work declines as they serve longer in the service. Empirical research on teachers' burnout carried out by Morrison et al. (2005) revealed that the non academic routines of teachers reduce their mood to keep on learning and improve their professionalism. This is because they refuse to change due to high pressure at work, high workload and role conflicts. Burnout causes emotional exhaustion, physical exhaustion, attitudinal exhaustion and low feeling of accomplishment. Consequently this affects the quality of their dedication and teaching towards their students. Therefore efforts and measures have to be taken to improve the quality of the teachers. According to Jamal (2009), teachers' readiness to changes and optimize the use of their professional skills are still limited and not developed that it does not improve their perseverance towards the challenges and changes.

Sadirman (2004) discovered that there were students who were not happy and scared of teachers. Some teachers always scolded their students during learning activities. Some teachers have no respect punctuality and others have been teaching the same topics repeatedly. This discourages and demotivated students to be involved in lesson activities.

Teachers Competency

Competencies are the capacities to carry out the product of learning process (Mulyasa 2005). The capacity is when an individual successfully learn how something complex to abstract is done. According to Indriyanto (2001),

competency is the skills and active appearance and highlighting one's roles. The basic competencies of a teacher consist of these components: time management, focus, feedback, forecast, decision making; and transfer of knowledge; and culture.

The research carried out by Widyoko (2005) on teachers' competency showed that most teachers have an average level of competencies. That study demonstrated that teaching experience has a positive impact on teachers' competency level. In addition to this factor, abilities to integrate modern technology and manage classroom effectively were found to be problems for some teachers (M. Nur 2013).

The international scenario of competency in a more general organisation reveals a similar situation regarding the organisational climate towards professional competencies. Gorman et al. (1997) introduced a competency model through based on the study on outstanding skills and leadership qualities. That study utilised qualitative research design using individual interviews. Each individual was interviewed and results suggest the importance of emotional intelligence to improve competencies in handling organisational climate. Important elements identified including interpersonal skills, initiative, possessing a vision, cognitive abilities, technical skills and high level of IQ. Five emotional intelligence investigated in that study were self-awareness, self-discipline, high level of motivation, high level of empathy and inter-personal skills.

Pillay (2005) has carried out the research on the relationship between burnout and teachers' competencies in Queensland. That study reveals that teachers' workload has a high correlation with burnout tendencies among teachers. It has negatively affected teachers' working competencies. The research discovers that working practices and working environment such as competitions, working nature transformation and technology could bring impact on the wellness and competencies of teachers.

According to Davies (2000), the creative process of learning is crucial for a teacher. Teachers have to be a creative role model to the students. In addition, Baghart and Trull (1973) who have carried out the research on the competency level of creative teachers have proposed several measures that could be adopted by teachers, namely the ability to accommodate to students' learning style, create a fun learning environment, inculcate living skills and versatility in the students, reduce all barriers and limitations in learning activities.

Learning Implementation Plan (RPP) in Indonesia stated that pedagogical competency is the teachers' ability to carry out learning experience. It includes the understanding of education policies, the understanding of students, curriculum development, learning plans, learning implementation, benefits of learning outcomes, learning outcome evaluation and the realisation of students' potential

Daborn (1999) emphasised that the most important things to be considered in teaching practise are regarding the learning outcomes and questioning techniques used. These will lead to effective learning and improve learning readiness and cognitive ability among students. Everything begins with the understanding of the

simplest to the most complex ones. Good teaching practice will educate students to critically thinking involving the process of recalling information, handling information, analyzing, making analogy (to compare and contrast), making interpretations, syntesizing and evaluating.

According to the criteria set forth by UNESCO, quality education is the combination between professional teachers with integrity and competency. Idris (1990) stressed that the quality of teacher should be the primary importance in the effort to develop effective teaching pattern. The quality of teachers is measured through personal competency, work performance, motivation and effort and changes in students' behaviour.

Flippo (1997) suggests that teachers need to imprive their delivery quality has in order to meet the professional standards. Thes include the working style, teaching practuce, and the use of interactive approach in communication. Serving quality is the product produced by the workers within a time frame which includes high sosialisation ability among workers to be able to share working qualities. Teachers are able to avoid the decline of work performance due to burnout by sharing their workloads (Bernardin & Russel 1993).

Mulyasa (2006) and Arikunto (2004) proposed several criteria for competent teachers. They have initiated specific tests in their studies which than were utilised in the current study. These tests were adapted and modified to fulfil the current research objectives. The validation of the items in the test was referred to educational experts in Indonesia. The pilot study was then carried out where Cronbach Alpha scores indicated that the items were appropriate to be used.

Aim of study

The current study evaluates the professional level and competencies among high school teachers in Pekanbaru. Specifically this study examined professional competency differences among high school teachers based on gender, work experience and age groups. The current study utilised survey research method using questionnaires. The questionnaires contain five major constructs namely

- the mastery of education foundation,
- the mastery of vision, mission and educational objectives,
- the mastery of national educational standards,
- curriculum development moves,
- classroom management, and
- the ability to use media and educational resources.

Pilot test was conducted in one secondary school involving 50 teachers. All the items in the teachers' professionalism competency test show high validity and reliability whereby the value is 0.82 while teachers' work performance shows an overall alpha value of 0.78. This indicates that all items are acceptable and able to be used. Sample of this study was selected using simple random technique

involving 327 teachers from various fields in 12 secondary schools in Pekanbaru, Indonesia.

Teachers' professional competency test contains 33 items which are divided into 7 constructs which are, the mastery of education foundation, the mastery of vision, mission and educational objectives the mastery of national educational standard, curriculum development, classroom management, the ability to use media and educational resources and the ability to understand and inculcate educational theories and students' development. Teachers' professional competency level is measured based on the five level mean scores. Table 1 shows the interpretation of the mean scores.

Table 1 Interpretation of the mean scores

<i>Score</i>	<i>Interpretation</i>
0-54	Not competent
55-64	Less competent
65-79	Quite competent
80- 89	Competent
90-100	Very competent

Results and Discussions

Overall results indicate that most teachers are quite competent (Table 1). Detailed analyses revealed that teachers are competent in two aspects that are the mastery of education foundation and the mastery of vision, mission and educational objectives.

Table 2 Competency Level among Teachers

Professional competency aspects (n = 327)	Mean	SD	Interpretation
Education foundation	83.49	15.12	Competent
Vision, mission and educational objectives	81.65	15.78	Competent
National educational standards	71.25	26.73	Quite Competent
Curriculum development	65.32	16.92	Quite Competent
Classroom management	60.30	20.09	Less Competent
Usage of media and educational resources	58.10	22.58	Less Competent
Average Mean Score	70.02	9.46	Quite Competent

The level of professional competency among teachers generally is satisfactory. This shows that the serving quality among them is at average level. This reveals that the teachers are mastering the professional competency. Results also indicate that teachers have less competent in classroom management and the use of media and educational resources. Past study suggest that a teacher has to be accountable of his duties which will encourage them to work hard and show high sense of responsibilities that they would be proud of their career (Cruickshank et al. 2006). Recent research carried out by Dinas Pendidikan Negeri Riau (2006) revealed that 45% of the teachers are still teaching using lecturing method. The use of modern technology was limited. Hence, it contributes to less productive

learning. Teachers have to take various efforts to improve qualities including all the competency elements mentioned. Detailed analyses were carried out to seek differences and commonalities between genders.

Gender

Table 3 shows the competency level of female teachers is higher than male teachers with significant differences regard to:

- mastery of education foundation,
- mastery of vision, mission and education,
- understanding and mastery of national education standards, and
- mastering and developing curriculum.

These results are parallel to research findings from Anderson (1990) and Bakalis (2003) that female teachers were more committed in the teaching profession compared to male teachers. It also supported findings from Widoyoko (2005) that female teachers' professional competency level is higher than the male teachers. However the competency in classroom management does not show any differences between male and female teachers in the research carried out by Shullman (1990). Teachers only focus on the delivery of teaching in the classroom towards academic improvement which therefore does not show obvious differences (Marks 1991).

Table 2 Professional Competency Level, by Gender

<i>Aspects</i>	<i>Gender</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>Type III</i>					
					<i>Total square</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>p</i>	
Mastery of Education Foundation	Male	132	81.25	17.02	110.94	1	110.9	4.90	0.028	
	Female	195	85.00	13.53						
Mastery of vision, mission and education objectives	Male	132	75.76	15.73	769.14	1	7689.1	34.0	0.000	
	Female	195	85.64	14.54						
Understanding and mastery of national education standards	Male	132	67.12	25.70	379.38	1	378.3	5.36	0.021	
	Female	195	74.05	27.12						
Mastering and developing curriculum	Male	132	62.39	19.14	191.45	1	190.4	6.78	0.010	
	Female	195	67.31	14.97						
Mastery of classroom management	Male	132	59.85	20.90	46.29	1	46.29	0.11	0.735	
	Female	195	60.61	19.57						
Ability to use media and education resources	Male	132	57.39	22.85	113.99	1	113.9	0.22	0.637	
	Female	195	58.59	22.42						

There is no significant differences between genders in terms of classroom management and the use of resources which indicate that both genders are moderately competent in these two aspects.

Working Experience

Table 3 shows there is a significant difference on teachers' working experience. Teachers who have been working between 16 and 25 years are found to be more

competent which indicates working experience is a major predictor of teachers' competency.

Table 3 Teachers' Competency Level on Working Experience

(I) Work Experience	(J) Work Experience	Mean Difference (I-J)	Range	P
4-9 years	10-15 years	-2.28	1.15	0.118
	16-25 years	-6.66(*)	1.36	0.000
10-15 years	4-9 years	2.28	1.15	0.118
	16-25 years	-4.38(*)	1.33	0.003
16-25 years	4-9 years	6.66(*)	1.36	0.000
	10-15 years	4.38(*)	1.33	0.003

The MANOVA analysis shows that there are no significant differences between teachers based on their working experience with regards to the following aspects mastery of vision, mission and education objectives and mastery of classroom management (Table 4). Ability to manage classroom effectively is important in teaching profession as it encourage and motivate students to be involved in lesson activities. Sadirman (2004) and Awang et al. (2013) found students are unhappy to study with angry teachers. This has negatively affected the teaching and learning process.

Table 4 Teachers' Competency Level, by Working Experience

Aspects in Professional Competency Constructs	Total	Average		F	P
		Quadrat	df		
Mastery of education foundation	Between Groups	3459.76	2	1729.88	7.88 0.000
	Within Group	71115.93	324	219.494	
	Total	74575.69	326		
Mastery of vision, mission and education objectives	Between Groups	1224.06	2	612.03	2.48 0.085
	Within Group	79934.20	324	246.710	
	Total	81158.26	326		
Understanding and mastering of national education standards	Between Groups	12828.32	2	6414.16	9.44 0.000
	Within Group	220157.61	324	679.50	
	Total	232985.93	326		
Mastering and developing curriculum	Between Groups	1857.45	2	928.73	3.29 0.039
	Within Group	91483.83	324	282.36	
	Total	93341.28	326		
Mastery of classroom management	Between Groups	1207.29	2	603.64	1.50 0.225
	Within Group	130362.13	324	402.35	
	Total	131569.42	326		
Ability to use media and educational resources	Between Groups	6719.32	2	3359.66	6.83 0.001
	Within Group	159305.14	324	491.68	
	Total	166024.46	326		

This result is parallel with the research carried out by Manullang (2002) and Tillman (2002) which covered that working experience brings influence towards the increase of commitment and education service quality. Teachers working experience has influenced teaching versatility in classroom and the knowledge of education foundation. Logically, the longer one works, the better the competency is

and this affects the standard and work style and also service quality. It was suggested that experienced teacher should guide young teachers to carry out duties in school (M. Nur, 2012).

Overall results from this study are parallel with the results obtained by Widyoko (2005) which demonstrated that most teachers are competent due to the selection criteria to become a teacher is considerably high. Research by Daniel (2001) found that a competent individual possesses these characteristics: initiative, with a vision, highly intellectual, possesses technical and cognitive skills, with high IQ and EQ. By having and practising these elements, positive school ethos may be able to develop. Happiness in learning activities was found to be vital in attracting students' engagement in socio-educational activities (Awang et al. 2011). Contrary to this, the current study revealed that competency criteria of the teachers are not evenly distributed whereby the competency management is still lacking compared to the mastery of education policy which consists of mastery of education foundation, vision, mission and objectives, national education standard and curriculum development.

Implications and Suggestions

Overall, the competency levels among Pekanbaru high school teachers most teachers are moderate. There are rooms for improvement for teachers especially in terms of classroom management and the utilisation of learning resources. The current study revealed most teachers have a lack of skills in managing classroom effectively. In-service training for teachers in Pekanbaru is essential. They must be exposed to the best practice of classroom management by visiting other schools either at national or international level. Teachers are also need to attend training on the use of various learning resources. It is important for teachers to have creativity in teaching and carry out own-initiative to utilise learning resources.

The current study also has an implication towards policy makers as data from this study can be used as a guideline in developing short term or long term courses in order to improve educational qualities in Indonesia. As data from this study reveals that demographic factors play important roles in developing teacher competency, any policy made by the Ministry of Education Indonesia has to take into account demographic variables. Suitability with local needs is an important factor for policy making consideration. At a school level, results from this study can be used as guidelines to improve teacher competency by designing specific in-service training programmes and on-going practice.

Conclusion

This research has brought clear indication regarding several aspects of teaching profession at high schools in Pekanbaru Riau, Indonesia. The level of professional competency of the high school teachers can be considered as average. Therefore strategies for improvement are necessary especially in terms of classroom management and the skill of using media and educational resources. This is

followed by understanding and mastering of national education standards and curriculum development.

As results of this study found that teachers are able to understand the education foundation and the interpretation of mission, vision and education objectives; the Ministry of Education Indonesia has to design the best formula for improving teacher competency. Overall this research results show the differences in mastery of education foundation, mastery of vision, mission and education objectives, understanding and mastering of national education standards, and mastery and curriculum development.

The professional competency level of the Pekanbaru high school teachers can be considered as average. Therefore, improvement is needed, especially in terms of classroom management and the versatility in using media. This is followed by the understanding and mastering of national education standards and curriculum development. Special attention has to be given so that the teachers themselves as they are the main subjects determining the quality of works. The understanding and awareness can also be instilled in the students to help teachers succeed as tradition ancestral agent and versatile curriculum evaluator. Career professionalism reflects the implementation of work using intellectual based techniques and procedures. The foundation is specifically acquired in a well-planned manner and directly practised for general use. Professional teachers are those who inspire their students, become the best role models, and generate brilliant and new ideas which bring benefits to their students and colleagues.

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CHAPTER 4

Non-Formal Education for Adults in Rural Areas

**Abdul Razaq Ahmad
Mohd Mahzan Awang
Mohd Jasmy Abdul Rahman**

Introduction

Educational programmes for rural communities aimed at improving socio-economic and social well-being among people in that area. To achieve that target, a special programme was conducted by the Department of Society Development (known as KEMAS) under the Ministry of Rural and Regional Development, Malaysia. One of the programmes organised by KEMAS is the Human Development Programme (known as HDP). The programme contains the knowledge and skills for societal activities, arts, families, generic skills and a self-development. The current study examined the impact of the Human Development Programme module for the rural community development. In addition the study investigated the suitability of the programme in improving social wellbeing among the rural communities. This study utilised Hammond model (1973) as the research framework to evaluate the effectiveness of the Human Development programme by focusing on three elements: (1) teaching methods, (2) teaching aids or facilities, and (3) organisational management including the programme structure. Samples of this study consisted of 1563 adult respondents from various backgrounds from three states of Malaysia. Data were analysed by using descriptive statistics to identify the effectiveness of the programme by looking at the suitability of the programmes based on the respondents' background. Overall results indicate that the Human Development Programme modules are quite suitable for developing rural communities where the majority reported that they have benefited from the programme. Although there is a significant difference between genders in-terms of the programme outcomes, overall result indicates that most of them were happy and satisfied. This means that the Human Development programme is beneficial; however it has to be improved in order to enhance the quality of the programme.

Non-Formal Education for Adults

Non-formal education means any organised educational activity outside the established formal system whether operating separately or as an important feature of some broader activities. Non-formal education became part of the international discourse on education policy in the late 1960s and early 1970s. According to Tight (1996: 68) who suggested that whereas the latter concepts have to do with the extension of education and learning throughout life, non-formal education is about 'acknowledging the importance of education, learning and training which takes place outside recognized educational institutions'. The notion of non-formal education has been a significant feature of education policy debates in southern countries for three decades. It has drawn attention to the importance and potential of education, learning and training that take place outside recognized educational institutions. There are questions about usefulness of the notion when looking at the process of education. Similarly in the 1980s there was a neglect of non-formal education and Fordham suggested that this was in tune with the politics of the decade, accompanied by greater inequalities both within and between countries. Given the extent to which notions of lifelong learning and associated ideas have gained ground in recent years, it will be interesting to see how the language of policy debates will change over the next few years.

Human Development Programme is one of the programmes organised by the Department of Society Development (DSD), Malaysia. HDP aims at enhancing human potential among rural communities by using non-formal education approach. The programme contains societal activities including soft-skills, community-engagement skills or also known in Malay language as *fardhu kifayah*, arts, families, institutional development and self-development. The programme is designed for all people in Malaysia regardless of their religions, ethnicity and ideologies. There is a specific module of the programme that is aiming to motivate the communities to be active, pro-active, and have high sense of self-awareness. This module contains the overall elements of enhancing human potential such as personal excellence, family health, and socio-economic development. Such elements are important to develop human capitals in rural areas (Collin, 1991).

HDP was initially organised by the Moral Building Division that was previously known as the Islamic Unit in 1961. In 1968, the Islamic Unit was renamed as Islamic Class (KAI) which emphasised on compulsory ritual activities for Muslims or better known in Arabic as *Fardhu Ain*, Al-Quran teaching, Muqaddam teaching, Arabic-based Malay calligraphic or commonly known in Malay as *Jawi*, application of Islamic values in daily life and extra-curricular activities such as Islamic celebration. This unit was also responsible for organising Quran reading contest (*musabaqah*) that are usually held in 7 states of Malaysia.

In 1990, the Islamic Class was renamed as the Islamic Religious Education (IRE). Activities carried out by IRE including Quran learning class, the Islamic education classes for children in the kindergarten, moral building training classes and religious education classes which were part of Societal development (known

as KEMAS) activities. In late October 1996, a restructuring plan for the Religious Education curriculum was made to overcome the problem of non-uniformity in the implementation of the programmes and activities for KEMAS. About 133,666 participants were involved in KEMAS HDP programmes. A total number of 2,623 community developers were also involved in KEMAS HDP programmes. For the purposes of this study, only 2135 participants from four states of Malaysia were included. These states were selected due to the active participation among participants. Indeed, the programmes held in these states were viewed to be the most comprehensive one.

Living in the rural area is not constrained by the hustle and bustle. Most people in the rural areas live in a simple way and conducive life zone. It makes the rural population unaware of the importance of acquiring knowledge and developing personal skills related to religious practices such as the Quran reading skills, Islamic knowledge, Islamic law and spiritual fulfilment. Due to this situation, KEMAS as the Community Development Department that is responsible for rural development has organised many activities relating to personal and socio-economic development. The holistic programmes were organised by this government agencies focusing on developing rural communities and educating the farmers by using religious values. It was asserted to be an important element to enhance the formation of positive personality. According to Halsey (1969), rural communities need to be exposed to various environment and modern facilities in order to improve their performance, to change their attitude and perception towards life thinking. These will motivate them in getting better strategies to generate better income.

In addition, past studies showed that school drop-out and unemployment are some of the problems faced by the youths in rural community. Helping the youths to involve in productive-based activities during their leisure time may be the best strategy to improve their quality of life. This will motivate them to engage in more productive activities, create awareness and develop self-discipline. These situations describe the importance of KEMAS HDP activities. However, there is unclear evidence to get in-depth knowledge on this subject due to lack of past studies focusing on such programme.

Values and Attitudinal Change

Human development can be simply defined as a process of enlarging choices. Every day human beings make a series of choices – economic, social, political, or cultural. If people properly focus on development efforts, then these efforts should be geared to enhancing the range of choices in all areas of human endeavour for every human being. Human development is both a process and an outcome. It is concerned with the process through which choices are enlarged, but it also focuses on the outcomes of enhanced choices. According to Amartya Sen, a 1998 Nobel laureate, human development covers more than just the rise or fall of national incomes. Later Martha Nussbaum, Sabina Alkire, Ingrid Robeyns, and others

expanded the concept. Thus human development is about expanding the choices that people have, to lead lives that they value, and improving the human condition so that people have the chance to lead full lives. Therefore, human development is more than economic growth, which is only a mean of enlarging people's choices

Noble values are always associated with the standards of good and evil, which govern an individual's behaviour and choices. The set of standard we use as the principles to determine what right, what good and what is just. Each individual's morals may derive from society and government, religion, or self which we attribute to a system of beliefs, typically a religious system, but it could be a political system of some other set of beliefs. When moral values derive from society and government, they may become the laws and the common morals of the society. However, people determine whether the values meet their own standard or fall short, come close or far exceed. To evaluate is to determine the merit of a thing or an action as compared to a standard. Typical noble values include honesty, integrity, compassion, courage, honour, responsibility, patriotism, respect and fairness.

Many of us find our values are strongly influenced by our sense of morality and some values are defined by a higher authority. Yet we refrain from citing that authority because doing so may seem less rational and more emotional to others who do not share our belief system. The lack of public reference to morals does not diminish the power of moral authority. Avoiding a morality-based rationale is a social convention and one that is not universally practiced.

Behaviour refers to the range of action patterns exhibited by humans. These behaviours are influenced by culture, attitudes, emotions, values, ethics, authority, rapport, hypnosis, persuasion, coercion and/or genetics. Behaviour is impacted by certain traits in each individual. The traits are vary from person to person and can produce different actions or behaviour from each person. Social norms also impact behaviour. Humans are expected to follow certain rules in society, which conditions the way people behave. There are certain behaviours that are acceptable or unacceptable in different societies and cultures. Behaviour can be influenced by a number of factors beyond attitude, including preconceptions about self and others, monetary factors and social influences. Studies have demonstrated that, in some cases, pointing out inconsistencies between attitudes and behaviour can redirect the behaviour. Thus, changes in behaviour can be defined as the different mode of performing act.

Hammond's Model of Human Development

Based on Hammond model (1973), we have classified human development elements into three components, which are: (1) Institutional Component – refers to demographic of respondents including socio-economic status, gender and ages; (2) Teaching and Learning component – contains three main aspects that are teaching methods, courses materials, and organisation management including course schedule and computer literacy programmes); and (3) Behaviour Modification

Component – comprises of cognitive, attitude and acquired skills after attending computer literacy programmes. We used the survey method selection to gather data. Figure 1 shows the conceptual framework for the current study.

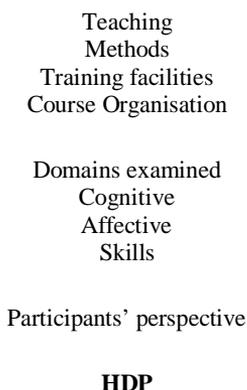


Figure 1 Conceptual Framework (Adapted from Hammond, 1973)

Respondents participated in this study are those who have attended KEMAS HDP programmes (n=1563). The assessment of this programme can be asserted to be accountable for empirical studies due to the widespread distribution of the total samples. It was proposed that a cluster sampling is suitable for large populations and scattered all over the place (Reaves 1992, Cohen & Manion 1994).

Adults' Perspectives On Human Development Programme

In order to identify the perspectives of adults on human development programme, a survey was carried in Malaysia (Abdul Razaq et al., 2014). Overall results from that study indicated that most participants attended HDP were satisfied with the programmes.

Table 1 Participants' Perception on the Teaching Techniques used in HDP

Item (n=1563)	Me an	SD
1. Simple teaching method	3.4 9	1.40
2. Encourages students to think	3.4 7	1.40
3. Emphasises students' understanding	3.3 3	1.27
4. Promotes participants' creativity	3.3 2	1.39
5. Experience-based teaching technique	3.3 1	1.20
6. Group-based teaching technique	3.2 8	1.29
7. Regular and systematic teaching	3.2 6	1.27
8. Various teaching aids	3.2 3	1.28
9. Daily problem-based teaching technique	3.2 1	1.28
10. Teaching for self-directed learning	3.0 4	1.22

Based on the results obtained in this study, it can be asserted that HDP is an effective programme. The HDP instructors are able to educate participants to promote personal excellence, family health, individual healthy lifestyle, socio-economic development. The HDP instructors also used their experience in carrying out the programmes that makes the teaching and learning process enjoyable and successful. Teaching seems to work in groups to discuss the subject matter. The use of group-based activities is found to be a very helpful technique for promoting participants' awareness. Participants' understanding is given a priority by most of the HDP so the participants are encouraged to contribute ideas and thought on the issues and subject matter.

Overall, most participants were satisfied with the training facilities. However, the following aspects need to be improved: classroom design, the use of classroom, the use of computer in teaching and learning process, and the use of teaching aids. From the findings, it is clear that most participants recognize teaching methods applied in the HDP so it can be asserted that the programme is successful and effective. Most of the participants accepted lesson delivered by the instructors in an appropriate way. The instructors also reported that they used a variety of media materials as a stimulus. This has facilitated the participants to understand of what is to be served and absorb the subject matter easily. Media are the means for transferring or delivering messages. Li-Ling Kuo (1996) stated that the use of media is important and it is impossible to coordinate teaching with learning without using media. Media are flexible because they can be used for all level of students and in all subjects. Teaching through media can also encourage

students to be more responsible and to control their own learning, to engage in joint planning of the syllabus, and take longer-term perspectives on their own learning (Masterman 1999). Therefore, since media provide a lot of advantages, a teacher should consider a medium to be used in teaching-learning process. However, there is relatively less self-directed learning method applied by the instructors. This is something which needs to be seriously highlighted as self-directed learning is an effective learning method for adults. Proponents of self-directed learning say that adults will learn better when allowed to plan their own learning. This is in line with opinions from Knowles (1984) whose notes that if adults are not allowed to direct themselves and are treated like children, they experience a kind of cognitive dissonance. This appears to indicate that if adults are given enough control over their learning, they will eventually take charge of the learning experience to make it meaningful for them. The role of self-education naturally increases in adults, for the potential possibilities of the personality are extremely great. It will make it possible to develop one's abilities more successfully, systematically and comprehensively.

From the above findings, it is clear that most participants recognize teaching methods applied in the HDP so it can be asserted that the programme is successful and effective. Most of the participants accepted lesson delivered by the instructors in an appropriate way. The instructors also reported that they used a variety of media materials as a stimulus. This has facilitated the participants to understand what is to be served and the subject matter can be absorbed easily. In fact, participants are encouraged to think and find answers to solve a problem. However, there is relatively less self-directed learning method applied by the instructors. This is something which needs to be seriously highlighted as self-directed learning is an effective learning method for adults.

Table 2 Participants' Perception on the HDP Facilities

	Item (n=1563)	Mean	SD
1.	Contemporary basic facilities	3.93	1.33
2.	Sufficient basic facilities	3.03	1.43
3.	Guide books that are used as texts books are helpful for understanding programmes schedule	3.01	1.46
4.	Good physical classroom infrastructure and arrangement	3.01	1.42
5.	New texts books and relevant	2.99	1.44
6.	Training rooms are suitable for teaching and learning activities	2.89	1.33
7.	Up to date computer software	2.89	1.37
8.	Conducive learning environment	2.89	1.39
9.	Adequate training rooms	2.79	1.38
10.	Sufficient teaching aids	2.60	1.39

Overall, most participants reported that they are satisfied with the training facilities. However, the following aspects need to be improved: classroom design, the use of classroom, the use of computer in teaching and learning process, and the use of teaching aids

Table 3 Participants' Perception on the HDP Course Organisation/Programme Structure

	Item (n=1563)	Mean	SD
1.	Suitable course organisation	3.15	1.43
2.	Suitable time allocation	3.04	1.42
3.	Suitable programmes schedule	3.01	1.35
4.	Appropriateness of the sequence and continuity of courses offered	2.94	1.43
5.	Adequate discussion time	2.92	1.82
6.	Sufficient training duration	2.91	1.39
7.	Adequate time for meeting session with instructors	2.87	1.41
8.	Sufficient duration of programme	2.86	1.35
9.	Adequate time for preparation	2.85	1.37
10.	The course is arranged in an easy and effective ways	2.30	1.36

As for Participants' Perception on the HDP Course Organisation/Programme Structure, it can be concluded that most respondents reported that the programme duration is adequate. Time allocation for teaching and learning is also suitable. The participants reported that they gained knowledge and skills from the programmes organised. Time for discussion with instructors is helpful and meaningful. Programme schedule is also arranged according to the participants' need. Respondents also reported that the courses are inter-related. Topics discussed are continuous and have good sequences. This helps participants to have better understanding on the topics discussed. As participants are adults, it is important to organise programmes in a flexible manner so they can manage their own schedule. It should be noted that most participants are self-employed, so it is necessary to consider their life in structuring HDP. As mentioned by Victoria Douglas in her article, flexibility is the key that makes adult education work. We can plan all we please, but we must be willing to adapt to any situation arising in the classroom that may completely do away with the plans. Differences are what make teaching a challenge. Shireen (2006) and Azelin (2006) conducted a survey and found obvious structural challenges. In a different research by both of them, Shireen discovered the lack of academic and administrative support for the selected distance learners in her studies while Azelin found that certain institutional policies are not adult learner friendly as perceived by her respondents. Both of them argued that classes should be held on appropriate days and time for everyone to attend. Thus, we should provide friendly learning environment for the adults to promote learning activities.

It can be concluded that most respondents reported that the programme duration is adequate. Time allocation for teaching and learning is also suitable. The participants reported that they gained knowledge and skills from the programmes organised. Time for discussion with instructors is helpful and meaningful. Programme schedule is also arranged according to the participants' need. Respondents also reported that the courses are inter-related. Topics discusses are

continuous and have good sequences. This helps participants to have better understanding on the topics discussed. As participants are adults, it is important to organise programmes which are flexible in manner so they can manage their own schedule. It should be noted that most participants are self-employed, so it is necessary to consider their life in structuring HDP.

Analyses of Behavioural Changes Based On Socio-Demographics Factors

Gender

Results show that female participants (Cognitive: mean=3.30, Standard deviation=0.96; Skills: mean=3.30, Standard deviation=0.96; Affective: mean=3.30, Standard deviation=0.96) are more likely to have behavioural changes compared to male participants (Cognitive: mean=2.95, Standard deviation=1.05; Skills: mean=3.15, Standard deviation=1.21; Affective: mean=3.16, Standard deviation=1.01). Female participants are found to have better understanding on the courses organised compared to male participants. This might have a close link with the concentration abilities between male and female. These results are consistent with other research that suggests education has effect on gender position. Gender-based learning differences are most pronounced in the areas of motivation and quantitative skills. Tyson found differences between the sexes in intrinsic motivation. Females scored significantly higher on "work needs" (the desire to perform a task well), slightly lower on "mastery needs" (the desire for new and challenging tasks), and significantly lower on "interpersonal competitiveness" (the desire to outperform others). Gender-based learning differences are most pronounced in the areas of motivation and quantitative skills (Fraser et al. 1978; Tyson 1989).

Age groups

Results show that participants aged 20-30 are more likely to have absorbed the course content better than other age groups (Cognitive: mean= 3.39, Standard deviation=0.88; Skills: mean= 3.56, Standard deviation=0.68; Affective: mean= 3.25, Standard deviation=0.93). The HDP has a low impact on the participants aged 51 as data showed that the mean score for this group is at the lowest level (Cognitive: mean= 3.04, Standard deviation=1.13; Skills: mean= 3.39, Standard deviation=0.97; Affective: mean= 3.10, Standard deviation=1.07). This informs that adult students also have a tendency to manage their time better, possibly because of the other life circumstances that surround them when they are in school. Thus, instructors need to consider student age as an important factor when selecting teaching methods and strategies but often have no information about teaching techniques designed to target learners of varying ages. Instructors should be aware of all the potential factors that can impede or promote learning.

Participants aged between 41 and 50 are found to have gained better skills compared to other groups (Cognitive: mean= 3.43, Standard deviation=0.80; Skills: mean= 3.68, Standard deviation=0.62; Affective: mean= 3.31, Standard

deviation=0.77). Participants aged 51 and above are also having a problem to absorb course content. This might have a link with cognitive abilities between the young and elderly.

Monthly Income

Results show that participants with the gross income between USD429 and USD571 have a better understanding compared to those with USD286 and USD428 income. The HDP has a moderate impact upon participants with the gross income less than USD140, between USD141-USD285, and more than USD572.

Table 4 Behavioural Change, by socio-economic status

Monthly Income		Behavioural change		
		Cognitive	Skills	Affective
< USD140 (n=1156)	<i>Mean</i>	3.31	3.59	3.30
	<i>SD</i>	0.92	0.62	0.87
USD141-USD285 (n=307)	<i>Mean</i>	2.98	3.17	2.86
	<i>SD</i>	1.17	1.21	1.16
USD286-USD428 (n=40)	<i>Mean</i>	3.68	3.78	3.85
	<i>SD</i>	0.73	0.70	0.66
USD429-USD571 (n=50)	<i>Mean</i>	3.90	3.90	3.20
	<i>SD</i>	0.30	0.36	0.45
> USD572 (n=10)	<i>Mean</i>	3.30	3.50	3.50
	<i>SD</i>	0.82	0.53	0.53
Total (n=1563)	<i>Mean</i>	3.27	3.52	3.23
	<i>SD</i>	0.98	0.79	0.94

Participants with the gross income between USD429 and USD571 have a higher skills in religious practice compared to the group that have gross income between USD286 and USD428. Participants with gross income between USD429 and USD572 are found to have a positive attitude towards HDP compared to other groups.

This finding portrays the socio economic status of adult learners plays a big role in their life as a learner. Since most adult learners are working, thus their income level could hinder their study. The amount a person could allocate or spend on their study depends on the amount of his/her income. Perception of family economic stress and personal financial constraints affected emotional distress/depression in students and their academic outcomes (Mistry, Benner, Tan, & Kim, 2009). Thus, this support our findings that participants with high income highlight better understanding in their study compared to those low income. These adult learners cannot afford to buy high tech instruments to boost their study because of financial constraints. When a person's disposable income is high and the cost of accessing technology i.e. internet is low, thus proportionately it is low. Eventually the cost of accessing technology would not jeopardize his/her consumption on other goods. On the other hand, if the amount is high it would force the adult learner to do some sacrifice in consuming or purchasing other

goods. Although one could argue, that being a student, priority should be given to education, but being a human being who are subjected to needs and wants, this could be easier said than done. Since finance is an influencing factor in human's daily life, thus socio economic status of working adult learners should be considered when discussing their achievement in study.

Conclusion And Suggestions

Overall, KEMAS HDP is a very good initiative FOR the rural community. It provides an opportunity for rural communities to learn and get professional training. This programme is useful as not all participants have a great opportunity to attend training courses. Indeed, most socio-economic development programme is organised by institutions that are located in urban areas. The KEMAS HDP has brought many changes for the rural community by providing the opportunity to gain knowledge, skills and experience in terms of learning personal excellence, family health, healthy life style, and socio-economic development. Courses such as sewing classes, cooking, weaving, crafts, parenting, family health, family happiness, family economics and management are necessary for rural communities as they can apply these skills in their daily life. It also can be one of the family incomes for rural communities. A lot of shortcomings in rural communities can be improved by providing socio-development programmes. Positive incentives for developing rural communities have to be sustained. This will help rural communities to equip themselves with knowledge and skills to face global challenges. They have to know that knowledge can be acquired anywhere as long as there is desire and curiosity.

KEMAS HDP has been organised for more than 40 years. Most of them obtained a Certificate of Primary Education and earned monthly income less than MYR501. This situation explains why most of them have a moderate impact in terms of cognitive, affective and skills after attending the HDP. However, it is significant to highlight that at this stage, the participants' involvement in HDP programme is more important than their achievement. The most important aspect of this situation is to encourage their participation in courses organized by professional bodies. Skills improvement will be slowly acquired by the participants by attending such courses regularly.

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CHAPTER 5

Administrators' Role in Managing ICT Integration in Schools

**Said Suhil Achmad
Mohd. Izham Mohd Hamzah**

Introduction

The development of information and communication technologies (ICT) has been recognized as management and learning supports in schools, so that management can achieve the goal effectively and efficiently, and students can succeed with high performance, but support of ICT should be integrated so that school aims can be optimally accomplished. Then, this is where the role of school administrators in the integration management TKM in school, so that they can integrate ICT in a planned, managed, guided and controlled properly.

This paper is expected to contribute a concept how to fix school administrators in managing information and communication technologies in schools related to the purpose of school, so that it is useful to: a) the Department of Education raise administrators in the integration management of ICT in school effectively and efficiently; b) The school inspector does the right observe to the staff in integration management of ICT in school effectively and efficiently; c) the principal can integrate ICT in schools with proper management, d) Teachers in following what is directed by the principal in the integration of ICT in schools, e) students can take advantage from the management in the integration of ICT in schools, and f) the department can use the ICT integration in schools as measurement of school accountability.

The role of ICT and Administration at School

Rusman, Deni, and Cepi (2011) said that ICT provide benefits to education if it is well planned and used for educational activities. Without a good design, ICT will not provide optimum benefit; even it is possible it will be a barrier educational activity. This is related to the OECD statement on line) and which basically explains that ICT have merit and could be used for education. Nevertheless ICT itself will not provide a significant impact compared to learning normal if the use of ICT is not managed efficiently.

Cepi (2010) said that ICT is expected to support the school optimization because the potential of ICT is quite large, such as (1) expanding learning opportunities, (2) improving the efficiency, (3) improving the quality of learning, (4) Improving the quality of teaching, (5) facilitating skill formation, (6) encouraging sustainable long-life learning, (7) improving policy planning and management, (8) reducing the digital divide. Department of Education (2004) in the ICT Blueprint for Education stated that the function of ICT in education is as a source of learning, learning aids, learning facilities, standard competence, administration system, decision support, and infrastructure.

Many studies shows a relation between effective management with quality schools, or in other words, management can be the difference between an effective and efficient school. This was evidenced by a survey conducted in the United States, Hong Kong, Britain, Israel and New Zealand (Bush & Coleman 2012). It was proved that an effective school is a school that takes over educational responsibilities from the national government, regional and local in which school administrators can take a strategic approach, which integrates several different aspects of management to set and achieve their own educational institutions.

Related to the opinion of Muhamad Sani, Izham, and Jainabee (2008) that the school always faces change, managing change and the school is one tricky task for school leaders. Hopkins, in MacBeath and Mortimore (2002) says that school improvement is a strategy to change in education student achievement and strengthen the school's capacity to cope in facing change. Based on the description above, it means that the integration of ICT in schools requires effective and efficient management, because it will be able to improve the quality and success in school.

Administrators Role in Handling School

Management schools in this study is the maintenance carried out by the school officials in this case the head and deputy head of the school. The school principal is person in charge the management of education (Ministry of Education 2005). Management education units in primary and secondary education implement school-based management which is indicated with independence, partnership, participation, openness and accountability (Ministry of National Education. 2006).

Rashid (2007) stated that the school board cannot separate himself from making decisions on every day because it is an essential thing in school administration. So the problem in school relates to the management of the school principal, is not optimal, so that it causes problems in an effective efficient, and the teaching standards.

Abdullah Sani (2009) says that the principal is the most important person in the school and he is the one responsible for all the activities. The principle should arrange and manage school programs, master and affect its implementation, coordinate the various activities of the employees and evaluate the progress and overall performance over time.

It means that one of the principal's tasks is a classic management, which is an art to obtain the results through the various activities undertaken by others (Siagian 2005). More fully expressed by Stonner, Freeman and Gilbert (1996) that it is the process of planning, managing, leading, controlling the manpower of members and using other resources to achieve the specified goal. The same point is also conveyed by Gibson, Ivancevich, Donnelly, and Konopaske (2009) that management functions as POLS, which stands for Planning, Organizing, Leading, and Controlling. Similarly, Kathryn and Martin, in Jamal (2012) also pointed out management as a process of achieving organizational goals that can be realized through performing 4 main functions, namely to plan, to manage, to lead, and to dominate.

Event planning is one of the main tasks of management. According to Stonner, Freeman and Gilbert (1996), planning implies that managers think thoroughly of the targets and actions based on a method, plan or logic and not based on feelings. Designing the organizational goals and establish monitoring procedures to achieve the best.

According to Siagian (2005), planning, as the first function of management, is a concrete step which should be firstly taken in achieving the goals. The second main task is the organizing, which is the process of organizing and allocating works, authorities, and resources among members of the organization, so that they can achieve the organizational goals (Stonner et al. 1996). Siagian (2005) defines organizing as the overall process of grouping people, equipment, tasks, authorities and responsibilities in such a way so as to create an organization that can be driven as a unified organization in order to achieve the predetermined goals. The oldest sense of organizing according to Jamal (2012) is that an action seeking for behaviour relationships efficiently among people, so that they can work together efficiently and gain personal satisfaction in performing certain tasks in the certain conditions of environment in order to achieve certain goals or objectives.

Effective school organizing is the most fundamental aspect in the school management (Hoy & Miskel 1978). According to Stonner, Freeman and Gilbert (1996), the third main tasks is to lead, which includes directing, influencing, and motivating the employees to do important tasks. Gibson, Ivancevich, Donnelly, and Konopaske (2009) said that leading is one of the important topics in the study and practice of management.

The third main task is to lead. Leading and leadership show a process, in which if someone is able to carry out the leading activities, he is then considered to have leadership. Leadership terminology, according to Nurholis (2003) comes from the word "leader" that first appeared in 1300, while the leadership terminology itself appeared before the 1700s. Leadership can be defined as an activity to influence people who are directed towards the achievement of organizational objectives (Mulyasa 2006). Husaini (2009) added that leadership includes at least three things which are interconnected, the leader and its features, the followers, and the supportive condition where group leaders and their followers can interact.

Leadership is associated with the missions, visions, goals, issues and strategies, transformations, human and communication (Mok 2012).

The fourth as well as the last main task of management is to control, which is a process of monitoring, evaluation and reporting the achievement for faster corrective action (Husaini 2009). Jamal (2012) said that all the previous functions would not be effective without the supervision task. In addition, Siagian (2005) stated that all scientists agreed that management supervision duties are in the management board.

In a study in Malaysia, Wee (1999) stated that leadership has been a topic discussed in the past and the present. Many scientists have emphasized the importance of the principal's role as staff developer. The purpose of this study is to find out the performance of the principal as staff developer, as perceived by principals and their staff. It is also to determine the factors that will influence the principals' educative behavior in the development of the staff. It is estimated that the demographic variables, age, and gender have an influence on the principals' educative behavior.

Administrators' role in the integration of ICT in Secondary Schools

High school is the most likely be possible to implement this concept, because it is supported by the resources and good administrators. Thus the management of secondary schools today must be associated with the integration of ICT in schools, which is a special task from the principal, since it is special in terms of planning, taking care of, leading, and controlling integration of ICT at school.

Malapile & Keengwe (2013) in his paper explore the main issues related to Information and Communication Technology (ICT) in education and technology planning. Using the spread of innovation theory, the authors examine the opportunities and challenges of technology planning in Developing Countries (DC), technology trends in school planning, and technology planning models that exist in schools within DCS. Instead, this paper aims to develop a discussion that is based on the premise that teaching is not efficient without the use of proper information and communication technologies.

In Indonesia, we need to emphasize the integration of ICT in schools because in the future education will make use of new ICT-based curriculum. This policy had been informed to secondary schools, especially to vocational schools, hence their schools have ICT facilities, yet it is not optimally used, because not all school administrators do their role properly. ICT integration in education is organized through the stages planned by UNESCO, which uses Schoolnet toolkit approach model. Bangkok: UNESCO Asia and Pacific Regional Bureau for Education, namely, emerging (emergence), applying (hint), infusing (the application), and transforming (change) (UNESCO 2004).

Indonesia is faced the education quality gaps between urban and rural areas, especially remote areas. In general, there is still a gap between the regions in western Indonesia and the regions in eastern Indonesia. Quality of education in

Indonesia is increasingly alarming. This is, perhaps, seen from the reduced levels of Indonesian in the HDI (Human Development Index) in 2011 from the level of 111 from 182 countries to the level of 124 from 187 countries, and last year Indonesia was ranked 112 out of 175 countries (far below Malaysia and Bangladesh). This is because the quality of teachers needs to be improved. Currently the number of teachers employed is 2,692,217, but only 727,381 people or 27% of them have obtained professional certificates, there is still 73% of teachers who do not meet the qualifications of professional educators, including the ability to use ICT in their school (Cepi 2010).

The use of ICT at schools in several cities in Indonesia seems not running as smooth as in Jakarta, Medan and Surabaya. According to the survey conducted by the Ministry of Communications and Information Technology, Human Resources Research and Development Council, Jakarta Post Maintenance and Information Technology (2011), only the 0.06% of teachers who teach basic computer skills to other teacher, only 86.5% computers are used for teaching and learning activities, and the rest 13, 5 % are used for school's administrative activities.

Comparing to other countries' ICT development, Indonesia is still below countries in Asia, particularly in ASEAN. This data is based on the results of ITU. Starting with a fixed line teledensity comparison, in the period 2006 to 2010, Indonesia experienced a significance increase in teledensity, especially between 2006 - 2009, Indonesia's position is just above Cambodia, Myanmar, Laos, India and the Philippines. While among ASEAN countries, Indonesia fixed line teledensity is still below the average of the ASEAN countries. After 2008, there is an increase at most ASEAN countries. (Ministry of Communications and Information Technology, Human Resources Research and Development Council Jakarta Post Maintenance and Information Technology, 2011)

In Indonesia, the school administrator implementing organized school management in facing ICT force is not optimal yet. This is revealed in Husaini's study (2009). They found seven important issues in school planning; a) school administrator actually views that the education planning procedural activities are not necessary; b) interest and attention of principal in school level planner tends to think on the shortcut mind-set due for the planning activities which is according to procedure is seen as wasteful; c) the strict bureaucracy tends to be an obstacle in developing the planning procedure aspects; d) the initiative in reviewing the substantive aspects of education planning do not implement due to unimportant consideration of principal. As the consequent, the model of development do not found by principal; e) the solid planning of school development can be achieved if it is supported by the capability education planner; f) incapability of principal in making a solid planning is due to incapability in comprehending procedural aspect and substantial education plan; g) with a solid plan of school development, there is a possibility on principal's behavior changing. This behavior changing can free the principal from the guide behavior and will be more anticipative attitude,

responsive, dynamic-interactive that finally contributes the increasing of learning productivity.

ICT integration in Indonesian school is planned in two phases; the first phase is according to Education Department (2004). ICT Blue prints for education. Jakarta, National Education Department publisher is that ICT function in education, as learning source, learning media, learning facility, standard competence, administration system, decision follower, and infrastructure. The second phase is continuum model from Bonk et al, in Rusman, Deni, and Cepi (2011) is that:

1. Marketing/ learning siblyls is through website,
2. Students' exploration of sources,
3. Student that is resulted by source in website,
4. The source is from the Course site,
5. The source is from purpose web,
6. Substantive activity site and high class,
7. Outdoor activities are more than in the class,
8. Website is as alternative way to students,
9. The whole course is in website,
10. The course is appropriate with website initiative in planning the more one.

Vanderlinde's report in the Netherland, Van Braak & Dexter (2012) stated that the researcher and the policy makers around the world definitely recognize the importance of developing school based ICT as basic plan to facilitate ICT integration in education. Although this interest is only some to know on how a school can develop their local ICT and create ICT basic plans.

The Studies of Management and School ICT Integration

The researches of school management are mostly focused on school-based management. One of the studies is that Zainal Arifin's study (2009) about the principal's strategies in implementing school-based management. With focus details (i) the principal's strategies in implementing the management transparency, (ii) the principal's strategies in implementing the quality of learning, (iii) the principal's in giving people participation.

Moerdiyanto (2007) stated that through eight parts of TQM, they are national groups, integrity, and trust, leadership, teamwork, training, achievement, and communication, so that it can be resulted the guarantee of successfulness. The role of principal is high, it is because he/she has to enhance, train, and implement those eight parts in school education program. Implementation of TQM without ethics foundation, integrity, and trust is useless.

The principal in Sergiovasi research, in Shahril, Rahimah and Hussein (2010) stated that the comparison which is done by Gilbert Austin in high achievement school and low achievement school in Maryland found a most

significant distinction between two type of those schools. It is strength of the principals in the school. A high achievement school, Mathematics teacher has a strong leadership always pay attention directly to learning, has wide range in terms of successfulness, and has more orientation to the academic achievement.

The theory of Mohd. Saleh (1997) that is to identify the perception of teachers, principals, and senior teachers in secondary school for their role which is done by principal as learning leader in influencing students' academic achievement. Learning leadership is essential role in achieving the successfulness of education. The role of learning leadership is related to an effort to develop teaching and learning process in the school. This process is usually involved the innovation of education program that has purpose to increase students' academic achievement.

Muhammad (2011) in his thesis concluded that ICT integration that is developing in Indonesia is in imitation phase, new set, and adjustment, for instance, applying technology in learning. Integration that lead to modification, diffusion, and innovation of information technology cannot be implemented yet either by technology or education experts. Both technology expert and education expert work separately and do not have any collaboration to build strength in modifying, reredakan, and creating information technology innovation that is integrated in learning while learning trough E-learning is an urgent need in term of developing Indonesian human resources. Although there are numerous theories of innovation diffusion is already done in applying information technology in learning, there are also many obstacles to face. Some of examples are Indonesian material, inadequate of English competency, internet access, unprepared of teachers, lecturers, educators, and the limited time in comprehending more about knowledge and competency of technology. It is a dominant problem that faces by almost technology expert and educators. According to Husaini (2009), management determines 80% of school quality.

Conclusion

From the explanation above, we can know that the role of school administrator concept in school Technology information integration management can contribute an optimal advantage. The function of management that has to be done by administrator is that planning, managing, leadership and supervising, so that technology information integration in the school can truly achieve. It is because management determines 80% of school quality.

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CHAPTER 6

The Use of Facebook in Cultivating Collaborative Learning among University Students

Fariza Khalid

Introduction

The potential of Facebook for learning and academic activities has been widely studied (Charnigo & Barnett-Ellis 2007; Educause 2006; Hewitt & Forte 2006). In higher education particularly, Facebook has become an informal platform for collaborative sharing and communication among students (Cain 2008), through which students can be spurred to develop their knowledge, to improve and to share their thoughts with members of their community (Mintz 2010). Facebook also has the capability to cultivate creativity among users through the process of sharing ideas, giving and obtaining constructive comments and gaining support from others (Ellison et al. 2007).

Facebook is a network that connects students with other students, creating an indirect learning community (Baker 1999). Facebook also offers opportunities for students to support one another. A study by Hamann and Wilson (2002) indicates that students who engaged themselves in online collaborative sharing activities showed better academic performance than those who learned only through traditional lectures. Facebook also can increase the level of interaction among students and between students and teachers. Using Facebook, educators can connect with their students, give them assignments and let the students collaborate with each other to complete the tasks given. Collaboration among students is more alive when they use online environments to gain ideas, or to seek help from other group members.

The features of Facebook itself have great potential to be widely used for education and to spur learning. Features such as downloadable applications enable users to share various file formats. Users can also upload photos and video, post information and send instant messages. Another feature of Facebook that enables more collaborative sharing activities is, its ability to help users to create groups which are aimed at a particular group of people. Previous research has revealed that students are comfortable to use Facebook in teaching and learning in their studies (Hewitt & Forte 2006) and Fischman (2008), stated that 39% of college students in

his survey showed their needs to regularly engage in online discussions with their faculty through Facebook. In Malaysian context, a study by Zaidatun et al. (2012) has revealed that the usage of Facebook among university students in Malaysia for social purposes is high, however, the usage of this platform for educational purposes is still moderate. The findings of the research also concluded that most students surveyed agreed with the potential of online social networks (e.g. Facebook) to enhance their learning processes. Lim's (2010) study also found that Facebook is able to captivate the attention and participation of learners, and has the potential to be used for online academic discussions, either as an alternative to learning management systems commonly used in distance education or to complement such platforms.

Although there is a growing number of research projects examining the use of social networking sites such as Facebook in teaching and learning (Charnigo & Barnett-Ellis 2007, Educause 2006, Hewitt & Forte 2006, Mintz 2010; Ellison et al. 2007), very few studies have addressed the development of specific instructions on how to use Facebook and a discussion of "best practice" policies that can be ethically implemented within the classroom (Munoz & Towner 2009). This paper focuses on two main areas: it offers an explicit explanation on how the integration of Web 2.0 could be implemented by others to create supportive learning communities for students, and discusses the effectiveness of the integration of Facebook (and other Web 2.0 applications) in enhancing collaborative sharing activities from the students' perspective.

Data generation methods

The research participants were 22 second-year undergraduate students from a group of 87 students who were enrolled in the Educational Technology course. These 22 students were from two tutorial groups under the supervision of the researcher. All the students were invited to a group created using Facebook at the very first tutorial. As all of them already had their own Facebook account, it was easy to get them to participate. Although they came from two tutorial groups, only one Facebook group was created for their use. All these students knew each other before they 'met' in this virtual group, as they were from the same faculty and had attended the same courses in the previous semesters.

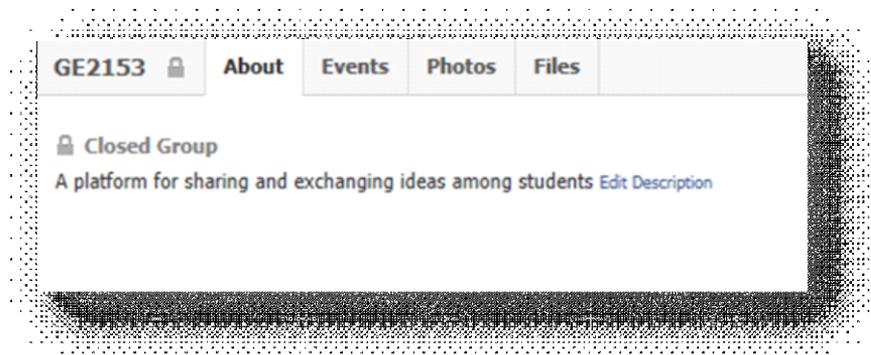
As the aim of this study was to examine the effectiveness of the integration of Web 2.0 in students' collaborative sharing activities, the generation of data was done via online structured interviews. In the final tutorial session, the students were asked to write their thoughts and reflections on questions that were sent to them via Dropbox. They were then asked to upload a file with complete answers to the same Dropbox folder. This method was used to collect data from the students as it would save time and also eliminate the need for face-to-face interviews; it allowed the researcher to interview more than one participant at the same time, because a standard interview schedule or list of questions could be sent individually to several participants at once. In addition, online research participants may be more

relaxed because they are communicating with the researcher from the comfort of a familiar environment. As a result, they may be willing to discuss sensitive or personal matters, such as emotions or disorders that are hard to reveal in person (Hunt & McHale 2007; Mann & Stewart, 2003).

The questions posted in Dropbox aimed to examine broader aspects of Web 2.0 including the use of metacognitive reflection through personal blogs, the process of forming a community of practice and the effectiveness of Facebook in general (in terms of the integration of other Web 2.0 applications). However, the effectiveness of Facebook as an online platform for collaborative sharing activities for students is discussed based on two related questions.

a) How do you value the overall use of Facebook as a platform for your collaborative sharing activities among your classmates?, and b) Name the application(s) utilised in our Facebook group that you think are beneficial for your learning process, and please explain why.

The integration of Web 2.0 applications to support students' online learning groups



In this section, I will explain how Web 2.0 applications were integrated into the Facebook group to support the students' learning. Apart from Facebook as the main platform, other Web 2.0 applications, including Wallwisher, SurveyMonkey, Skydrive, Dropbox and a few others were used. At the beginning of the GE2153 tutorial class, an online group was created using Facebook as a collaborative sharing platform for the students. Students were invited to join the GE2153 group which was set as a closed group (Figure 1). This was to provide space for more private discussions and to prevent unrelated others from reading the discussions.

Figure 1 A description of the GE2153 group

During the first tutorial, the students were asked to fill in a short survey created using SurveyMonkey (Figure 2). The objective was to examine their prior knowledge and experiences of using online applications and the purpose of their use. At the end of every tutorial, students were asked to write their reflections on the lessons or activities they had undertaken during the class using Wallwisher

(Figure 3) and sometimes a new post was created on the Facebook group's wall, asking the group members to share their thoughts.



Fariza Khalid shared a link.
March 6 near Kuala Lumpur

UP: Pelajar-pelajar GE2153, sila klik link ini dan kongsi pendapat anda tentang tutorial pertama ini :)
<http://www.wallwisher.com/wall/teknopend>

Tutorial Teknologi Pendidikan by Fariza
www.wallwisher.com

Sila kongsi pendapat anda tentang tutorial kita pada hari ini. Jangan malu2! :)



Fariza Khalid
March 6 via SurveyMonkey

Little Survey ^^,

Tutorial TP 1
Tutorial TP 1

Para pelajar yang budiman, saya menghargai kerjasama anda semua untuk meluangkan masa 2 minit untuk survey ini ..

via SurveyMonkey

Figure 2 Short survey on students' current use of online applications using SurveyMonkey

Figure 3 Obtaining students' reflections on the activities using Wallwisher

For the purpose of enhancing students' learning and to spur their discussions, other Web 2.0 applications were integrated with the use of Facebook as their online collaborative sharing platform. Among the most widely-used features of Facebook for this group were announcements and information-sharing, as well as links and file-sharing in various forms including tutorial notes, related reading material (Word, PDF and PowerPoint), videos (e.g. YouTube), links and photos.



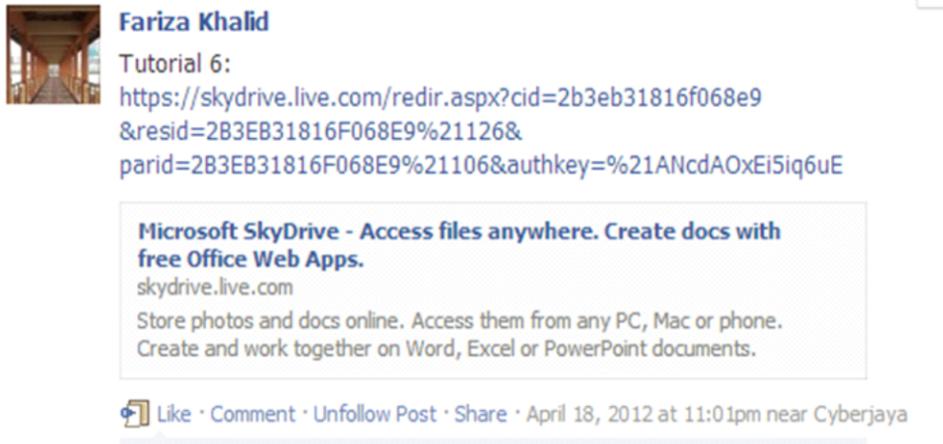


Figure 4 Sharing tutorial notes with students via Skydrive
Figure 5 Sharing links to related reading materials

Sometimes there was a need to gather students' opinions on certain activities. For this purpose a poll feature in Facebook was utilised (Figure 6).



Figure 6 Gaining students' consensus using a poll in Facebook



This group was actively used by the students for several purposes, such as to get clarifications or explanations on topics they were unsure about, and to share information with their classmates.

Figure 7 Student asking for further explanation on the assignment

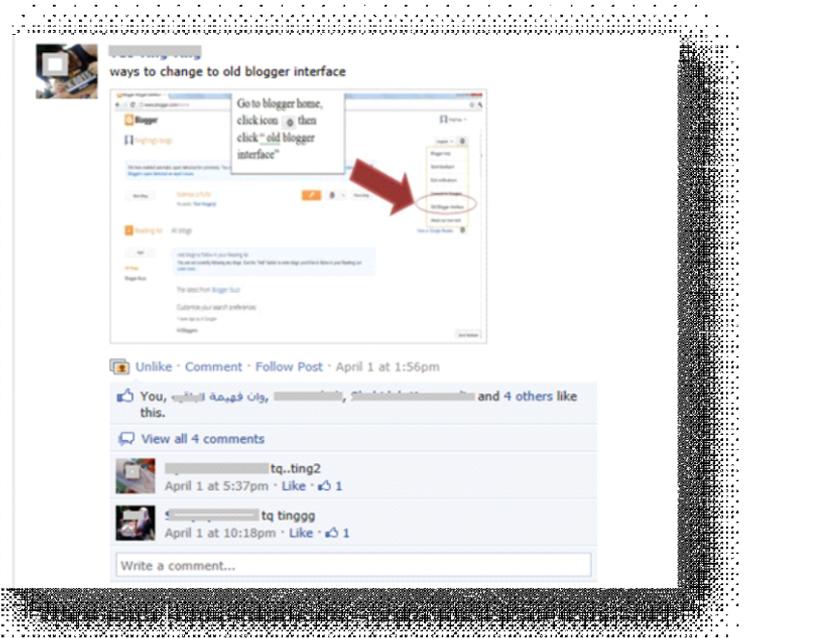
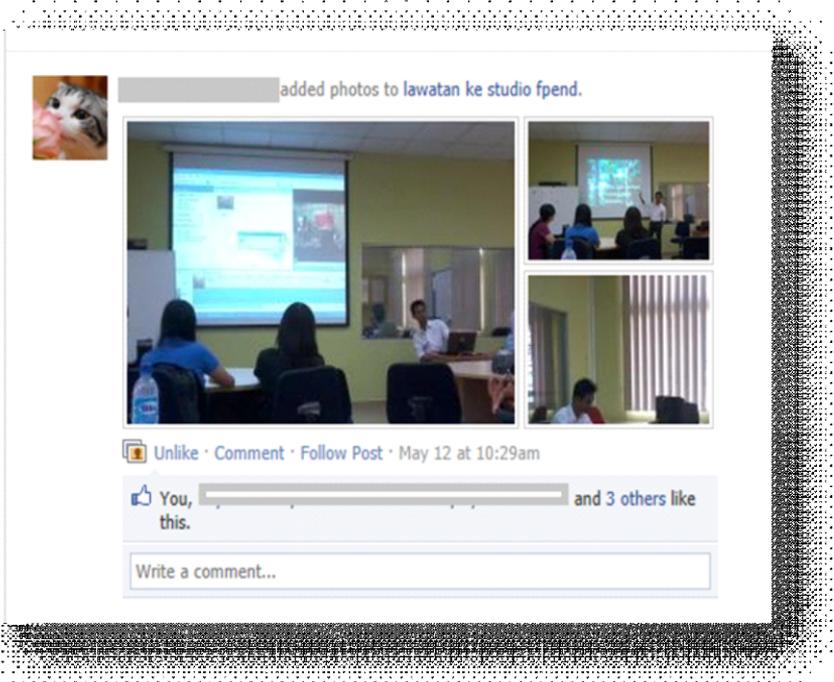


Figure 8 Student sharing information with others
Figure 9 Student sharing photos with others

The effectiveness of Facebook in supporting learning

Based on the findings in response to the first question, i.e. how students valued the use of Facebook in enhancing their learning on the Educational Technology course, a number of themes emerged, as shown in Table 1.

Table 1 Themes relating to the usefulness of Facebook

Theme	Number of students	Percentage
Sharing materials related to the course	21	95.5%
Sharing useful information	19	86.4%
Ease of access to Facebook	18	81.8%
Gaining support or help from friends and the lecturer	17	77.3%
Instant replies from members of the group	16	72.7%
Opportunities to have one-to-one discussions with the lecturer	11	50.0%
Developing good relationships with friends and the lecturer	9	40.9%

Sharing relevant materials

The findings show that the students appreciated the sharing of lecture and tutorial notes, which they used for reference and in preparation for the examination (19 students). Sometimes, a link is shared, to notes for the upcoming tutorial, i.e. before the class was held so as to get the students to prepare. One student said:

I think what has been done in our Facebook group is great. Puan Fariza used it to upload all the notes from the first tutorial until the last one. This helped us to do revision as preparation before the final exam. She also provided us with a list of all the assignments which I regularly referred to. (Salma)

Eleven students mentioned the benefit of the videos shared in the group and found that watching videos helped them to complete the video assignment. In GE2153, they were required to work in groups and create an educational video as one of their assignments.

The Facebook group is very beneficial for me. Through Facebook, I get additional information about the topics, for example, how to edit videos and

take pictures using the correct techniques by watching the YouTube video shared in the group. I also have access to the lecture and tutorial notes. (Aini)

Sharing useful information

A group of 19 students viewed the Facebook group as a useful platform as there was active sharing of information going on in the group. Not only was there information provided by the lecturer, but there was also information shared by the students. Information such as announcements, updates on the assignments and the venue for photography site meetings were shared, in addition to various materials related to Educational Technology topics. What made the Facebook group an appreciated platform was the fact that it compiled all the materials on one 'page':

It is easy to have everything in one place. Once I open up this Facebook group, I can access all linked or uploaded materials. Sometimes when you save something on your computer you tend to forget where the folder is. But here [in the EDU2153 group] I can see everything. (Mursyid)

These notes can also be stored and easily searched if required. So I do not have to worry. In addition, we are free to ask questions related to the problems we face in our Facebook group. (Aisyah)

Students also found that by referring to this group, they did not miss any important information that they needed to know:

Another thing is that we don't miss the information. All the announcements, notes or discussions can be viewed by all members. (Zaini)

At the same time, silent readers could follow the discussions and benefit from the activity without having to take part actively:

Even though I was not involved in the discussions, I learned from what had been said or explained by the lecturer. It is a practical way of giving 'justice' to all students. Sometimes I was not involved, but I did read what others wrote. (Kamariah)

Easy access

The availability of Internet access almost everywhere in the faculty and on campus enabled the students to get online anytime they wanted to. The analysis indicates that 18 students mentioned that access to Facebook anywhere and anytime gave them freedom in their learning. For example:

Facebook can be used as a site for sharing information between students and lecturers. In addition, it can save time so that everybody can interact anywhere

or anytime they want to. It is good that we are not bounded by a specific period of time to participate in discussions. (Aida)

Lecturers can easily upload records to groups to share with the students, and the students can ask questions they do not understand about the lectures.

We were able to ask any questions to the lecturer and she replied so fast. It was a surprise also to see her comments even late at night, when we were still doing our assignments! (Zaini)

Gaining support or help

Seventeen students found that the Facebook group enabled them to gain support or help from others. As assignments in EDU2153 involved lots of hands-on activities such as photography, video-making or development of other 3D materials, students needed more support so as to be able to complete their tasks. This can be seen from their answers:

I used the group to ask others about how to do our assignments. I think we had very active interaction there. For example, in creating a video task, we [the group team] discussed our project together using the inbox. It is very convenient that we can directly share links, files or even the photos to express our ideas. (Muhayah)

Students were also seen to post their questions on the group wall. Again, the interaction surrounding the topic had benefit for others who were not involved in the discussions.

One of the benefits of this Facebook group is that I could ask my lecturer questions related to the assignments and she would respond to it. Then, other students might ask additional questions. This helped everybody to understand better. (Zalina)

Instant reply

Another advantage of the Facebook group stated by 16 students was the fact that they were able to get instant or quick reply from others. This was appreciated by the students as they did not have to wait long before getting support and so they could complete their tasks or assignments more quickly. For example:

I am very satisfied with the discussions among us in the group. I get replies very quickly, as if we are talking to each other face to face, whereas in reality we are in different hostels. That is why every time I wanted to do my assignments I would open up my Facebook account first. (Zalina)

Developing good relationships with friends and the lecturer

Facebook is known as a social networking site as it promotes social interactions among users. In this study, it was also found that the Facebook group enhanced the relationships between the students, as well as with the lecturer. Even though only nine students mentioned this, it was a vital finding that confirms the importance of good relationships in enhancing interactions in any online learning community (Wenger 1998). This is also in line with Lampe, Ellison and Steinfield (2006), who posit that Facebook has been found to reinforce current relationships among its users. One student stated:

Our GE2153 group was effective, not only in helping us getting additional information needed to develop sound understandings of certain theirs or concepts that we learned, but also in strengthening our relationships; student to student as well as student to lecturer. When we had conversations with our lecturer, I felt like I was talking to my own 'sister'. (Muna)

Applications that benefitted the students

In the survey, the students were asked to name the application(s) that had been utilised in the Facebook group that thought had been beneficial to their learning process and to explain why.

Table 2 Applications that were beneficial

Theme	Number of students	Percentage
File-sharing (Word, PDF, PowerPoint, photos, videos etc.)	20	90.9%
Link-sharing (websites, Skydrive, Dropbox, Youtube etc.)	18	81.8%
Post and comment space	15	68.2%
Messaging (live chat, inbox)	11	50.0%

As shown in Table 2, there were four main applications available in the EDU2153 group that were most beneficial for the students' learning; file-sharing, link-sharing, post and comment space and messaging. In the EDU2153 group, file-sharing included Word, PDF, PowerPoint, photos and videos as the most cited applications. 20 students stated that the sharing of these files was one of the most beneficial applications for their learning while 18 students named post and comment space in their Facebook group. For example:

The links are helpful because sometimes I do not know where to look for information. By referring to the links given, I was able to trace other related

links as well. I found this to help me a lot. I discovered many other informative sites too. (Farhana)

The availability of the posting and comment space on Facebook was cited by 15 students who found it beneficial.

I like to write comments. It is just simply straightforward. You just type in your thoughts and press the ENTER button. You can easily remove or delete the comment if you want to. The comments can be read by everyone, which is great. No repetition needed. You can print it out if you want. (Azira)

Another application named as beneficial was messaging, which was mentioned by 11 students. Messaging allows users to have private communication with specific friends or a group of friends.

I love the chatting application which my friends and I used a lot too. We talked and discussed our assignments via the chatting space. It was fun too. Besides discussing in the group, the Facebook messaging application also allows me to send reports and assignments to a friend. This application is easier because I do not need to open Yahoo! Mail to send reports to friends. (Muna)

Five students also mentioned that they were more comfortable engaging in discussions with the lecturer in private messages, as some of them felt lacking in confidence to ask questions in public. This is in line with Lampe, Ellison and Steinfield (2006), who posit that specifically, has been found to be used to reinforce current offline relationships. Most of these students posed questions to the lecturer relating to their assignments, as well as other questions relating to EDU2153 topics, such as the selection of cameras to be bought, or opinions on which movie making software package should be used.

The inbox allows me to ask questions to my lecturer in private. Sometimes, there are things that we do not have to ask in public. For example, I asked my lecturer about what camera brand she considered to be good and practical to have. I wanted to buy a DSLR [Digital Single Lens Reflex] but I did not have a clue what to look for when purchasing a DSLR. She gave me options, together with photos, which is cool. (Mursyid)

Conclusions

From the findings of this study, it can be concluded that Facebook with the integration of other Web 2.0 applications has the potential to be used for online collaborative sharing activities and to spur active learning for students, either as a core platform for learning, or as an alternative platform. The Facebook group in this study enabled its users to share relevant materials and information, and to gain

support and instant replies. Through this, sound relationships among the students and between the students and the lecturer were able to develop. Four main applications (file-sharing, links, post and comment space and messaging) were found to be the most beneficial applications in this group. All these applications could be used at the optimum level as these could engage learners in sustained conversations with others in the online group (Munoz and Towner, 2009). It is also important to note here that, in addition to students' participation, lecturers or teachers should play their roles too. The lecturer's engagement in an online learning group would help their students feel their presence (Yeh, 2010), and therefore could better motivate their involvement.

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CHAPTER 7

The Application of *CIRCOM* Software in English Instruction

**Mahdum
Mohd. Arif Ismail**

Introduction

The use of ICT in term of multimedia toward education is not a new thing. The use of multimedia in teaching and learning process is important. Multimedia in learning is as a tool to enhance the teaching and learning environment. Development of science and technology has a positive influence on teaching and learning (Mohd Arif 2009).

The transformation of information has caused a paradigm shift in the way of thinking about the use of multimedia in education (Mohd Arif 2012). Correspondingly, Maslen (1997), said that the use of multimedia supported and promoted flexible learning and reduced dependence on learning to the students.

The use of multimedia in teaching and learning English in Pekanbaru was not yet benefit optimally, they were still limited to computer or laptop especially power point only. This was in line with what was said by Nor Aini (2011); Rysavy and Sales (2009) teachers hoped to use multimedia in the learning process. Only some teachers could embrace technology and used it in teaching and learning process. In general, teaching and learning adopted by the teachers still used a conventional method. They came to class then explaining the materials, questioning and answering, discussing, giving the task and finished (Hanifah 2010).

One of the efforts that needed to be done in improving the teaching and learning process in classroom is to create lesson plans that used multimedia and multimethod. This study attempted to integrate between multimedia and multimethod. Models of teaching and learning in cooperative learning encouraged the students to work in certain activities such as discussions or study with their peers (Slavin 2001).

Teaching cooperative learning is to teach the students the skills of cooperation and collaboration within the group. The principle of teaching cooperative learning indicated a positive influence on student learning outcomes

(Johnson & Johnson 1984). However, Slavin (2002) explained that in language learning, especially for students of primary and secondary schools over the proposed use of the Cooperative Integrated Reading and Composition (CIRC).

Based on the Constructivism theory, this study will develop a teaching learning model by integrated multimedia theory and the cooperative theory in term of Cooperative Integrated Reading and Composition. The integrated theory called *CIRCOM*. The development of *CIRCOM* software analyzed such requirement. They are: curriculum, syllabus, textbooks, student groups, the strengths and weaknesses of the students (Allesi & Trollip 2001). The *CIRCOM* software for educational purposes will be successful when attention to aspects that should be taken into account in this phase include: (1) the appropriate contents, (2) learning outcomes that can be achieved after following the learning, (3) content delivery strategy that best for the *CIRCOM* software planned; (4) Ability to enrich students English achievement, (5) ability to enrich the students' knowledge through the development of the *CIRCOM* software.

An effort could solve those problems was the teachers should find a model of teaching that could be improved students' achievement. In teaching learning process the students are active, creative, innovative, effective and joyful (Rysavy & Sales 2009). Hanim Zainab (2004) stated that a teacher must be able to choose and encourage his teaching learning process that is suitable to the students' competence and their achievement.

The objective of this study is to develop the *CIRCOM* software to address issues related to the achievement of learning English in junior high school students (SMP) in Pekanbaru.

The use of multimedia in teaching language

Multimedia had many definitions depending on the context of use. According to Gibbons and Fairweather (1998) referred to the use of teaching multimedia in a combination of media such as audio, slide presentation that can change the order of slides, in a timely manner. Nor Azan (2005) stated many researchers (Abernathy & Allen 1999; Fluckinger 1995; Shuman 1997; Tiene & Ingram 2001) defined that multimedia as the integration and control of multiple forms of information such as text, graphics, sound, animation, still images and moving images generated by the computer system capable of enabling interaction with the user.

Abd. Gapor Latif (2006) defined that multimedia as the opposite computer-based presentation that combined one or more of the following elements: text, color, graphics, animation, simulation, virtual reality, audio and video. According to Jun Hu (2006), the multimedia is: A term used to describe multiple means of media which are used to convey information (text, audio, graphics, animation, video and interactivity). As the information that presented in various formats, multimedia enhances experience and helps grasping information better and faster. Hersh and Stapleton (2006) sated that the media chosen can affect learning

outcomes and that there are advantages in a multisensory as well as a multimedia approach.

Most students had difficulties in learning the language and this situation caused them not to be interested in English subject. The effective usage of computers in teaching and learning languages could motivate students in learning English. In general, research finding showed that the use of computer as teaching media had improved students' achievement in language subjects. According Mitropoulou and Triantafyllidis (2005), for multimedia courseware provided text should be short but comprehensive. For students, the difficulty of reading is a common problem faced by most students. This means, practice speaking containing mostly text will pose problems for students. Through audio elements this difficulty can be reduced.

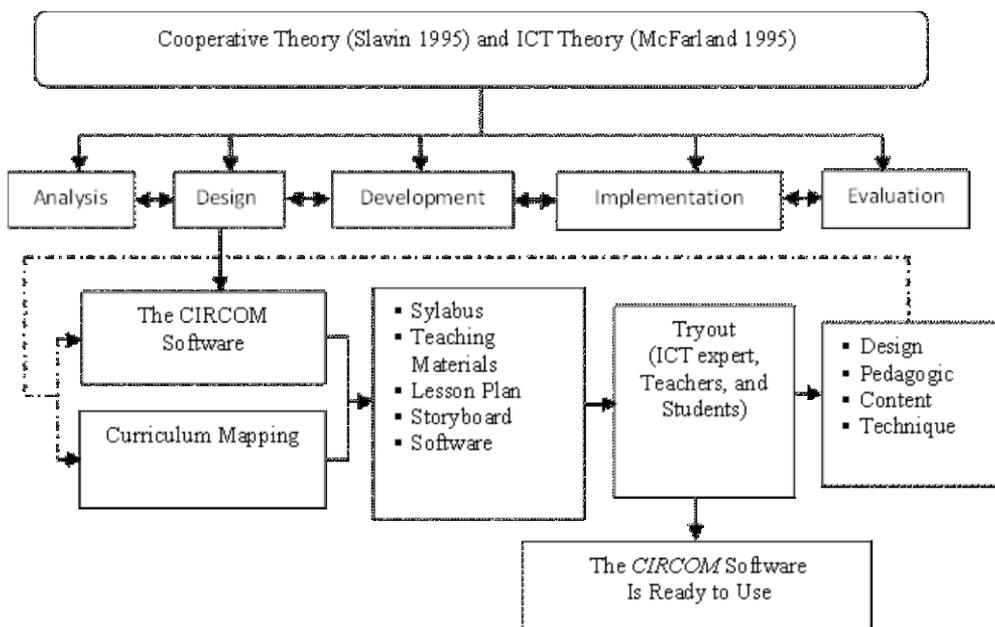
According to McFarland (1995) visual and text should also be complementary to each other. Students could determine the frequency of repeat reading of the text by the system according to their needs. They can also explore the software repeatedly according to their needs. Repetition in the system is the ability to perform required freedom, creativity and self-confidence to students (Clements 1994; Munir 2001; Noor Aini 2004; Quintana & Fishman 2006).

The main components that must be known by a good teacher is the teacher from the kindergarten level up to college in using CIRC types of cooperative learning (Slavin 2001): (1) reading group. If the reading group use, students collected over 3 or 4 in accordance with the level of achievement, or can also be a lesson for all classes, (2) Group. A student in a group has a good performance and 2 students from a group has low achievement, and (3) Activities related story.

Reading text activities are introduced and discussed in the *CIRCUM* Software development referred to the ADDIE model (Norton & Wiburg 2003). Features generally found in instructional design model had produced a generic instructional design model (Hannum & Hansen 1989, Gibbons & Fairweather 1998). ADDIE model was a generic model was a systematic approach to the design process direction. The model provided a framework to ensure that the products developed are effective, and to ensure that the creative process was done efficiently.

The *CIRCUM* software is the design of descriptive study. In this study, the researchers determined the choice of the sample with simple random sampling. Sample for this study is 3 multimedia experts, 10 teachers and 30 students from junior high school. The research instrument was a questionnaire. The questionnaire contained three parts: Part A background; Part B responded to the items which consisted interface, pictures, texts, images, contents and pedagogical approach in teaching and learning process for evaluating the development *CIRCUM* software, and Part C provided commentary and views on the advantages and disadvantages of the development of the *CIRCUM* software. This study used the descriptive statistical analysis.

The research design toward the development of the *CIRCOM* software in English instruction could be shown as follow:



Formative assessment, involving three specialists was conducted by researchers in January 2013. Descriptive analysis involving frequency conducted with the description of each aspect of the discussion to be evaluated in the assessment instrument on the *CIRCOM* software. The derivation is as follows.

Interface

Analytical results of the experts' assessment on the *CIRCOM* software interface as shown in table 1 below.

Table 1 The experts' formative assessment on the *CIRCOM* software of interface aspects

No	Rating the <i>CIRCOM</i> software interface	Estimation					%
		STS	TS	KS	S	SS	
1	The package the <i>CIRCOM</i> software is interesting	-	-	-	1	2	100.0
2	The colors used are appropriate	-	-	-	2	1	100.0
3	The size of the <i>CIRCOM</i> software is appropriate and easy to read	-	-	-	-	3	100.0
4	The <i>CIRCOM</i> software is easy to carry wherever	-	-	-	-	3	100.0
5	The contents make it easier to read	-	-	-	-	3	100.0
Overall Score							100.0

Teachers' views on the *CIRCOM* software showed that teachers' formative assessment item on the *CIRCOM* software exciting, a total of 7 teachers (70%) expressed agree and a total of 3 teachers (30%) said strongly agree. For item colors used are appropriate, a total of 8 teachers (80%) expressed agree and a total of 2 teachers (20%) said strongly agree. Next, the items measured on the *CIRCOM* software appropriate and easy to read, a total of 10 teachers (100.0%) said strongly agree. Further, on the *CIRCOM* software items easy to carry where it is all, a total of 3 teachers (30%) expressed agree and a total of 7 teachers (70%) expressed strongly agree and the contents for item availability makes it easier to read, a total of 10 teachers (100.0%) stated strongly agree. It showed that teachers said agree and strongly agree for evaluating on the *CIRCOM* software interface.

Students' views on the *CIRCOM* software showed that for finishing items of the *CIRCOM* software is interesting, a total of 16 students (53.3%) expressed agree and a total of 14 students (46.7%) felt strongly agree. For item colors used are appropriate, a total of 22 students (73.3%) expressed agree and a total of 8 students (26.7%) felt strongly agree. Next to the items measured the *CIRCOM* software are appropriate and easy to read, a total of 12 students (40.0%) expressed agree and a total of 18 students (60.0%) felt strongly agree. For the items the *CIRCOM* software easy to carry where it all, a total of 10 students (33.3%) expressed agree with 20 students (66.7%) felt strongly agree and the contents for the item availability makes it easier to read, a total of 9 students (30.0%) expressed agree and a total of 21 students (70.0%) felt strongly agree. It was showed that students answered agree and strongly agree to the item in terms of the *CIRCOM* software

Picture

The Experts' assessment results of pictures on the *CIRCOM* software would be analysis as shown in table 2 below.

Table 2 The experts' formative assessment of pictures on the *CIRCOM* software.

No	Items of picture on the <i>CIRCOM</i> software	Estimation					
		ST S	T S	KS	S	SS	%
6	Images used are adequate	-	-	-	2	1	100.0
7	Pictures used ii connected with lesson	-	-	-	2	1	100.0
8	Pictures display file format are compatible with MS Windows	-	-	-	1	2	100.0
9	The color of the pictures are appropriate	-	-	-	1	2	100.0
10	The pictures display are sharp	-	-	-	2	1	100.0
Overall Score							100.0
							0

As a whole, it shows that the experts agreed to the images used on the *CIRCOM* software. Based on open questions in the instrument the *CIRCOM* software assessment there were an expert provided recommendations for completing the picture on the *CIRCOM* software. Recommendations provided by the expert to the *CIRCOM* software enhanced picture showed the recommendations given by experts to repair the *CIRCOM* software. Recommendations provided as development picture produced on the *CIRCOM* so much more interesting to attract the students to read.

Teachers' views on the *CIRCOM* software showed that the item images used were adequate, up to 7 teachers (70%) expressed agree and of 3 teachers (30%) said strongly agree. Next to the item picture used was clear and easy to understand, as many as 8 teachers (80%) expressed agree and of 2 (20%) said strongly agree and teachers said the images used for items related to their subject matter, a total of 8 teachers (80 %) expressed agree and of 2 teachers (20%) said strongly agree. Showing that the teachers had a positive assessment for each item in the picture aspect was integration *CIRCOM* software.

Students' views on the *CIRCOM* software showed that the item images used were adequate, a total of three students (10.0%) felt less agree, a total of 23 students (76.7%) expressed agree and up to 4 students (13.3%) felt strongly agree. Next to the item picture used was clear and easy to understand, as many as 20 students (66.7%) expressed agree and were 10 students (33.3%) felt strongly agree and images used for items related to their subject matter, there are 22 students (73.3 %) expressed agree and a total of 8 students (26.7%) felt strongly agree. As a whole, showing that the students felt agree and strongly agree to the item in the picture on the *CIRCOM* software. Nevertheless, there are some students who expressed did not agree that the images used were adequate.

Text

Descriptive analysis results involving expert assessment of the frequency of text on *CIRCOM* software as shown in table 3 below.

Table 3: Formative assessment experts on the *CIRCOM* of software text aspects

No	The <i>CIRCOM</i> software text items	Estimation					%
		ST	TS	KS	S	SS	
11	Text usage is clearly visible and legible	-	-	-	-	3	100.0
12	Text integration is appropriate	-	-	-	-	3	100.0
13	Text display is interesting	-	-	-	1	2	100.0
14	Text display on the image of the <i>CIRCOM</i> software provides an obvious aid	-	-	-	1	2	100.0
15	The Combination of text, image, and color made me understood the subject matter	-	-	-	1	2	100.0
	Overall Score						100.0

There was no suggestion given by experts for the improvement of the text on the *CIRCOM* software as they agreed on the *CIRCOM* software text produced. Teachers' views on the *CIRCOM* software showed that the text used for items were clearly visible and legible, a total of 10 teachers (100.0%) said strongly agree. For the item text integration was suitable, up to 4 teachers (40%) expressed agree and a total of 6 (teachers 60%) said strongly agree. Next to the item text appearance is interesting to note, as many as three teachers (30%) expressed agree and a total of 7 teachers (70%) said strongly agree and teachers said the item combination of text, pictures, graphics, and color made me understood the subject matter, up to 4 teachers (40%) expressed their agreement and a total of 6 teachers (60%) said strongly agree. Showing that no teacher stated disagree and strongly disagree on the item in the *CIRCOM* software text aspect and teachers also did not have any suggestions for topics on the *CIRCOM* software text.

Students' views on the *CIRCOM* software showed that for text items used were clear and easy to read, up to 13 students (43.3%) expressed their agreement and a total of 17 students (56.7%) felt strongly agree. Next to the appropriate integration of item text, a total of 22 students (73.3%) expressed their agreement and a total of 8 students (26.7%) felt strongly agree. For the display of item text is interesting to note, as many as 16 students (53.3%) expressed agree and a total of 14 students (46.7%) felt strongly agree and for the combination of text item, image, and color made me understood the lesson, about 2 students (6.7%) felt less agree, a total of 20 students (66.7%) expressed their agreement and a total of 8 students (26.7%) felt strongly agree. In general, showing that students had chosen agree and strongly agree for each item on the *CIRCOM* software text aspect. However, there were some students who said that not agree to the combination of text item, image, and color made me understood to the lesson is more easily.

Image

The results of descriptive analysis by the experts' assessment of images on the *CIRCOM* software as shown in table 4 below.

Table 4: The experts' assessment of image on the *CIRCOM* software

No	The experts' assessment of the images items on software the <i>CIRCOM</i>	Estimation					%
		S	TS	KS	S	SS	
		T					
		S					
16	The images used is enough	-	-	-	1	2	100.0
17	The images used is interesting	-	-	-	3	-	100.0
18	Images used is connected with lesson	-	-	-	2	1	100.0
19	The images used made students understood the difficult concept	-	-	-	1	2	100.0
Overall Score							100.0

Showing that the experts had expressed their agreement to the images produced on the *CIRCOM* software. There was no recommendation given by experts on the improvement of certain image on the *CIRCOM* software.

Teachers' views on the *CIRCOM* software showed that the adequate images used items, a total of 6 teachers (60%) expressed their agreement, up to 4 teachers (40%) said strongly agree. The image items used are interesting, a total of 5 teachers (50%) expressed their agreement and of 6 teachers (60%) said strongly agree. Next to the image used in relation with lesson of 7 teachers (70%) said agree, 3 teachers (30%) said strongly agree. The item images used made students understand difficult concepts more easily, of 6 teachers (60%) expressed agree and up to 4 teachers (40%) expressed strongly agree.

Contents

Descriptive analyzes involving frequency had been carried out to study the content of expert assessment the *CIRCOM* software as shown in Table 5.

Table 5 The experts' Assessment toward the content of the *CIRCOM* software

Bil	The Content of the <i>CIRCOM</i> Software	Estimation					%
		STS	TS	KS	S	SS	
25	The contents are easy to follow	-	-	-	-	3	100.0
26	The contents helped students to identify the needs of using the <i>CIRCOM</i> software.	-	-	-	-	3	100.0
27	The <i>CIRCOM</i> software helped students to identify the contents in solving problems	-	-	-	-	3	100.0
28	The <i>CIRCOM</i> software helped students to develop the content of concept.	-	-	-	1	2	100.0
29	The contents are suitable to knowledge and skills to be achieved by students	-	-	-	-	3	100.0
30	The terms used are relevant and they support learning process.	-	-	-	1	2	100.0
31	The content of the <i>CIRCOM</i> software is compiled from easy to difficult.	-	-	-	-	3	100.0
32	The example given is sufficient.	-	-	-	1	2	100.0
33	Explanation given is complete.	-	-	-	-	3	100.0
34	The activities prepared are suitable to learning objectives.	-	-	-	-	3	100.0
35	The test items in daily practice are relevant to the learning objectives.	-	-	-	-	3	100.0
36	The <i>CIRCOM</i> software encourages students to perform hands-on activities	-	-	-	-	3	100.0
37	The <i>CIRCOM</i> software has good and appropriate steps.	-	-	-	1	2	100.0
38	Produced steps are effective	-	-	-	1	2	100.0
39	The steps of the <i>CIRCOM</i> software are all kinds of	-	-	-	2	1	100.0
Overall Score							100.0
							0

The items content are appropriate knowledge and skills to be achieved by students a total of 3 experts (100.0%) said strongly agree. For the terms used are relevant and they support learning process, a total of 1 expert (33.3%) said expressed their agreement and of 2 experts (66.7%) said strongly agree.

Pedagogical Approach in Teaching and Learning Process

Descriptive analysis was conducted to determine the frequency involving expert assessment of the pedagogy approach in teaching and learning process of the *CIRCOM* software. Analysis results showed that the instruction space will spark the interest of students to learn the content, involved 3 experts (100.0%) said strongly agree. For the tutorial spaces help students to understand the concept of lesson, of 1 expert (33.3%) said agree, and of 2 experts (66.7%) said strongly agree. The example item on the *CIRCOM* software help students to understand the concepts more clearly of 2 experts (66.7%) said strongly agree and of one experts (33.3%) said agree. The *CIRCOM* software helps students to solve the problem a total of 3 experts (100.0%) said strongly agree. The *CIRCOM* software stimulates students to complete practice a total of 3 experts (100.0%) said strongly agree. The *CIRCOM* software helps students to answer the questions a total of 3 experts (100.0%) expressed strongly agree.

Relationship to Learning Theory

Descriptive analyses towards expert assessment of the relationship to learning theory as shown that there are specified learning objectives, a total of 3 experts (100.0%) said strongly agree. The practices are available for each objective, a total of 3 experts (100.0%) said strongly agree. The tutorials and additional examples related to the information are available, there were two experts (66.7%) expressed agree and of one experts (33.3%) said agree. Furthermore the *CIRCOM* software allows students to learn individually and made them an autonomous learning which has a mind of its own and independent discretionary, a total of 3 experts (100.0%) said strongly agree. Then the assessment of 10 teachers on the *CIRCOM* software can develop teachers' formative assessment.

Conclusion

Perspective experts agree on the *CIRCOM* software produced. Hence there is no suggestion given by experts associated with the improvement of the *CIRCOM* software. Teachers hereby agree and strongly agree for evaluating the *CIRCOM* software interface. Students' answered are agree and strongly agree to the item in terms of the *CIRCOM* software interface.

The results showed that the experts pointed to agree on the images used in the *CIRCOM* software. Based on open questions in the instrument the *CIRCOM* software assessment there were one expert provide recommendations for completing the picture on the *CIRCOM* software. Recommendations provided by the expert to repair on picture of the *CIRCOM* software. Teachers have a positive

assessment of each item in terms of image integration on the *CIRCOM*. Students who expressed did not agree to the images used are adequate.

This study shows that the experts agree on cooperative integration software the *CIRCOM* text reading and writing produced. There is no suggestion given by experts for the improvement of the text in cooperative integration software *CIRCOM* reading and writing. Teacher stating disagree and strongly disagree on the item in the text in the software aspect the *CIRCOM* and teachers also did not have any suggestions for topics in software the *CIRCOM* text. Students are rated agree and strongly agree for each item in the text aspect the *CIRCOM* software. However, there are some students who say that do not agree on the item combination of text, image, and colour to help me understand the lesson more easily.

The meaning of the study is the experts agree and strong agree on the images produced in the *CIRCOM* software. Recommendation given is to improve certain images shown. Teachers' views on the *CIRCOM* software showed that adequate images used items are a total of 6 teachers (60%) expressed agree and up to 4 teachers (40%) said strongly agree. The images used are interesting items are a total of 5 teachers (50%) expressed agree and of 6 teachers (60%) said strongly agree. Next to the item image used in relation with lesson are a total of 7 teachers (70%) said agree and of 3 teachers (30%) said strongly agree and the images used can help students understood difficult concepts. The findings of the study on the *CIRCOM* software indicated that experts, teachers and students felt agree and strongly agree for each item in its achievements to the *CIRCOM* software.

As a whole, the experts' views on the *CIRCOM* software felt agreed and strong agree. Recommendations given by experts served as input to improve the *CIRCOM* software. Teachers' views showed that there were high scores for each aspect on the *CIRCOM* software. The students' views showed that there was lowest score to picture on the *CIRCOM* software. While the highest score were the objectives on the *CIRCOM* software in terms of interface. Thus, development of the *CIRCOM* software in English instruction was very good and could be applied in the teaching and learning process of English in junior high schools in Pekanbaru.

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CHAPTER 8

Positive Behaviour Enhancement Strategies in a Scholl Context

**Mohd Mahzan Awang
Abdul Razaq Ahmad
Manisah Mohd Ali**

Introduction

Positive behaviour enhancement is one of the Malaysian government priorities ([Education Act, 1996](#)). The Vision 2020 blueprint states that the Malaysian government aims to achieve a fully developed nation status by 2020.

... without being duplicate of any of developed countries including the United Kingdom, Holland, Sweden, Finland and Japan, we can still be developed. ... Malaysia should be fully developed in terms of national unity and social-cohesion, in terms of our economy, social justice ... quality of life, social and spiritual values, national pride and confidence ([Mahathir, 1991, p. 1](#)).

In order to achieve this vision, the Malaysian government outlined nine challenges to be addressed. Developing positive behaviour among the nation is one of the identified challenges.

There can be no fully developed Malaysia until we have finally overcome the (fundamental) nine central challenges that have controlled us from the moment of our birth as an independent nation ... The fourth challenge is establishing a fully moral and ethical society, whose citizens are strong in religious and spiritual values and imbued with the highest of ethical standard ([Mahathir, 1991, p. 2](#)).

According to the National Ideology or as it is known in Malay, the *Rukunegara*, nations with positive behaviour are one of the Malaysian government's priorities:

Our Nation, Malaysia is dedicated to: achieving a greater unity for all her people; maintaining a democratic way of life; creating a just society in which the wealth of the nation shall be equitably distributed; ensuring a liberal approach to her rich and diverse cultural tradition, and building a progressive society which shall be oriented to modern science and technology. We, the people of Malaysia, pledge our united efforts to attain these ends, guided by these principles: belief in God, loyalty to the King and Country, upholding the Constitution, sovereignty of the law, and good behaviour and morality ([Malaysian Administrative Modernisation and Management Planning Unit, 2011, p. 1](#)).

It emphasises that the people of Malaysia should be guided by five principles including good behaviour and morality. In line with these principles, the Malaysian government has formulated the National Education Philosophy which emphasises that education in Malaysia is:

... an ongoing effort towards further developing the potential of individuals in a holistic and integrated manner so as to produce individuals, who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God. Such an effort is designed to produce Malaysian citizens who are knowledgeable and competent, who possess high moral standards and who are responsible and capable of achieving high levels of personal well-being as well as being able to contribute to the harmony and betterment of the family, the society and the nation at large ([Education Act, 1996, p. 11](#))

This philosophy emphasises that education in Malaysia should be able to develop positive behaviour among nations.

Pupils with challenging behaviour

Pupils with behavioural problems pose a challenge in teaching profession. Disruptive and anti-social behaviour are found to be the most problematic behaviours and frequently occurred in schools. These behaviours have negatively affected the teaching and learning process. A total number of 5,455 juvenile cases occurred in Malaysia in 2003. Of these, 73% were boys and the majority were pupils from secondary schools (Yahaya, Geok, & Abdul, 2004). In the same year, 20 pupils had been expelled from a school after they were found guilty of being involved in gangster activities. In February 2009, a 16-year-old Malaysian pupil died after he was beaten by a group of pupils (Suffian, 2009). The Social Welfare Department of Malaysia reported that a total number of 5,319 youths engaged in juvenile cases in 2002 (Yahaya, et al., 2004). Teachers from a southern region of Malaysia reported that pupils often played truant, stole, fought with others and were absent (Yahaya, Ramli, Hashim, Ibrahim, Raja Roslan, et al., 2009).

The similar problems also occurred in other countries. For instance, Learner (2008) reported that more than 4,000 children in the United Kingdom were suspended from school due to physical assault, verbal abuse, bullying behaviour, sexual abuse, sexual misconduct, drugs trafficking and alcohol-related problems. In the United States of America (USA), the national survey 2006 reported that 82% of American youth admitted they lied to their parent, 62% said they lied to a teacher, 60% reported they cheated in a test at school, and 20% stated that they stole something from a store (Lumpkin, 2008).

Professionals' Roles and Responsibilities

School professionals play integral roles in preventing negative behaviour and promoting positive behaviour. As the role models for pupils, school professionals must portray good image and behave professionally. The Council of Ontario Directors of Education (2004) list out attribute of good teachers. These include their commitment to pupil learning, ability to demonstrate a positive rapport with pupils and self-initiative to establish a productive environment. This will maximises learning and promote pupils' motivation. Teachers are expected to interact with pupils professionally. Good teachers will address inappropriate pupil behaviour in a positive manner. They also are supposed to have soft-skills in promoting pupil self-esteem. They are also expected to establish and maintain standards for pupil behaviour that support learning. Good teachers also who are trusted by pupils, managing pupil performance data effectively and keeping comprehensive records of pupil achievement in a systematic way.

According to the Ministry of Education Malaysia (2008), good teacher must excel the following six key components. i.e. (i) good personality (demonstrates good behaviour; an ethical teacher; a role model); (ii) skilful and knowledgeable (expert in his/her subject area; expert in teaching and learning; excellent time management; excellent resource management; able to identify pupils' needs and problems; very informative; and excellent information technology skills); (iii) ability to produce good outcome (able to improve pupil learning in line with the National Educational Philosophy); (iv) good communication (excellent communicator; competent to deliver ideas; and effective communicator); (v) excellent potential (clear vision, proactive, shows initiative, responsive and innovative), and (vi) contribute to the educational development (competent to generate new ideas in education and happy to share their knowledge and skills).

It should be noted that although teachers play integral roles in promoting positive behaviour, there are many other factors associated with the success of the positive behaviour enhancement strategies. These include their social life in daily situation especially during leisure time. The use of substance for instance is one of the major factors for behavioural changes and it requires a special treatment.

Promoting Positive Behaviour Strategies and Approaches

Various strategies can be used for promoting positive behaviour in schools, however the effectiveness of the strategies used are still questionable. Some scholars believe that socio- interaction and verbal communication are found to have a positive impact on pupils' behaviour. So, good communication skills are vital in teaching profession. This approach emphasizes the importance of self-discipline and communication ability of students and teachers heard immediately respond to students (Martin & Sugarman 1993). The study conducted by Chang et al (2007) involving 1365 students in Hong Kong showed that students are able to express their emotions when teachers used positive communication. Other scholars suggested that teacher's tolerance when dealing with problematic pupils is the key element for encouraging positive behaviour (Wright, Cullum, & Schwab, 2008). However, it should be highlighted that pupils are also influenced by daily life situations. An individual behaves according to norms and values of the community. Therefore, it can be asserted that effective strategies are supposed to emphasise on the school environment. In order to promote positive behaviour (by emphasising the socio-environment in school) a whole-school approach is vital. This approach posits that job satisfaction among teachers and pupils' happiness in schools create productive and conducive environment. Indeed, past studies showed that socio-environment is the most influencing factor for pupils' behaviour.

Past study revealed that developing positive school milieu requires teachers' understanding on the school mission, vision, codes of practice, routines, classroom rules and general rules of school will have positive implication towards school milieu (Cole, 2003). At a classroom level, teacher's competencies in managing classroom management effectively will create supportive classroom environment, consequently promotes pupil's happiness. As pupils are diverse and differ in terms of their abilities and attitudes, teachers' abilities to identify these differences will help teachers to use appropriate strategies for each pupil. Some disruptive pupils are actually having difficulties to adapt with the classroom environment. This explains the importance of specific management skills for teachers. One of the strategies to help a pupil with problem behaviour is via serious discussion with the pupil (Olewus 2003). This explains the importance of behaviour modification plan and action in a school context. However, it should be noted that most behavioural issues have a link with psychological problems. That is why many social-psychologists recommended a clinical-psychological based treatment to a person with challenging behaviour. This approach is called as Behaviour modification approach. This approach posits that treatment should be given to the cause of the occurrence of the problem (antecedents), or to a person's behaviour (for instance stopping someone from acting aggressively), or the effects of one's behaviour (Consequences). It is known as the ABC model (Antecedents-Behaviour-Consequences).

Literature search revealed that the use of encouragement, reward and negative reinforcement are found to be the most common suggestions for promoting positive behaviour. The basic principle of encouraging and rewarding approach is to

motivate the pupils to be always well behaved. Encouragement through praise and recognition is a method of intrinsic motivation, while the reward is an extrinsic motivation. On the other hand, negative reinforcement offers a different approach. It focuses on removing the stimulus that creates inappropriate behaviour.

Another strategy used for stopping negative behaviour is physical punishment. At this date, corporal punishment is permitted to be carefully used in school. The punishment has to be carried out in a room with the presence of witnesses. In order to have a clear suggestion from the Malaysian government, a documentary analysis of the Malaysian government circulars was carried out in the past. Results revealed that at least, 483 circulars on various subjects have been distributed by the Ministry of Education Malaysia to secondary schools for over the period of 40 years (1969-2011). Out of 483 policies, 91 of them were relevant to the positive behaviour enhancement (Awang, 2012). Analysis of these circulars revealed that the Malaysian government recommended following strategies for promoting positive behaviour: involvement in school activities, interpersonal relationships, responsiveness, motivation programmes, home-school partnership and inter-agencies partnership. Strategies for preventing negative include punitive approach (corporal punishment, suspension and dismissal) and intervention programmes such as counselling sessions and moral development workshop (Awang, Jindal-Snape & Barner, 2013). Although these strategies are more likely focusing on the whole-school level, it provides general principles of practical strategies that can be used by teachers at a classroom level. By taking into account these recommendations as well as past research findings, the current study has identified eight strategies for further exploration. They are:

- Strategy 1: treating pupils with respect;
- Strategy 2 : discussing with pupils their feelings towards any issues;
- Strategy 3: co-operation with government agencies;
- Strategy 4: encouraging leadership roles;
- Strategy 5: praising pupils;
- Strategy 6: guiding pupils to modify their problem behaviour;
- Strategy 7: allowing pupils to give an explanation when blamed for doing something wrong; and
- Strategy 8: recording pupils' behavioural problems (systematically recording this information).

Empirical Evidences

In order to identify how teachers promote positive behaviour in children, an empirical research was carried out (Mohd Mahzan Awang 2012). The study surveyed strategies used by school professionals based on their demographic backgrounds to promote positive behaviour in a school context (Mohd Mahzan Awang 2012). The survey research design was employed by using questionnaires to collect data from 15 urban national secondary schools in Malaysia. Participants were selected using stratified random sampling involving 13 principals, 21

counsellors, 205 class teachers, 28 discipline teachers and 52 physical education teachers. More females (n=239) than males (n=80) involved in research. A total number of 171 respondents were from inner-city schools and 148 were from outer-city schools. The majority of respondents were Malay. Out of 319 respondents, 244 Malay, 34 Chinese, 18 Indian, and 10 respondents were from various ethnic groups (unidentified). Prior to data collection, a pilot test was carried out in one Malaysian community school. Improvement was made to the items as recommended by the participants involved in the pilot test. The real data collection was then carried out in selected schools assisted by in-service school teachers and counsellors. Data collected was analysed using descriptive that are frequency and percentage.

Overall results show a positive trend in the communication and interaction in the school studied. Most professionals in this study reported that they always carried strategies for promoting positive behaviour in school. Table 1 illustrates that teachers always treat pupils with respect, co-operate with the government agencies, encourage pupils to actively participate in school activities, use more praise than criticism, and guide pupils to modify their behavioural problems. Past studied in this area suggest that professionals' satisfaction and high level of competencies are contributing factors to effective teaching practices (Duckworth, Quinn and Seligman, 2009; Scott, Swartzel & Taylor, 2005). However, there is insufficient data from this study to relate the current results with the actual contributing factors. This informs the need of qualitative study in future.

Table 1 Positive Behaviour Enhancement Strategies used in Schools

<i>Strategy (n=319)</i>	<i>Frequency</i>
Treat pupils with respect	Always
Co-operation with the government agencies	Always
Encourage pupils to actively participate in school activities	Always
Use more praise than criticism in schools	Always
Guide pupils to find a solution to modify their behavioural problems	Always
Pupils are able to give their side of the story when blamed for doing something wrong	Sometimes
Discuss with pupils about their feelings towards any issues	Sometimes
Systematically record of a pupil's behavioural problems	Sometimes

Although results from this study indicate that is a positive trend in the implementation of positive behaviour enhancement strategies, detailed analyses on demographic factors may produce different viewpoints. It is significant to consider demographic factors in data analyses as extensive past studies revealed that is a close relationship between instructional strategies used in school with demographic variables. Berry (2001) found that demographic factors including teaching experience and gender has a significant relationship with their attitudes towards working environment. Past study suggests that there is a significant relationship between the professionals' roles and preferred teaching strategies (Threeton &

Walter, 2009). Therefore, detailed results from the current study that is based on demographic factors are analysed and discussed.

Positive Behaviour Enhancement Strategies Used In Schools Based On Socio-Demographic Factors

In order to analyse how socio-demographic factors affect the strategies used for promoting positive behaviour in pupils, an inferential statistical analyses were carried out.

Gender

Results suggest that although most professionals of both genders always carried out positive behaviour enhancement strategies, there is a discrepancy of response between genders. Many female professionals reported that they never *co-operate with government agencies* (Strategy 8) and *recorded pupils' behavioural problems in a record book* (Strategy 8). The most often strategies carried out by both genders are Strategy 1 *treating pupils with respect*, Strategy 7 *allowing pupils to give an explanation when blamed for doing something wrong* and Strategy 4 *encouraging leadership roles*. This is parallel with previous studies where results showed that disparities exist by gender in term of teaching strategies used in school (Huber & Schofield 1998, Kelly 2000). Gender differences among these groups may occur due to the different learning styles between genders (Lin 2001).

School location

Results show that professionals from inner-city and outer-city schools reported that they had more or less similar practices. For instance, the majority of respondents of professionals from both school locations reported that they always *treated pupils with respect* (Strategy 1) and *allowing pupils to give an explanation when blamed for doing something wrong* (Strategy 7). More than half of professionals reported that they always *praised pupils* (Strategy 5) and *provided guidance to modify behaviour* (Strategy 6). This might be due to the centralised teacher education system where every teacher is educated using standard modules. The curriculum for teacher education in Malaysia is standardized in which all teachers have to pass the screening tests and examinations. Two ministries involved in teacher education in Malaysia are the Ministry of Education Malaysia (via teacher training institutes) and the Ministry of Higher Education (through public universities). Past empirical studies showed that the only differences in teaching practices may occur for the use of technology and modern computer in classroom (Kim & Bagaka, 2005).

Ethnicity

Most professionals from different ethnic backgrounds reported that they always treated pupils with respect, praised pupils, guided pupils to modify their problem behaviour, and allowed pupils to give an explanation when doing something wrong. This means that teachers irrespective of their cultural backgrounds have a

similar practice. However, there is irrelevant data from this study to explain factors associating with the teaching practice among diverse ethnic groups of teachers. It may be due to the teacher education curriculum that contains cultural responsive management elements (Weinstein, Tomlinson-Clarke & Curran, 2004). Gay (2002) recommended that cultural elements have to be embedded in any curriculum design. Detailed analysis revealed that the majority Chinese professionals reported always *treating pupils with respect* (Strategy 1) compared to Malay and Indian. A gap was observed on *treating pupils with respect* (Strategy 1), *discussing with pupils their feelings towards any issues* (Strategy 2), *co-operation with government agencies* (Strategy 3) and *recording pupils' behavioural problems* (Strategy 8). Most Chinese reported that they always discussed with pupils. On the other hand, most Malay (38%, n=131) reported that they sometimes carried out such a strategy. A higher percentage of Malay (30%, n=77) reported that they never co-operated with the government agencies (Strategy 3), compared to Chinese and Indian. These gaps show that there is a close link between teaching practices (in several aspects) with cultural elements. This confirms past studies on this subject where the result indicated that there is a close link between home environment, cultural elements and behaviour in school (Faitar, 2011).

Roles

Results from this study revealed that there are some similarities and discrepancies of practice based on the professionals' roles. The roles in this study refer to the designation of school professionals either principals, counsellors, class teachers, discipline teachers or physical education teachers. Results show that most principals reported that they always carried out all strategies. This is positive. It is important to have principals who are keen on positive approaches as it at influence the formation of productive learning environment. Many past studies suggest the importance of supportive school leaders for developing productive school environment (Awang, 2012; Phillips, 1997). Apart from *discussing with pupils their feelings towards any issues* (Strategy 2) and *recording pupils' behavioural problems* (Strategy 8), the majority of counsellors reported they always recorded pupils' behavioural problems followed by discipline teachers, principals, physical education teachers and class teachers. Results also show that almost counsellors reported that they always had a discussion with pupils. This is not surprising as discussion is part of a counsellor's job. However, it is unusual when four counsellors reported that they sometimes had a discussion with pupils. Most class teachers and physical education teachers reported that they never had a discussion with pupils compared to others. Indeed, some of class teachers and physical education teacher stated that such strategy was not needed. These differences may have close link with the leadership styles among teachers based on their roles in school (Mudulina, 2012). Tatto (1998) believes that different teaching practices might have a close link with their roles in school and educational backgrounds.

Academic Backgrounds

Result shows that professionals with higher education backgrounds reported to have carried out most strategies. Almost professionals who had a master's degree or PhD reported always *treated pupils with respect* (Strategy 1), compared to those with a bachelor's degree and diploma or certificate of education. The majority of professionals with a bachelor's degree and diploma/certificate reported that they never *co-operated with the government agencies* (Strategy 3). Results from this study seem to support past studies on the association between educational backgrounds and teaching practices (Tatto, 1998). However, there is no narrative data in the current study to explain in details the extent to which their educational background has influenced their teaching practices. Although most teachers ordained higher degrees in education, there is unclear to show the relationship between teaching practices and leadership's styles among them. Past study on this subject revealed that although head teachers were fully qualified, they have different preferences leadership styles (Mudulina, 2012).

Experiences

Result shows that most professionals aged below 35 reported that they never *co-operated with the government agencies*, compared to older professionals. The majority of professionals aged over 36 reported always carried out such strategy. Data shows that as the age increased, the more professionals reported they always *encourage pupils to actively participate in school activities* (Strategy 4). Past study empirical study revealed that appropriate strategies used by teachers have encouraged pupils' learning behaviour, simultaneously contribute to productive learning environment (Awang et. al, 2013). Result also shows that apart from *discuss with pupils their feelings towards any issue* (Strategy 2), and *systematically record a pupil' behavioural problems in a record book* (Strategy 8) most senior professionals reported always carried out most strategies. The majority of professionals who had less than 15 years teaching experience reported that they never had co-operation with the government agencies. In fact, some professionals who had less teaching experience (15 years) stated that the strategy was not needed. The majority of professionals irrespective of the length of experience reported always *treated pupils with respect* (Strategy 1). Past study indicated that there is a significant relationship between school experience and teaching practices (Morgan & Hansen, 2008).

Conclusion

The current study surveyed positive behaviour enhancement strategies used by school professionals. Analyses were conducted on demographic variables as a way to examine the similarities and discrepancies of practices among school professionals based on their demographic factors. Although results from this study revealed that most of the recommended strategies were carried out by school professionals, there is limitation of narrative data to explain reasons for using such

strategies. Indeed, detailed analyses on demographic factors revealed that demographic factors including gender, age, experience, academic background and ethnicity seem to have influence the selection of strategies for promoting positive behaviour. It might be relevant in the future to explore professionals' perspectives on effective strategies. In addition, it is important for the future study to compare the professionals' and pupils' perspectives regarding the use of positive behaviour enhancement strategies and the implications toward pupils' motivation, satisfaction, happiness and psychological well-being. The current study also highlights the need of further exploration on the relationship between teacher training and teaching practices as data showed that there is a link between these variables. Exploratory study on this subject is vital as school professionals may have their own preference in carrying out strategies for promoting positive behaviour. They may have developed their own strategies that have been based on their professionals experience and knowledge on cultural background of pupils. By exploring their experience, a positive behaviour enhancement model that is based on Malaysian culture can be developed.

Suggestions

As results from the current study reveals that professionals from different background has different preference in carrying out positive behaviour enhancement strategies, policy makers have to consider demographic factors in designing educational policies, particularly things related to positive behaviour enhancement. The authority educational bodies especially the Ministry of Education and Teacher Training Institute have to relook at the current teacher education curriculum as results indicate that many teachers are sometimes using positive approaches in interacting with pupils. Special syllabus on positive behaviour enhancement strategies must be part of the teacher training schedules. Realising that making transformation on teacher educational curriculum is time consuming, instant action must be initiated by the government. This includes retraining in-service teachers for promoting positive behaviour in pupils. It should be carried out regularly and consistent at various levels including school, district, national and international level. Perhaps, it encourages professionals to use more positive approach rather than controversial strategies when interacting and dealing with pupils.

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CHAPTER 9

Language Learning Strategies Used by Successful Students

Fakhri Ras

Introduction

The number of successful students at English Department of FKIP of University of Riau is about 60 % out of the whole students who obtained average achievement between 3.00 up to 4.00). Based on simple interview on the use of language learning strategies, a series of language learning strategies have been practiced: a). main daily activity is doing lecture, b). doing lecture tasks as instructed, c). attending lecture regularly, d). repeating what has been taught in the classroom, e). discussing lecture materials with cleverer students, f). singing English songs in spare time, g). having enough resting time everyday, h). supporting by sufficient fund to study, and i). living one in a room of dormitory.

Those strategies, do not reflect language learning strategies referring to learners' own potency which are available in Strategy Inventory for Language Learning (SILL)(Oxford:1989). The SILL consists of 6 aspects; memory, cognition, compensation, metacognition, affection, and social. Based on those phenomena, language learning strategies used by successful students should be acknowledged thoroughly. The clear data on the use of the strategies have positive impact toward English lecturers and the students themselves. Besides, these research findings are fruitful to the subject of TEFL 1 and TEFL2 at English Department of FKIP of University of Riau in which the status of English is as a foreign language. In short, it can be concluded that the clear acknowledgement on the use of language learning strategies is regarded as a crucial factor.

The objective of this study is to examine the relationship between language learning strategies used by successful students based on socio-economic and academic at English Study Program of FKIP University of Riau Pekanbaru-Indonesia. This study is executed to determine the use of language learning strategies used by successful students in relation to gender, ethnic, parents' income, and academic background at senior high school.

Conceptual Framework

Social Factors

- Gender
- Ethnicity (Malay, Minangkabau, Javanese, Batak, Chinese, and others)
- Income levels (low, medium, or high income bracket of the parents)

Language Learning Strategies

1. Memory
2. Cognitive
3. Compensation
4. Metacognitive
5. Affective
6. Social

Adopted from Oxford (1990)

English achievement in the odd semester of
English Study Program

Situational Factors

State and private schools

Academic Factors

-Social, natural, language engineering, and entrepreneurial sciences

The conceptual framework is adopted from Ellis (1994) and Mohamed Amin Embi (2000).

Language Learning Strategies

There are several definitions that can explain the nature of language learning strategies. Wenden & Rubin (1987) refers to them as behaviours, where learners engage in and regulate the learning of a second language. Chamot and O'Malley (1987) defines LLS as techniques, approaches, or deliberate actions that students take in order to facilitate the learning and recall of both linguistic and content area information. Ellis (1994) listed two types of learning strategies similar to Tarone's concept: skill and language learning. Lan (2005) sees language learning strategies

as terms applied to various behaviours used in learning: things people do that are relatively easy to change, vary according to their learning style, are effective or ineffective for specific situations, and are frequently under some level of conscious control. In short, language learning strategies can be summarized based on their key elements like the context of using the language, the target of learning the language, and the suitable steps to learn the language including English language.

Characteristics of Language Learning Strategies

Oxford (1990), language learning strategies (a) contribute to the main goal; communicative competence, (b) allow learners to become self-directed, (c) expand the role of teachers, (d) are problem-oriented, (e) are specific actions taken by the learner, (f) involve many aspects of the learner, not just the cognitive, (g) support learning directly or indirectly, (h) are not always observable, (i) are often conscious, (j) can be taught, (k) are flexible, and (l) are influenced by various factors.

Cohen (1996) suggests that language learning strategies (a) have the explicit goal of assisting learners in improving their knowledge; (b) include cognitive processing strategies, strategies for solidifying newly acquired language patterns, and strategies to determine the amount of cognitive energy needed; (c) encompass language performance and communication strategies; and (d) can be further differentiated into cognitive, metacognitive, affective, or social.

Successful Learners in Language Learning

The characteristics of successful students in language learning, including English language, have been identified. In general, those students have high self-confident (Larson 1991), and have willing to find out (Willis 2001).

Models of Language Learning Strategies

A number of models on language learning strategies have been constructed by various experts. O'Malley model (1990) combined three components in the model of language learning strategies that is metacognitive, cognitive, and socio-affective. Stern (1992) has classified language learning strategies into five categories: managing, planning, cognitive, communicative experience, interpersonal, and affective strategies.

Oxford model (1990) has two main strategies that is direct strategies and indirect strategies. The direct strategies consist of memory, cognitive, and compensation. The indirect strategies have metacognitive, affective, and social. MacIntyre (1994) created a strategy model based on social psychology. He stated that language learning strategies could be carried out if: (a) the learners are aware of the variety of strategies and what is suitable to them, (b) the learners have a strong support to use such strategies, (c) the learners do not have reasons not to use the strategies, and (d) the use of strategies is strengthened by an impressive positive result.

Mohammed Amin (1996, 2000) designed a model of language learning strategies by combining three things that is environment, situation and atmosphere of of a language. Purpura (1997, 1999) classified language learning strategies based on the model of information process (Gagne et al., 1993). This model consists of two components: the structure and function of information. Macaro (2001) has four main strategies: cognitive, metacognitive, social, and affective strategies.

The studies on language learning strategies have been carried out wide world researchers. Al-Otaibi (2004) also found that male students used more language learning strategies compared to female students in Saudi Arabia. However, male and successful learners used more strategies to improve their learning ability. Saif et al. (2004) showed that most of respondents were medium users. Lan (2005) examined 1,911 elementary Taiwanese students [*SILL*] and found that the females used more strategy than the males.

Nada (2006) concluded that there is no significant different in the use of language learning strategies for the whole respondents but the female students used more strategies of memory, cognitive, and compensation compared to the male students. Zamri Mahamud et al. (2010) concluded that there was no strategy inventory which is able to figure out the language learning strategies used by successful students to learn English language in Malaysia. Those strategies are needed a guide for those who are easy, quick, and impressive to learn English language.

In Indonesia, there were several studies conducted on the use of language learning strategies. Nenden (2004) found that there are significant differences in the intensity of using memory, cognitive, compensation, affective, and social strategies between EFL and IFL learners. On the other hand, there is no significant difference in the use of metacognitive strategies between the two groups. She also concluded that memory, metacognitive, and affective strategies were more frequently used by EFL students in Indonesia than by IFL students in Australia. She also found that cognitive, compensation, and social strategies are used more in Australia than in Indonesia.

Johari (2005) findings revealed that the two strategies applied most by the students were metacognitive and affective, while memory strategies were the least used. The results also showed no statistical significance as regards the choice of strategy in gender and socioeconomic status, but significant differences in terms of the proficiency level and strategy use. Kartika (2010) concluded that the learners had different learning styles - one was strongly auditory and the other, highly visual - but were similar in the way they attained success. Both learners could withstand in certain extend of time evoking themselves. Fakhri (2012) found that there was a significant relationship between the use of language learning strategies and the students' English achievement at Pekanbaru Senior High School.

Factors Affecting Language Learning Strategies

There are five factors that might affect the language learning strategy: gender, ethnicity, economic status, academic background, and type of school. Politzer (1983) found that females used learning strategies more significantly than males, which he attributed to women's stronger social orientation. Oxford (1989) drew similar conclusions from her study. Hirschman (1995) stated that the Chinese have a strong representation in small-scale commerce and also in towering heights of the economy in Indonesia and the rest of Southeast Asia. It takes consequence to Chinese heritage to learn English language more frequently.

Abdan (1991) said that middle-income parents in Saudi Arabia send their children to private schools since they can afford to pay the tuition fee. In Indonesia, the situation is similar: parents invest huge amounts in their children's education to give them a good career and secure future. Yang (1993) and Banya & Cheng (1997) reported that the rich can afford to pay tuition for their children's private foreign language lessons or send them abroad where they will get more exposure to the foreign language.

Oxford (1994) mentioned two types of language learning purposes: academic language and social language, adding that academic language was more difficult. Cummins (1982) said that achieving success in the academic language took longer. Gardner and MacIntyre (1993) support the theory of LLS in relation to situational variables. They found that the characteristics of language learners, situational variables, and type of learning strategies interact in complicated way to influence proficiency in a second language.

Research Methodology

The population of this study is 202 successful students out of 322 of the total of the students. Quantitative data were collected by using of Strategy Inventory for Language Learning (SILL) that constructed by Oxford (1989). Qualitative data were collected by constructing questions lead to the students' ways of leaning English in general (general English), and four English Skill (listening, speaking, reading, writing) as well as vocabulary and structure.

This section discusses the research findings which consist of the quantitative data analysis and qualitative data analysis. Quantitative data analysis is reported in two sections: descriptive-data finding and inferential-data findings. In the descriptive data analysis are presented respondents' profiles; mean score for language learning strategies overall. In the inferential-data findings, the research questions –hypotheses are discussed in relation to the data findings to decide whether the hypotheses are to be rejected or accepted. In addition, the qualitative findings of the interviews on language learning strategies employed by the respondents are also discussed. Finally, a summary of the findings on the usage of language learning strategies in relation to the factors investigated in this study and the responses of the interviews are presented.

Findings

The overall mean of the use of language learning strategies is medium (3.49) but it is so close the border between medium and high (3.50-5.00). There is no a significant different between gender (male and female) of successful students at English Study Program FKIP University of Riau. The average score of the use of language of language learning strategies of male successful students is higher (3.53) than that of the female (3.49) successful students. As a result, the null hypothesis is rejected. There is no a significant different among ethnic groups in the use of language learning strategies of successful students at English Study Program FKIP University of Riau. The highest average of the use of language learning strategies is by the Javanese successful students (3.61). This figure is followed by the Minang successful students (3.56). Both averages are in the category of high. The lowest average is by Batak successful students (3.39). While Malay and other ethnic groups of successful students are also the category of medium (3.42 and 3.46). So, the null hypothesis is rejected.

There is no a significant different among parents' income on the use of language learning strategies by successful students at English Study Program FKIP University of Riau. The student from medium parents' income is the highest (3.55) among the other group of parents' income (3.46 high group and 3.45 low group). Consequently, the null hypothesis is rejected. There is no a significant different between type of school on the use of language learning strategies by successful students at English Study Program FKIP University of Riau. The students from state school is little bit higher (3.493) than the score of the students from the private school (3.491). So that, the null hypothesis is rejected.

There is no a significant different between academic background at senior high school on the use of language learning strategies by successful students at English Study Program FKIP University of Riau. The score of the students from social science is the highest (3.53) among the two groups (3.49 natural science students and 3.45 other students). As a result, the null hypothesis is rejected.

There is no significant correlation between the use of language learning strategies and learning achievement of successful students at English Study Program FKIP University of Riau. There is a significant correlation between the use of language learning strategies and the students' learning achievements as big as 0.045. So, the null hypothesis is rejected. There is no significant association between the use of language learning strategies and learning achievement of successful students at English Study Program FKIP University of Riau. There is a significant association between the use of language learning strategies and the students achievement as big as 3.319. As a result, the null hypothesis is rejected.

Strategies used by the successful students to learn English in General

To learn English in general, the successful students use several preferred ways as the following:

- Speaking English every day

- Learning English tenses or grammar intensively by applying them in English
- Listening to the music (English song)
- Reading a lot (English novel, English books, etc.),
- Watching western movie
- Writing dairy activities in English,
- Looking for the new vocabulary items in the dictionary
- Reviewing the material of English subject
- Integrate the four language skills of English in learning (listening, speaking, reading, and writing)
- Taking an English course to improve the four language skills of English.
- Reading as many of vocabulary item as possible
- Pronouncing the learned vocabulary items

The strategies used by the successful students learn individual skills of English (listening, speaking, reading, and writing), vocabulary, and structure at English Study Program FKIP University of Riau are

- Speaking English with my friends every day whatever possible to do (female students).
- Listening to TV, radio, music, in order to learn the dialect of the people from different countries (male students).
- Reading some novels, newspapers, and books every day (Batak)
- Trying to write an English journal in my notebook, because notebook can check up the sentence, word, and grammar automatically (Minangkabau).
- Speak English every day with friend in college, applying the new vocab to the conversation (Javanese).
- Listening to the sounds like western music, western radio station, etc. (Malay).
- Reading some books, and try to find difficult words in that book, look at dictionary, and write the difficult word in notebook (Others).
- Trying to listen the conversation, song in English at radio or television every day (Average to high).
- Reading books more than usual and often using the vocabulary in speaking or writing (Average to low).
- Listening to western music every day and watching western movies.
- Trying myself to listen to western song in order to accustom my ears to listen (Social science).
- Learning a lot about structure and get some exercise (Natural science)

Conclusions

Based on the data analysis, it can be concluded as the following. The quantitative research data show that the overall mean of the use of language learning strategies is medium (3.49) but it is so close the border between medium and high (3.50-5.00). Besides, all null hypotheses on the use of language learning strategies in

relation to gender, ethnicity, parents' income, academic background, and types of schools are rejected. It means that the factors have positive relationship toward the use of language learning strategies at English Study Program of FKIP of University of Riau-Indonesia. The qualitative research data show several preferred strategies to learn English in general, individual skills of English, vocabulary and structure.

The findings of this research imply to the following paths: English teachers, School Managements and Curriculum designer. English teacher got exact information on how the students learn English in general and individual skill of English, vocabulary and structure. Consequently the English teacher may use suitable teaching approaches to assist the students. School management also obtains fruitful information in providing learning and teaching sources for example English textbook, English reference book, etc. The curriculum designer also has data to redesign new curriculum with suits to English learning development in the future.

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CHAPTER 10

Teachers' Readiness in Implementing School-Based Assessment

**Zamri Mahamod
Tuan Azlyna Tuan Soh
Wan Muna Ruzanna Wan Mohammad**

Introduction

School-Based Assessment (SBA) was implemented in 2011 for Year 1 students, primary schools and in 2012 for Form 1 students, secondary schools. SBA is an assessment method that is designed by the Lembaga Peperiksaan Malaysia (LPM) (Malaysia's Board of Examination), but the schools administered, analysed and reported the scores. LPM provides instruments include standards, criteria, guidelines, rules and implementation of SBA. SBA aims to measure the candidate's level of knowledge, skills and values in the subjects evaluated (Lembaga Peperiksaan Malaysia, 2010).

This allows the candidates to improve the achievement of self-assessment throughout the year. Therefore, it is essential to focus on the holistic assessment that help to produce quality students (Lembaga Peperiksaan Malaysia, 2010). The introduction of Standard Curriculum for Primary Schools (USSR) with SBA can be characterized as a method of alternative learning and authentic form. The learning activities can be done inside and outside the classroom as coursework assessment activities, projects, presentations, physical activities, co-curricular, personality, character, and personality development of students (Malaysian Examination Board, 2010).

During the process of teaching and learning, the evaluation and assessment were done simultaneously. Evaluation is the process of identifying, obtaining and providing useful information for the decision to consider the options available to us, (Stufflebeam et al. 1971). Based on the objectives of the implementation, SBA will be able to provide a comprehensive assessment of the students and not just students achieving high band. SBA will also help students with relatively weak in studies with the assessment in terms of character, personality and co-curricular (Lembaga Peperiksaan Malaysia 2010). Through SBA, skills and values will be strengthened even students can improve themselves to achieve the best band. This

method will help students gaining self-confidence and be more interested in learning.

Implementing of School-Based Assessment

Teachers are learning managers who are responsible for planning knowledge, skills and values to be taught to students every day (Esah 2003). Fundamental task of the teacher is to teach and to ensure that teaching and learning process is able to achieve its set of objectives (Rosli 2008). But the issues that arise in the implementation of the School-Based Assessment (SBA) Bahasa Melayu (BM) is perceived as the competence to carry out the task of assessment. Responsibilities of teachers in implementing SBA is enormous that they need to understand clearly the purpose of the assessment. Before considering how the assessment should be done, teachers need to decide why they need to assess (Antonio 2008). The question is whether this issue displays that there are teachers who are not prepared to implement the assessment as it was still new.

Generally, LPM has implemented an online questionnaire to identify the readiness of teachers in implementing SBA in schools. The result of the survey conducted on teachers' willingness to implement SBA online in September 2012 showed that 84.2% of 46,929 Form 1 secondary school teachers throughout the country understand the concept of SBA. Approximately 90.7% of the 89,618 teachers in Year 1, 2 and 3 schools were also found to understand the concept and how to implement SBA (Straits Times Online 2012). Approximately 9,006 (10%) of teachers in Year 1, 2 and 3 primary and 7,979 (17%) of teachers in secondary school Form 1 clear about the concept of School Assessment academic component of SBA. In addition, the LPM concluded that teachers faced problems in understanding the assessment during the teaching and learning process (formative assessment). This is because, it is difficult for the teachers to do variety of assessments as they were used to assess students achievement using paper and pencil test form (Straits Times Online 2012).

Objectives Of The Study in implementation of the SBA

The objective of this study was to determine the level of readiness of the BM teachers in secondary schools implementing SBA BM. The objectives of the study are to:

1. Identify the knowledge level of teachers in the implementation of the SBA for the subject BM.
2. Identify the skill level of teachers in the implementation of the SBA for the BM subject.
3. Identify the certain attitude of teachers in implement SBA for the BM subject.
4. Identify the problems faced by teachers in implementing the SBA for the BM subject.

Profile of Respondents

A random selection of teachers as sample were done from 15 secondary schools and 92 teachers who was involved as appraisers of the SBA for the BM. Profile of respondents as shown in Table 1. Based on the gender of teachers, a total of 10 respondents (10.9%) were males and 82 respondents (89.1%) were females. In the aspect of academic qualifications, most of the respondents have a degree and a diploma in education (95.7%). There is only a teacher who has a bachelor degree and three teachers (3.3%) are master degree holders.

When viewed in terms of the number of pupils, most teachers teach more than one hundred pupils (83.7%). Only 4 teachers have 50 students in the class (4.3%). Whereas 11 teachers (12%) teach 51-100 students. Next, Table 1 also shows that most of the of teachers (66.3%) are teaching more than 24 hours a week. While teachers who teach 18-24 hours a week is a total of 30.4% and teachers of 6-12 hours per week is 3.3%. This shows that respondents are teachers who have a lot of work load.

Many respondents had experience in teaching BM, three to 10 years and more than 10 years experience. There are 50% of respondents had teaching experience of three years up to 10 years. While, 42.4% respondents, have experience in teaching BM for over 10 years and the other only 7.6% have less than three years.

Based on the experience of implementing SBA BM, most teachers have experience for a year and a year half. A total of 44.6% of the respondents are experienced teachers for a year and a half in implementing SBA BM, 41.3% of respondents experienced for one year and the remaining 14.1% of respondents experienced for two years. This shows that respondents are teachers who have experience implementing SBA at least one and a half year of experience.

Table 1. Profile of respondents (N = 92)

Teacher Background		Frequency	Percentage
Gender	Man	10	10.9%
	Woman	82	89.1%
Qualifications Academic	Degree and diploma education	88	95.7%
	Bachelor	1	1.1%
	Master	3	3.3%
Number of students taught	50 people	4	4.3%
	51-100 people	11	12%
	More than hundred people	77	83.7%
Total time Teach	6-12 hours a week	3	3.3%
	18-24 hours a week	28	30.4%
	More than 24 hours a week	61	66.3%
Teaching experiences	Less than 3 years	7	7.6%
	3 years-10 years	46	50%
	More than 10 years	39	42.4%
Years of Experience implementing SBA	1 years	38	41.3%
	1.5 years	41	44.6%
	2 years	13	14.1%

The Teachers' Level of Knowledge in Implementing School Based Assessment

The descriptive analysis results in Table 2 shows the average of teachers' knowledge in the implementation of school-based assessment was high (3.65). There are 8 items scored mean from 3.54 to 4.21. The highest means for the teacher knowledge is the teachers know how exercised SBA during the learning process (4.21). It also shows that more than 50% of the teachers have high knowledge in implementing SBA in schools. There are 4 items of the teachers' knowledge shown which are at moderate level. The lowest mean of the teachers' knowledge is 3.17 for the schools need to set up a committee consisting of SBA appraiser, coordinators, and internal monitoring to ensure that SBA is operated in accordance with the procedures set.

Table 2. Teachers knowledge in implementing SBA BM

No	Item	SK+ K	S	T+S T	SD	Min	Level
1	I know exercised SBA during the learning process.	3.2%	20.7%	76.1%	0.887	4.21	High
2	I know that the School Based Assessment criteria based on the instructions in the book assessment provided by the Malaysian Examination Board	7.6%	20.7%	71.7%	1.030	4.05	High
3	I know SBA will reduce dependence on public exams	14.2%	18.5%	67.3%	1.098	3.81	High
4	I know SBA changed the method of testing performance testing system to test the ability of general	15.2%	18.5%	66.3%	1.098	3.80	High
5	I know in the performance of SBA, the school is required to manage documents, performance, and their evidens	14.1%	25%	60.9%	1.151	3.76	High
6	I know the implementation of SBA rejected claims that the examination system better	15.2%	29.3%	55.5%	1.150	3.66	High
7	I know schools have to implement SBA for all subjects from 2012	18.4%	28.3%	53.3%	1.142	3.55	High
8	I know SBA focuses on forms of assessment that measure aspects of the acquisition of skills than subject content mastery alone	18.4%	30.4%	51.2%	1.180	3.54	High
9	I know SBA will transform teaching and learning by expanding the activities of project management, curricular offerings, personality, and character	18.4%	32.7%	48.9%	1.113	3.44	Moderate
10	I know that each assessment	20.6%	30.5%	48.9%	1.13	3.42	Moderate

	should follow the syllabus prescribed Malay.		%		1		e
11	I know SBA conducted in accordance with guidelines set by the Malaysian Examination Board	19.5%	35.9%	44.5%	1.168	3.41	Moderate
12	I know the schools need to set up a committee consisting of SBA appraiser, coordinators, and internal monitoring to ensure that SBA is operated in accordance with the procedures set	20.6%	43.5%	35.9%	1.033	3.17	Moderate
Average					0.84	3.65	High
					1		

Note: SK = Very low; K = low; S = Moderate; T = high; ST = very high; SD = Standard Deviation

The level of skills poses by the BM teacher in implementing SBA.

The descriptive analysis results in Table 3 shows that the skills of high level are identify the relationship between the implementation of SBA with curriculum objectives, always make Documents Performance Standards (DSP) SBA as the best guide, well-versed in providing additional material recommended assessment based on DSP and always refer to the DSP SBA to determine pupils' band. Teacher skills in identifying the relation between the implementation of SBA with curriculum objectives is the highest (4.48). When viewed in terms of frequency, more than 50% of teachers have aquired the skills needed to implement SBA. In terms of the mean is achieved, the SBA management skills and processes include the performance of students in acquiring the skills SPSBA is the lowest (2.90). Although there are four very high skills, six skills are at a high level and two skills a moderate level, but on an average, teachers' skills in assessing and administering school-based assessment is at the high level (3.95).

Table 3. Teachers skill in implementing SBA BM

No	Item	SK + K	S	T+ST	SP	Mean	Level
1	I can identify the relationship between the implementation of the objectives of the curriculum SBA	4.4%	8.6%	87%	0.907	4.48	High
2	I always make the Performance Standards Document SBA as the best guide	7.6%	6.5%	85.9%	1.043	4.35	High
3	I am skilled in providing additional material based on the assessment of the proposed DPS	6.6%	5.4%	88%	0.965	4.34	High
4	I always refer to the DPS SBA to determine the band students	6.5%	8.7%	84.8%	1.031	4.34	High
5	I always diversify SBA	7.6%	13	79.4%	1.071	4.19	High

	teaching aids to facilitate students answered evidens		%					
6	I am skilled in the use of ICT facilities to perform activities in the module provided	7.6%	16.3 %	76.1%	0.967	4.17	High	
7	I will tell students that they will be assessed prior to interpretation	12%	14.1 %	73.9%	1.113	4.03	High	
8	I must do its own assessment and determine the band students	18.5%	18.4 %	63.1%	1.297	3.82	High	
9	I always assess skills assessment after running several times	16.3%	23.9 %	59.7%	1.139	3.67	High	
10	I can mastering the assessment and administration of SBA	16.3%	26.1 %	57.6%	1.155	3.63	High	
11	I skilful in managin band and evidens students base on syllabus	23.9%	25%	51.1%	1.270	3.47	Moderate	
12	I am well versed in the management of SBA and putting performance of students in School Based Assessment Management System	45.6%	18.5 %	35.9%	1.482	2.90	Moderate	
Average					0.837	3.95	High	

The Attitude Levels of BM Teachers in Implementing School-Based Assessment

The descriptive analysis results in Table 4 shows that the level attitude of the teachers is high. About 70.7% of teachers providing a form before running SBA children's performance in school (4.05). And 71.8% of teachers agreed that consultation with teachers BM others about SBA implementation. Attitudes provide individual files before running SBA children at school also showed promising results. This is also indicative of the high level reinforced.

A total of 59.8% of teachers reported that they strongly agree and agree on SBA attend briefings organized by the school. A total of 58.8% of the teachers also stated that they agree and strongly agree SBA attend relevant courses organized by the PPD and AGC. Attitudes were reportedly not attend approved by 11.9% of teachers, while the other 29.3% of teachers looking quite agree in attending the course. Then, when also asked about teaching students in accordance with SBA, then a total of 60.9% of the teachers suggested that their own views agree and strongly agree with this attitude. However, this was denied by 11.9% of teachers disagree and strongly disagree teach students in accordance with SBA.

Further, 58.7% of teachers reported their consent in providing more opportunities for students to interact in class. While 8.7% of teachers felt that disagree and strongly disagree to provide more opportunities for students to

interact in class. The remaining 32.6% of them showed quite agree only. Attitude makes a SBA performance feedback students to improve teaching is supported by 56.5% of teachers and 10.8% were denied by teachers who do not agree and strongly disagree. A total of 32.6% of other teachers are not quite clear his views. They simply stated quite agree on the attitude feedback.

Two other attitude is also high attitude is greater emphasis on fostering the development of students' skills and always according to plan and the time set by the Examination Board in the exercise of SBA in schools. Consent obtained from 54.3% teachers place more emphasis on fostering the development of students' skills. The 48.9% teachers agreed to plans and time set by the Examination Board in the exercise of SBA in schools. As already discussed, there is only one item at moderate level which is always prepared to implement SBA repeatedly if students failed the band assessed (3.29). Although there is one item that attitude is moderate but, on the average attitude of teachers in the implementation of school-based assessment at the high level (3.73).

Table 4. Teachers attitude in implementing SBA BM

N o.	Item	STS+ TS	AS	S+SS	SP	Mi n	Level
1	I provide a form before running SBA children's performance in school	5.4%	23.9 %	70.7%	0.96 4	4.05	High
2	I always talk to the teachers about the implementation of other BM SBA	5.4%	22.8 %	71.8%	0.93 1	4.01	High
3	I provide individual files before running SBA children in school	6.5%	30.4 %	63%	1.00 3	3.88	High
4	I attended a briefing organized by the SBA school	8.7%	31.5 %	59.8%	1.08 8	3.84	High
5	I attended courses on SBA hosted by the PPD and AGC	11.9%	29.3 %	58.8%	1.16 8	3.77	High
6	I teach my students in accordance with SBA	11.9%	27.2 %	60.9%	1.07 4	3.70	High
7	I have provided more opportunities for my students to interact in the classroom	8.7%	32.6 %	58.7%	1.05 6	3.69	High
8	I'm a SBA performance feedback my students to improve my teaching	10.8%	32.6 %	56.5%	1.08 7	3.61	High
9	I place more emphasis on fostering the development of students' skills	10.8%	34.8 %	54.3%	1.03 7	3.60	High
10	I always follow the plan and the time set by the Examination Board in carrying SBA at school	9.7%	41.3 %	48.9%	1.00 9	3.54	High
11	I am always prepared to implement SBA repeatedly if students failed the band assessed	25%	31.5 %	43.5%	1.26 2	3.29	Moderate
Average					0.84 4	3.73	High

Table 5 shows that the mean score of attitude in implementing school-based assessment (3.95) is, higher than the knowledge and skills (3.73 & 3.65). The aspects of knowledge mean scores higher than the skill aspect. The skills are items that have the lowest mean score compared to the knowledge and attitudes. Even so, all aspects of knowledge, skills and attitudes are at high level.

Table 5 The level of knowledge, skills and attitudes

Item	Min	Level
Knowledge	3.73	High
Skills	3.65	High
Attitude	3.95	High

Problems in the Implementation Process on School Based Assessment

Thus, the descriptive analysis results in Table 6 shows that all the items were high indicating the problems faced by teachers in implementing SBA BM in school. The absence of pupils to teachers making assessment difficult problem is the item that gets the highest mean score (4.79) which a total of 95.7% teachers agreed on this matter. About 95.7% teachers agreed that to assess the health problems homepage SPSBA to delay the process of entering student performance.

Another problem is that many students affect the assessment process which a total of 90.2% teachers agreed and strongly agreed. Assessment of recurrent cause difficult teachers spend syllabus within the stipulated time and too many topics and evidences to be resolved in a very limited time is also supported by the statement of agreed and strongly agreed by more than 80 % teachers.

Items other problems that were reinforced by more than 80% teachers have repeatedly assessment cannot be performed because the teachers were time constraints and the assessment of many in each band resulting assessment cannot be done in-depth and comprehensive. Next, the item mean scores were very high; a short assessment period complicates the implementation of the assessment. This statement is supported by 79.4% teachers who agree and strongly agree.

Problems faced by the teachers is teaching a limited time make it difficult to implement the assessment process and limited ICT facilities in school cause the teacher is difficult to use and keep the pupil profile. In accordance with the problems that were discussed, then the issues that contributed difficulty in implementing SBA BM in school there were no co-operation from the students because they only assessed only by their own teachers and pupils do not want to be assessed the second time in a band that did not achieve by them.

Table 6. Attitude of teachers in implementing SBA BM

N o.	Item	STS+TS	AS	S+SS	SP	Min	Level
1	The absence of pupils to teachers making assessment difficult	0	4.3%	95.7%	0.503	4.79	Highest
2	Teachers to assess the health problems homepage SPSBA to miss the key in the performance of pupils, including evidence	0	4.3%	95.7%	0.526	4.75	Highest
3	Number of students that are affecting the assessment process	3.3%	6.5%	90.2%	0.742	4.67	Highest
4	Assessment of recurrent cause difficult teachers spend syllabus within the stipulated	2.2%	8.7%	89.1%	0.787	4.57	Highest
5	Too many topics and evidence to be resolved in a very limited	3.3%	7.5%	89.2%	0.775	4.55	Highest
6	Repeated assessments are not feasible due to time constraints teachers face problems	0	10.9%	89.1%	0.686	4.53	Highest
7	Assessment of many in each band led assessment cannot be done in-depth and comprehensive	2.2%	15.2%	82.6%	0.830	4.44	Highest
8	Short assessment period complicate the implementation of the assessment	3.3%	17.3%	79.4%	0.884	4.35	Highest
9	My teaching time is limited it difficult to implement the assessment process	8.7%	15.2%	76.1%	1.006	4.22	High
10	ICT facilities in schools restricted to teachers is difficult to use and store student profile	3.3%	20.6%	76.1%	0.887	4.21	High
11	Pupils do not show cooperation as assessed only by their own teachers only	12%	13%	75%	1.073	4.10	High
12	The students do not want to be assessed the second time in a band that does not reach them	16.3%	15.2%	68.5%	1.187	3.91	High

Conclusion

This research implies that the knowledge, skills and attitudes of teachers in implementing SBA are at high level. However, the study also found that there is a number of weaknesses in imlemeting the assessment of by the teachers at schools.

This is because in the teacher's knowledge, SBA changed the approach to teaching and learning by expanding the activities of project management, curricular offerings, personality, and character. Knowledge of teachers that each assessment should follow the syllabus prescribed Malay still at a moderate level. Therefore, the school, or JPN PPD should conduct various training courses related to SBA to enhance the knowledge, skills, and attitudes of teachers in implementing SBA. The problems inherent in the execution of the SBA should be addressed by various invite potential.

For problems related to students, not just the school that should fix it but, the parents should also play a key role working with the school because of the success of the SBA execution also depends on the involvement of parents in the home. Parents should know their children's achievement such as the band and the DSP for each evidence assessed by the teacher. Parents should monitor their children in order to achieve the targeted band by the school. That way, the students will be given more work in the SBA implementation so that they can achieve the targeted band.

On the other hand, the teachers will need to do more work to diversify assessment activities inside or outside the classroom. With a variety of creative activities, students will be more willing to complete evidences provided by teachers, in turn, achieve a predetermined band. As for the LPM, they should be more aware of the problem SBA online so teachers can accelerate the process of entering students' performance.

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CHAPTER 11

The Use of Webquest in Reading Comprehension

**Hadriana
Mohd. Arif Ismail**

Introduction

English is one of the important subjects offered in Indonesia's schools. As a foreign language, English has been introduced to kindergarten and elementary schools as an elective subject. While in junior and senior high schools, English is made as a compulsory subject and tested in the national examination.

According to the national curriculum, as stipulated in *Garis-Garis Besar Program Pengajaran* (GBPP) (Departemen Pendidikan Nasional 2006), all language skills such as listening, speaking, reading and writing in English should be integrated in the teaching approach at the senior high schools. The goals of teaching English are the usage of English in communication and help the students to score good grades in English in the final national examination (Departemen Pendidikan Nasional 2004). The two goals are relatively difficult to be achieved as reported by Fakhri (2011), that most of the third year students of senior high schools in Pekanbaru could not use English for communication even though they have learned the language for almost six years before finishing their study at senior high schools.

The aim of the final national examination is to evaluate the students' achievement and proficiency in English. But both the teachers and the students neglected the speaking and writing skills, because these skills are not tested in the final national examination. Therefore reading skill is the priority in the teaching and learning activities, as the students have to understand the materials through reading and listening which are tested in the final national examination (35 items for reading and 15 items for listening).

Having good reading comprehension is very important for the students or those who have desire to further their studies or for their future careers. This is because reading skill helps the students to improve their proficiency in English and they are able to comprehend current information (Luu 2011). According to senior high school curriculum in 2006, the students should be able to gain competency in

reading so that they are able to understand the meaning of written interpersonal and transactional discourse, direct or indirectly, in the form of recount, narrative, procedure, descriptive, news item, report, analytical exposition, hortatory exposition, spoof, explanation, discussion, and review, in everyday life context. Based on interviews with some of the English teachers from various senior high schools in Pekanbaru in September 2012, it was found that the level of students' achievement in reading comprehension was not yet satisfactory.

This is due to several factors such as cognitive, affective factors, reading texts, and the proficiency of the students. The cognitive factor is related to the knowledge, experience, and level of intelligence of students' ability to think. While affective factor related to the emotional state, attitudes, and situations faced by the students. The third factor which is reading text is referred to the level of difficulty and readability of the text that were influenced by the choice of words, structure, content of reading text, and language usage. Finally the proficiency level of the students is associated with the mastery of vocabulary, structure, and elements of texts.

This view is in line with the findings of Rina (2010) and Sinur (2012). Both studies found that students' inability to answer questions is due to their lack of vocabulary. Students' vocabulary was very minimal that they were not able to get the meaning of a reading text well. Another factor that caused unsatisfactory level of students' achievement in reading was the lack of interest and motivation to read (Susilowati 2012). The students said that they read because they have to read, not because they interested to read.

The teachers also have to review their methods in teaching as it is still the main issue that influences the students' achievement in examinations. The methods of English language teaching in schools are still monotonous and not interesting. There is an inclining that most of the teachers are still using conventional teaching methods. Teaching the same subject for years also cause teachers to think that they do not need to make any preparation in teaching (Mahdum 2010). Learning situations like this tend to make the students become passive.

A good teacher always tries to do his/her best to help students to learn and assist them in improving their performance in reading comprehension. Therefore, a teacher must create a learning atmosphere that is communicative and student-centered learning environment may encourage students' participation and interaction actively.

There are many teaching methods of student-centered suggested by educational experts such as using information and communication technologies in education (Norazah & Ngau 2009). The existence of computers and internet indeed has brought new changes in the teaching and learning process. Besides, the use of computers and internet can make teachers become more creative and innovative. It also facilitates the teaching and learning process in the classroom. Auzar (2010) argue that the use of computers can make learning program activities faster.

The use of Information and Communication Technology (ICT) in education creates a new teaching method which is called a web-based instruction. Findings from studies by Muhammad Anas, Mursidin and Firdaus (2008), and Mohd. Arif, Rosnaini and Zainuddin (2007), proved that the use of web in teaching and learning activities is able to provide support for interactive communication between teacher, students, and learning materials required in a learning activities. For the teachers, using the web provides many resources in planning the learning material apart from sourcing from textbooks as teachers can get books and additional references from the internet.

One application model of the web-based instruction in the classroom is the *WebQuest* (Norazah & Ngau 2009). *WebQuest* model is designed by Dodge in 1995 and after 3 year his colleague, March developed the model. According to Dodge, *WebQuest* is an inquiry-oriented activity in which some or all of the information required by the students derived from the sources on the internet. *WebQuest* allows students to explore the virtual world of learning outside the classroom and access information from the web. By using a *WebQuest* as a learning tool, students will be able to understand the learning material more easily (Norazah & Ngau 2009). Agus (2009) explained that *WebQuest* can be used in teaching and learning process because it: (1) develops a way of thinking critically: analyze, synthesize, and apply new information, (2) develops collaboration or mutual learning, (3) provides scaffolding materials and; (4) suitable for problem-based learning, and (5) suitable for adult learners.

Reading and Reading Comprehension

Experts are still arguing about the accurate definition of reading. Nevertheless, they agreed that there any reading activity is related to understand or comprehend the reading materials. This opinion is supported by Zamri, Mohamed Amin and Nik Mohd Rahimi (2010) that after reading the text, the reader need to understand the content delivered by the writer.

Reading is an active process that has a purpose. It requires a certain strategy in accordance with the objective of reading and the type of reading. Reading is also an activity that involves physical and psychological processes. Physical process involves the activity of visually observing form of writing and is a mechanical process in reading. The mechanical process is continued in the form of the psychological process of thinking in processing the information. The process began when visual senses send their observations of the writings to the center of consciousness through the nervous system.

Pang et al. (2003) agreed that reading is a complex activity that involved both perception and thought. It consists of two related processes such as word recognition and comprehension. Word recognition refers to the process of perceiving how written symbols correspond to one's spoken language. Comprehension is the process of making sense of words, sentences and connected text.

According to Lenz (2005), reading comprehension is the ability of getting an approximate understanding of the writer's idea in a text. By comprehending a text, the reader could understand what the writer wanted to tell in the text. Since reading comprehension is the process of constructing meaning of the written text with readers' background knowledge (Strothman 2006), the reader's prior knowledge directly impacts new learning situations. When the readers got new knowledge from the text, they would relate it with their prior knowledge. While reading process, readers would create the visualization of the relation in their mind in order to get what the writers meant in the text (Williams 2008).

This idea corresponded to Horowitz (2006) findings which argued that good readers must also be able to understand the words they read, and to relate what they read to their own lives and experiences. When readers get information of a written text, they would construct the new information with the knowledge that they already have in order to gain the writer's idea. So, everyone could have different interpretation of a text, since his/her background knowledge may be different with another. Nunan (2003) defined reading as a fluent process of readers combining information from a text and their own background knowledge to build meaning. The goal of reading itself is comprehension as the reader's background knowledge integrates with the text to create the meaning.

In short it can be said that reading comprehension is the process of constructing meaning of the written text with readers' background knowledge. The reader's prior knowledge would have direct impacts on the new learning situations. When the readers get new knowledge from the text, they will relate it with their prior knowledge. While reading process, readers will create the visualization of the relation in their mind in order to get what the writers mean in the text.

Understanding the process of reading is also important. Nunan (2003) also divided the reading process into 3 model which are bottom-up model, top-down model, and interactive model. Bottom-up model is typically a lower-level reading process. Students start with the fundamental basics of letter and sound recognition, which in turn allows for morpheme recognition followed by word recognition, building up to the identification of grammatical structure, sentences, and longer text. Letters, letter clusters, words, phrases, sentences, longer text, and finally meaning is the order in achieving comprehension.

Top-down models, on the other hand, begin with the idea that comprehension resides in the reader. The reader uses background knowledge, makes prediction, and searches the text to confirm or reject the predictions that are made. The interactive model is a model that is accepted as the most comprehensive descriptions of the reading process. This model combines elements of both bottom-up and top-down models assuming that a pattern is synthesized based on information provided simultaneously from several knowledge sources.

Nasamalar, Saratha and Teh (2004) pointed out 8 important insights about reading which are (1) reading involves knowledge of certain writing conventions; (2) real reading involves not merely sounding of the words in a text but

understanding the meaning or message the words are intended to carry; (3) understanding a text involves understanding the language in which it is written; (4) reading involves utilizing previous knowledge; (5) reading is a thinking process; (6) reading is an interactive process; (7) reading is a life-support system; and (8) reading is not a single skill but is a multiple skill that is used differently with different kinds of text and in fulfilling different purpose.

Students' comprehension of the text can be evaluated from different aspects. Nuttal (1982) mentions that there are five types of questions can be used to classify reading comprehension such as (1) questions of literal comprehension; (2) questions involving reorganization or reinterpretation; (3) questions involving reorganization or reinterpretation; (4) questions of evaluation; and (5) question of personal response.

Hughes (2002) stated a different opinion about types of reading comprehension questions. They are: (1) identifying order of events and topics; (2) identifying reference; (3) guessing the meaning of unfamiliar words in context. Pardonio (2005) added that two more types of questions that can be used in reading comprehension were true-false question and exception question. In a true-false question, the students were given a set of sentences asked to decide whether the sentences are true or false according to the given text. In an exception questions, the students were given some sentences, and are asked to decide which sentences is not true according to the text.

It can be seen that to comprehend the text is not easy. In order to have good comprehension of the text, the students need to have background knowledge, understand various kinds of reading skills, and have sufficient amount of vocabulary. Besides, the students have to know about lexical, grammatical, cultural meaning, text organization and connection between sentences. Many students failed to catch the writer's idea because of the limitation of thinking and analyzing the meaning of words and sentences. Good reading comprehension is very tightly associated with the acquisition process of English as a foreign language. By having a good reading comprehension, students would be allowed to make progress, not only on the reading subjects, but also in all areas of science.

Using *WebQuest* in Teaching Reading

The idea for *WebQuest* came from Bernie Dodge, a professor at San Diego State University in 1995 (Dodge 1997). The *WebQuest* is created as a strategy to introduce the World Wide Web into the classroom. Therefore, a *WebQuest* is an inquiry-oriented lesson format in which most or all the information that learners work with comes from the web (Dodge 1997). The *WebQuest* design is based on a constructivist philosophy, and it promotes cooperative learning and scaffolding of instruction. *WebQuest* for language learning allows students to construct their knowledge of the language through exploring structured web resources on their own (Laborda 2009).

Chen (2011) said that the use of *WebQuest* in foreign language learning is also supported by Krashen's Input Hypothesis: a foreign language is better acquired when it is meaningful and acquired through experience. In addition, several studies (Bradshaw et al. 2002; Owens et al. 2002; Ridgeway et al. 2002; Zheng et al. 2005) have linked *WebQuest* to the development of higher order thinking skills and problem solving skills (Zhou & Li 2010). More importantly, *WebQuest* learning helps students become better learners by increasing their autonomy and providing them a sense of fulfillment (Cai 2005, Liu Song & Kong 2007, Lou 2010).

Furthermore, Torres (2007) stated that several advantages of using *WebQuest*: (1) can be used to foster critical thinking; (2) provide a fast way for students to use the resources on the Internet without time-consuming searches; (3) clear structure and effective use of time; (4) improve motivation; and (5) improve collaboration and cooperation among students. The use of technology captures the attention of students. It increases students' motivation to learn complex skills. When the teachers use computers in constructivist ways, students may work together, help each other, and use a variety of resources to solve problems. Active engagement and engagement with real-world situations to foster higher-order thinking are key features of constructivist teaching (Roblyer 2003).

A well-designed *WebQuest* typically consists of six components (Dodge 1998): (1) introduction; (2) task; (3) process; (4) resources; (5) evaluation; and (6) conclusion.

- The Introduction is normally used to introduce the overall theme of the *WebQuest*. It also provides background information of the topic as well as introduces key concepts which the students will need to understand in order to complete the tasks involved.
- The Task section of the *WebQuest* explains clearly and precisely what the learners will have to do through the *WebQuest*. The task should obviously be highly motivating and intrinsically interesting for the students.
- The Process section of a *WebQuest* provides step-by-step instructions for completing the task. The process should provide a clear description of what the students should do.
- The Evaluation section explains how assessment of the final product will take place. This is usually in the form of a rubric or checklist.
- The conclusion summarizes what the students have learned as a result of completing the activity.

There are two main types of *WebQuest* defined primarily by the scope of the tasks involved whether short term or long term (Sen & Neufeld 2006). Both employ similar principles and methods but for different purposes. Short-term *WebQuest* is designed to be completed within less than two or three lessons with a limited amount of new information for students to comprehend and process. Long-term *WebQuest* is usually designed to span a week or a month's period depending

on the given tasks, which usually require the students to analyze new information and show their understanding by elaborating or synthesizing their ideas

Following Dodge's five rules for writing a great *WebQuest* (Chen 2011), the *WebQuest* is characterized by the following features: (1) Websites were carefully selected and screened to prevent students from information disorientation and overload. Resources were organized into categories with a short description for each category. (2) Students were divided into groups and required to work collaboratively to complete tasks. (3) Tasks were designed to challenge students to think and use the language in life-like situations. (4) Linguistic and cognitive scaffolding was provided for each section.

The application of teaching reading by using *WebQuest* can be presented as the following. The teaching and learning process should take place in the computer lab with internet access. At the first meeting, the teacher should introduce the *WebQuest* to the students and demonstrated the way how to study by using the *WebQuest*. The teacher should also give time to the students to navigate through the sites on their own to be familiar with each section of the *WebQuest*. The activity of teaching and learning itself can be divided into three phases: the pre-activity, during or while-activity, and post-activity phase. In the pre-activity phase, the topic and task(s) are introduced by the teacher, including the goal, procedure, and time needed. Warm-up activities are usually included, such as brainstorming or mind mapping used to activate their background knowledge. In the during-activity phase, the students work in group to complete tasks. They complete the task by using step-by-step guidelines given in the *WebQuest*. In other words, the students have to complete the task by reading the articles provided on the *WebQuest*. The role of the teacher, then, is as a facilitator, organizer, and guides the students. The students have responsibility for their own learning and ask for help when they need it. Next, students worked with their group members to pool their research findings and develop PowerPoint presentation slides. Finally, the students present the results of their discussions to the class using PowerPoint slides. In the post-task phase, the teacher summarizes the teaching materials and led the students to review targeted knowledge or skills. The teacher also evaluates students' work and provides opportunities for repeated performance, if necessary.

Conclusion

Based on the explanation above, it can be concluded that it needs serious effort from the students if they want to gain good reading comprehension. They need to have background knowledge. Indeed they have to understand well about reading skills and strategies. Moreover, they should have sufficient amount of vocabulary. Besides, the students have to know about lexical, grammatical, cultural meaning, text organization and connection between sentences. The use of technology in education, especially the use of *WebQuest* in language learning plays an important role to improve the students' achievement. The use of *WebQuest* places the students in a well-structured learning activity. Guidance provided by the teacher

will make the teaching and learning process more effective. *WebQuest* provides the students with necessary resources of information to discuss. The teacher's advance planning and guidance during the activity also make the search for information more effective within the time available so that the students can spend the class time more on discussing the issue. *WebQuest* activity is, therefore, a well-structured activity appropriate for students to improve motivation and read extensively in a limited amount of time.

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CHAPTER 12

Structure and Elements of the Educational Policies for the Gifted and Talented

**Rosadah Abd Majid
Aliza Alias
Manisah Mohd Ali**

Introduction

The education system and the schools have the responsibility to provide suitable educational provisions for all their students. Some of these students face learning challenges and have unique learning needs. Among those are the gifted students who for most cases are learning alongside their friends in the mainstream classrooms. Thus, the education system or the schools should have a concise and clear policy in providing the education to cater for the gifted students' learning needs. The gifted and talented policy should have a structure among which inclusive of the rationale for the gifted program, its aims, definitions of the terms used in the policies, general educational approaches, identification and monitoring, personal and social education, responsibility for coordinating and monitoring progress, process for review and development, use of outside agencies for training, and provisions. This paper will present a study on gifted education policies. The policies were analyzed for their structures as well as for the explicit elements or terms listed. Implications of the policies on the development of the gifted and talented students will be discussed.

Gifted education is referring to special educational provisions and approach for a group of students whose ability in learning is different than their peers. The words that were used to describe these groups of students include; fast learners, high ability, brilliant, genius, and gifted. Philosophically, students who can learn fast or more intense, and are capable of comprehending knowledge at a deeper level, should be allowed to pursue their learning needs. This is just like special educational provision which needs to address the learning needs of those special education students whose phase of learning is not compatible with their age group peers. Much is being said about the importance of implementing gifted education in school. It has to be the nation's agenda to nurture its' natural resources, namely

the human potentials. The education system needs to put effort and strategies on realizing students' potentials, transforming giftedness to talents for the development of the national and universal civilizations.

Characteristics of Gifted Students

Gifted students were observed to demonstrate several unique characteristics associated with their cognition or mental processing. Cognitive is referring to how students use their brain to learn (Berk 2012). Gifted students were observed to demonstrate several unique characteristics associated with their cognition or mental processing. Among gifted students' cognitive characteristics include; ability to manipulate abstract symbol system, power of concentration, preference for independent work, multiple interests, ability to generate original ideas, unusually well-developed memory, early language interest and development, curiosity, ability to manipulate abstract symbol system, power of concentration, preference for independent work, multiple interests, ability to generate original ideas, unusually well-developed memory, early language interest and development, and curiosity (VanTassel-Baska 1998).

Even though not every gifted student demonstrates all the characteristics, those who demonstrate also differ qualitatively from one another. These characteristics will then impact the gifted students' behaviour positively and also in a negative manner. A student who is able to concentrate for a long period of time, is good at manipulating symbol systems, has excellent memory, shows the ability to generate original ideas, had early language interest and development, and showed a high degree of curiosity, will be learning easily. The students will learn easily and would be wanting to learn more and at a faster rate. He/she will be asking a lot of questions due to their reflective minds and curiosity. They might also be researching topics of their interest on their own, in pursuing his/her curiosity. Sometimes they act mischievously too when trying to experiment their thoughts. They become independent learners, researching topics of their interest on their own in pursuing his/her curiosity. Empowering oneself to learn is good and important in developing the right attitude and the appropriate skills for learning in general.

Underachievement

Gagne has proposed a model on talent development or known as Differentiated Model of Gifted and Talented (DMGT). The model discusses the factors that lead a gifted person to become talented in their specific domain of giftedness. One of the domains of giftedness is the intellectual giftedness which leads to the achievement in the field of academic talent. However as compared to other fields of talents such as in the arts and in the sports, academically gifted students seem to underachieve more. A person is said to underachieve if there is a discrepancy between his/her potential with his/her true performance or achievement (McCouch & Siegle 2003). Gagne's (2011) explanations for this phenomenon include problem with diverse

definitions of who are the gifted students which lead to difficulties in the identification. If students are not identified he/she will not get the educational provisions to match with the gifted students' unique learning needs. Nevertheless once identified the gifted students may not be getting appropriate and suitable educational programs in schools. Additionally teachers' attitudes and skills have a lot to add to the success of the academic achievement of the gifted students. Concurrently there are also issues in many of the teachers' training programs which do not include knowledge about gifted education. Thus, many teachers are still struggling to accept gifted education and to design and conduct suitable educational programs and interventions for the gifted students.

Schools do not readily identify their gifted students as supposed to a musician who can detect a talented young pianist or a young violinist. The musician evaluates the child based on his/her performance that shows remarkable quality comparable to the experts' piece of work. Back in school settings, most of the times we tend to only look at students' academic achievement. We often regard high academic performance as usual because there are other children who gain high academic performance, and they are regarded as hardworking. However we should be looking at other indicators or characteristics that may be able to give us further information about the "good" students. Besides high academic performance, gifted students show some cognitive and affective characteristic that mark their high cognitive ability and their high emotional intensity towards particular issues. They may be very motivated, persistence, and show enthusiasm in pursuing academically related activities. Thus, in providing provisions for gifted students, educators need to look for students with high mental ability and show favourable intrapersonal characteristics. Limiting on the identification procedure would lead us to unintentionally miss the students whom we are looking for.

Sometimes, some of the gifted students due to some circumstances perform below their true abilities. This phenomenon will mask their true potentials and they will not be regarded as gifted and consequently will not get educational provisions or interventions that they need. This once again leads to another cycle of underachievement. Another phenomenon that would mask the gifted child true potential is the disabilities that they may have, and over time they have learnt to deal with the disabilities, and the teacher is not able to detect the underachievement. Also educators sometimes tend to spot students' disability more readily than to spot on their characteristics associated with giftedness. Sometimes those characteristics could be mistakenly labelled as misbehaviour or pure act of immaturity. A gifted student who feels deeply, empathize with the earthquake victims seems emotionally immature, while indeed this affective characteristic could be due to him experiencing emotional intensity or overexcitabilities, typical characteristics of some gifted students.

In preventing or reversing underachievement we have to think and plan seriously on schools' gifted education policy, and on the teachers' training programs. The teachers need to possess; the relevant knowledge, skills, and the

right attitude to carry out the responsibilities of teaching and educating the gifted students. Gifted education policy need to emphasize that gifted students need to be identified, nurtured and supported in order for them to achieve to their true potentials. It is important to realize that as educators we need to ensure that our students' learning needs are met, regardless whether they are academically gifted or otherwise.

Analysis on Gifted Education Policies

Countries and schools from many parts of the world had formulated policy paper on gifted education. This effort was done to assist and support teachers in conducting gifted education programs at their schools. Besides, gifted education policies specify the rights for appropriate education for gifted students in schools. The policy papers were written guidelines for educators in providing educational provisions that need to be allocated for gifted students in schools. These students may be found in special schools, special programs, or in mainstream schools. If they are in mainstream schools, more effort need to be channelled in addressing the issues of providing gifted education for the gifted and talented students. This is because in most mainstream schools the gifted students are learning alongside their peers who are following mainstream curriculum. Without a clear gifted education policy those gifted students will not get appropriate educational provisions that they need.

Various gifted education policies from several institutions were studied to gauge on the patterns of the structures of the gifted education policies. Five policies were studied and they are:

- Gifted and Talented Children and Students policy, Department of Education and Children's Services, Government of South Australia, (Policy A)
- The Policy for Gifted and Talented published by the Education and Training Unit, Canberra Government, Australia (Policy B)
- Gifted and Talented Policy, written for Jewish community secondary school.
- Gifted and Talented Policy for West Hatch High School.
- Gifted and Talented Education Policy, by Instruction and Program Development Office, Board of Education of Montgomery County.

Analysis was made to identify the patterns of the structure of the documents. Also the analysis will look in depth to study the elements written in the gifted education policy.

Structure of the Gifted Education Policy

The first policy paper studied was Gifted and Talented Children and Students policy, by the Department of Education and Children's Services, Government of South Australia, established in 2012. This policy paper is one of the most recent and comprehensive gifted education policy that has been studied. The 'Purpose' of publishing the document was specified at the very beginning. This document is

important to ensure that gifted students get the necessary support in their learning. Secondly, this document specifies the 'Legislation' upon which this policy was drawn. Next is the 'Scope' which specifies which schools would be bound by this policy, and which particular theory was being referred. This part is followed by the 'Context' upon which this policy was drawn. Important documents related to the state of educational agenda were listed. The next part of the document listed and explained the 'Principles' that need to be upholding in the implementation of the policy. Following this part is the "Policy statement" part. It is a concise description and explanation of what gifted students need, the risk if there is no provision, and what is the significant or the importance of having this policy. The next part laid down a big portion of this policy paper with nine parts under the heading of 'Implementation'. It encompasses; identifying gifted and talented learners, supporting positive social and emotional development, curriculum differentiation, pathways for gifted and talented learners, enrichment, extension, and acceleration, specialist secondary schools, individual learning plans, gifted and talented learners with disabilities, and responsibility. Following this part is a component with the headings 'Contact, supporting Information, and resources'. This part is packed with information about options in professional development in gifted education, various special gifted programs for students, and special interest secondary schools. Next is 'Websites' where people can acquire further information or knowledge about gifted children and gifted education. This document was complemented with five appendices which are Gagne (2003) differentiated model of giftedness and talent, conditions and procedures for early entry to schools, referral process, gifted and talented check list for early years, and characteristics of the gifted learner.

The second policy that has been examined is the Policy for Gifted and Talented published by the Education and Training, Division, Canberra Government in 2008. The policy comprises of seven parts. The first part laid down seven 'Policy statements'. It was followed by the second part which put forth the 'Rationale' for allowing various gifted provisions in schools. The third part laid down the 'Definitions' for gifted students, talented students, and definitions for various educational provisions that could be offered to suit the gifted students' educational needs. Fourthly, the policy paper emphasizes the 'Procedures' in implementing the gifted education program, such as identification. These also include procedures in implementing acceleration, grouping, differentiation and early entry. The fifth part of this document touches on the 'Policy responsibilities'. It is about the support needed by the students and the implementers in conducting gifted education program. The sixth part specifies 'Policy owner', and that is the Director of the Learning and Teaching Unit, Education and Training Division, Canberra Government. The last part, which is the seventh part of this document, has listed down 'Related policies' which is the context of which this policy document is created.

The third policy studied was the Gifted and Talented Policy, written for Jewish community secondary school. It was adopted in 2010, and reviewed in

2013. This document has seven parts. The first part of the policy paper started with a list of statements of 'Aims' to rationalize its' educational missions and purpose for having gifted and talented education. The second part of the policy paper addresses the issue of 'Definition and identification' of giftedness and talent. This part specifies how school could identify gifted and talented students. The third part talks about 'Success criteria and monitoring'. The fourth component is the 'Provisions within classrooms'. Various means of educational approaches are listed. This allows teachers to select various educational options for students. The fifth component mentions about 'Extra-curricular provisions' which emphasizes learning beyond academic curriculum for the development of soft skills. The sixth part of the document presents 'Social emotional development' of gifted students. This part emphasizes the needs to address the social emotional well-being of gifted students. The seventh component of the policy paper specifies the 'Role of parents and carers'. Parents and community members need to be empowered to render their supports for the development of gifted students in the pursue of realizing their utmost potential.

The fourth policy studied was the Gifted and Talented Policy for West Hatch High School, Essex, United Kingdom, reviewed October 2011. The first part of the policy states the 'Purpose' of this document is to provide practical guidance for teachers in handling gifted students in their school. Secondly, it lists out the 'Principles' upon which the education system upholds to. These principles include; inclusiveness, responsibilities and accountability of the educational system. The third part of the policy discusses the 'Scope' of who gifted students are. These include students who are referred as talented, able, exceptionally able, and students with marked aptitude. The fourth part of the policy laid down the 'Procedure' for identification of gifted students including using gifted students' register. Following the procedure section is the 'Responsibility' section which listed down the responsibilities of all the respective educators involved in the implementation of gifted education. The last section, which is the sixth section of the policy paper, emphasizes the work of 'Monitoring' gifted students' academic progress. This policy paper pays attention to avoid underachievement among gifted students. This particular issue was mentioned both under the 'Monitoring' section and under the 'Responsibility' section.

The fifth policy studied was the Gifted and Talented Education Policy, by Instruction and Program Development Office, Board of Education of Montgomery County, Maryland, United States of America, amended in 1995. The policy paper started with the first section addressing the 'Purpose' or the importance of establishing this policy paper. It emphasizes the importance of realizing each student's potential. The second part of the document explains about the 'Issue' surrounding gifted students and efforts needed to meet their educational needs. Next, this document emphasizes on what is called 'Positions'. This section lists and explains definitions, provisions, curriculum, programs, identifications, nurturing/mentoring, staff development, communication, and coordination of the

gifted education program. The fourth part of the document spells out the ‘Desired outcomes’. This includes outcomes for gifted students, for the schools, and for the district. The next section of the policy paper is the ‘Implementation strategies’. This section listed out several means and ways of strategizing efforts in the implementation of gifted education programs. These include developing challenging curriculum, developing instructional technologies, implementing benchmarking, and many more relevant initiatives to advance the gifted education program in the county. The last part of this policy paper is ‘Review and reporting’. This specifies the accountability of the people in charged to prepare program evaluation and their relevant reports. The reports will be referred to in revising the policy from time to time. The summary of the main structures of the gifted education policies studied was tabulated in table 1 below.

Table 1: Main structures of the gifted and talented education policies

	Policy A	Policy B	Policy C	Policy D	Policy E
1.	Purpose	Policy statements	Aims	Purpose	Purpose
2.	Legislation	Rationale (procedures)	Definition and Identification	Principle	Issue
3.	Scope	Definitions (of various provisions and other terminology related to gifted education)	Success criteria and monitoring	Scope; definition of gifted and talented	Positions; definitions, provisions, curriculum, programs, identifications, nurturing/ mentoring, staff development, communication, coordination.
4.	Context	Procedure	Provisions within classrooms	Procedure; Gifted and talented identification	Desired outcomes; students’ level, school levels, district level
5.	Principles	Policy responsibility	Extra curricular provisions	Responsibilities ; coordinator, head of department, teachers	Implementation strategies
6.	Policy statements	Policy owner	Social emotional development	Monitoring	Review and reporting
7.	Implementation	Related policies	The role of parents and carers		

8.	Contact, supporting Information, and resources				
9.	Websites				
10.	Appendices				

The outcome of the document analysis shows that there are many different ways of writing gifted education policy. Policies are written to advocate the rights of appropriate education needed by gifted students. These policies are also important because they facilitate teachers and educators to handle and educate gifted students whom they may encounter. Policies provide guidelines for teachers and empower them to educate gifted students align with the stated policy. In the next, this paper will discuss key components and structures of gifted education policy.

Gifted and Talented policy framework

Gifted and talented education policy paper needs to be comprehensive. It must provide all aspects of necessary information to convince people that the policy is worth to be carried out. It should address important issues to allow people to understand beyond what is made compulsory for the implementation. The document also needs to provide clear guidelines for educators to carry out their responsibilities. Based on those arguments and from the five policy papers studied, these components of the structures of the framework for gifted education policy paper are suggested:

1. Rationale; to list down reasons why the policy is needed and how it is linked to the general educational aims and philosophy.
2. Aims; to specify what the school aims to provide for gifted and talented children.
3. Definitions of terminology used in the document.
4. General overall approach, example in-class provision, setting, or withdrawal.
5. Identification of gifted students, and the monitoring schemes.
6. Organisational and institutional initiatives and planning for the gifted students identified.
7. In-class approaches and specific teachers' initiatives and strategies.
8. Out-of-class activities which include extracurricular activities as well as service learning
9. Personal and social education for character building or enhancement of soft skills.
10. Persons in charged and their responsibilities to co-ordinate and monitor progress.
11. Reports and review for further progress and development.
12. Provisions for teacher training.

Conclusions

Efforts must be made to ensure that gifted and talented education is effectively delivered in our education system. Gifted students must be educated according to their educational needs to nurture them to realize their true potentials. Those empowered with responsibilities to educate gifted students need to formulate a comprehensive gifted education policy in ensuring the gifted students get the necessary provisions and support in their education. This article had analyzed five policy papers for the education of the gifted and talented, upon which had suggested a comprehensive structure to build a framework for gifted and talented educational policy. Policy paper should not be regarded as directives from top management. Instead it facilitates the advocating agenda for the gifted students and for their educators alike.

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CHAPTER 13

Early Study in Developing Take-Home Physics Experiment to Improve Science Process Skills and Scientific Attitudes

**Zulirfan
Tamby Subahan Mohd Meerah
Zanaton Haji Ikhsan**

Introduction

Reality on the ground shows that the learning of science in general, just use the method that puts the ability in cognitive domains only, where scientific inquiry is expected to build science process skills and scientific attitudes in accordance with the mandate of the curriculum, it is not fully implemented. Cooley (2006) suggested that teaching methods such as teaching inquiry, problem solving, problem based learning, and project based learning depends on students' science process skills to complete the research. Meanwhile, Trumper (2002) stating that the practical work in the laboratory has been widely used as a teaching strategy and a strategy that is crucial in building and understanding the procedures of scientific inquiry. But, in our country science teachers almost never to practice science process skills that must be done. Suyana (2011) states that learning physics is usually done in lectures and students tend to memorize a lot of terminology relating to physics concepts to their knowledge of physics and nature.

Science process skills and scientific attitudes are very important in the teaching and learning of science. To learn about nature, two things are absolutely necessary. Harlen, (1999) states that science process skills in developing an understanding of science is something crucial, he said construction of the science process skills should be a major result in science education. Meanwhile, Kamisah (2012) argues that in the learning process meaningful and effective science, students not only have to develop the concept, but also must learn how to acquire and organize various information and apply and test ideas. Further, Kamisah (2012) asserts that scientific knowledge was revealed directly through the observation of a phenomenon activity.

As for the problems faced by teachers and schools in conducting science experiments in school. Some causes of things including: not available laboratory space for experimental activities, absence or lack of experimental tools and materials, no special staff available to help prepare for an experiment in a lab activities (Sumintono, 2011). In addition, Norlander-Case (1998) states that the implementation of experimental methods take a long time.

Alternative strategy would be developed by researchers is a take some science experiments to students' home. This term well-known as a take home experiment. Turner (2008) studied the effectiveness of home kits experiment in physics for adult distance learners. In this study, researchers develop strategies home experiment in teaching science, especially physics to junior high school students that focus on the impact of rising home experiment science process skills and scientific attitudes. In general case, science teachers give homework assignments to students that can be done with paper and pencil. Thus, researchers are attempting to replace paper and pencil tasks to be experimental activities, so students not only acquire scientific knowledge but also skills to carry out research and scientific attitude. Accordingly home experiment will build science process skills and scientific attitudes of students. In order to conduct home experiments required teaching and learning modules that can assist students in conducting scientific work at home. To develop this home-based experimental module, the researcher uses the ADDIE instructional systems design model. ADDIE model consists of five stages, namely: Analysis, Design, Development, Implementation, and Evaluation. ADDIE model is a generic and simple model in instructional systems development (Wang & Hsu 2009, Sabar 2011). This paper reports the initial study done by researchers to obtain information related to the development of a variety of home experiment module. This preliminary study aims to identify various problems that cause science teachers conduct the experiments rarely, especially physics teaching in junior high school, and to identify the frequency of experiments was conducted specifically on the topic of light and optics. This preliminary study also aimed to identify students' perception on the possibility of conducting science experiments at their home.

Science process skill

Science process skills are very important in the study of the universe and an absolute must-have for students in learning science. Science processes skills (SPS) is defined as a skill that can be exercised in respect of behavioural science reflect scientists (Ergul et.al. 2011). If students have science process skills, then they will think and work, especially in scientific research and science process skills can enhance their scientific literacy. This is in accordance with the opinion of Harlen (1999) that mean science process skills to prepare future scientists, a science literacy, enabling students to use scientific information in everyday life (individual, community, and global).

Ergul et al. (2011) says that, development of science process skills enable students to solve problems, think critically, make decisions, draw conclusions, and satisfy their concerns. According to him, not only do scientific research, but also students can obtain information science, learning science process skills to help them think logically, ask reasonable questions and find answers and solve problems they encounter in everyday life. According to Walter & Soyibo (2001), science process skills can be divided into the two parts. First, the basic process skills (basic science process skills) include: observation, measurement of and use the number, and classifying. Skills policy is a fundamental process in scientific inquiry. Second, the integrated science process skills (integrated science process skills) include: handling variables, sorting hypothesis, and conduct research. These skills are built on the basis of skills.

A study conducted by Turner (2008) for students taking first year physics course at university, found that the use of take-home experiment kits can reinforce the concepts learned. According to him, the students can adjust experiment time and can do it over and over. In chemistry lesson, the activity has been studied home-based experiment to be a way to improve the quantity or quality of the learning of chemistry.

Attitudes toward science can be interpreted in two dimensions. The first dimension is the attitude towards science (attitude Toward science) and scientific attitudes (scientific attitudes). According to Harlen (1991), there are at least 4 attitudes that influence student learning, especially in science, namely: attitudes toward school tasks, attitude toward himself as a student, attitudes toward science as a product of, and attitudes towards objects and events in the environment. In simple terms, the attitude towards science is 'like' or 'dislike' towards science. Kuppam et al. (2009) noted that when students' attitudes towards science understandable, especially to the ground like and do not like science, we will easily make up that inquiry-based learning curriculum more friendly with the students.

In this preliminary study, the researchers would like to get some information about the possibility of home science experiment applied in the teaching of physics in secondary schools, especially low. The information to be obtained as: the factors that cause scientific experiments conducted science teacher rarely, frequency of experiment of light and optics as sample learning topics, students' attitudes towards science teaching, and student opinion about the possibility of an experiment carried out at home. A total of 12 teachers from several schools that joined the group Pekanbaru science teachers have participated in this preliminary study. Science teachers in this group often do meetings and discussions in order to improve teaching skills to teach science in junior high school. The teachers are 30 to 50 years old and have been teaching science for more than 5 years. In addition to science teachers, participants in this study are 50 students of 8th grade from two primary schools in Pekanbaru.

To identify the problems faced by teachers in implementing the experiment or practical work in the laboratory, participants were asked to fill out a questionnaire

with responses strongly agree, agree, less agree and disagree. The same is done to obtain information about the frequency of science teachers conduct experiments. To be more directed, researchers choose the topic of light and optics. The choice of this topic is based on basic competencies related to investigation of the properties of light, mirror and lens. Two senior science teachers and performers in addition to the 12 people have been interviewed to obtain supporting information from the tendency of participants' answers. Meanwhile, information about students' attitudes towards science teaching and student opinion about the possibility of take-home experiment is obtained based on questionnaires given to students. Student responses in the questionnaire are done by selecting behavior strongly agree, agree, less agree, and disagree. Data analysis using descriptive statistics by calculating the percentage, frequency and bar chart for describe the tendency of attitudes and perceptions of teachers and students.

Obstacles for the implementation of experiments in science teaching

Many factors become obstacles for the rare implementation of the science experiments in the lab at school. From 12 science teachers as participants in this survey, obtained at least 8 causative factors that makes them rare implement experimental methods in the teaching of science, especially physics. However, not all participants experience the same obstacles. Survey result of 8 factors that cause science teachers perform experiments rarely in science teaching methods shown by Figure 1.

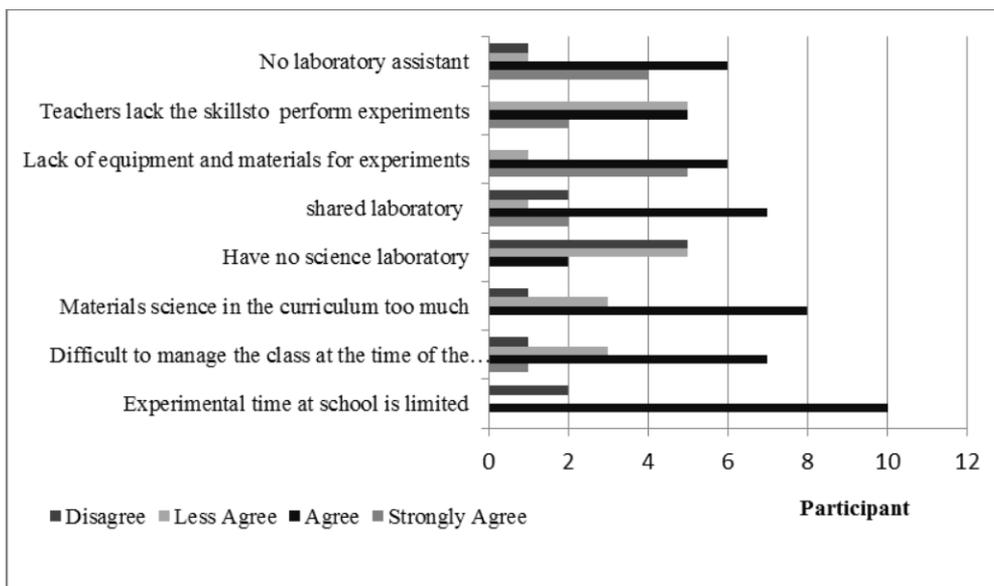


Figure 1. *Obstacles Factor for the Implementation of Experiments in Science Teaching*

Most of the participants (10 out of 12 participants) agreed that one of the factors causing teachers hardly perform the experiment in the teaching of science in schools is time limited experimental study hours. This matches the findings Norlander-Case et al. (1998) which revealed that one among the challenges in implementing an inquiry-based learning is lack of time. In Education Curriculum Unit (KTSP) science education in junior high school in Indonesia provided 4 credit or 4 x 40 minutes that the implementation per week divided into two meeting times of 80 minutes for each meeting. According to participants, the time of 80 minutes is short enough to carry out scientific experiments, especially if there is more than one type of experiment to be performed to make students successful experiment, the science teacher must implement inquiry-based teaching and scientific activities. Stage-level academic work must be followed. The teaching starts by presenting the problem to be researched, studied the problem need clarification, how to study, equipment and materials needed for the study, analyse the ways and means of observations and the application of the concept of drawing conclusions obtained in the context of everyday life or technology. The level of scientific inquiry is making it hard for science teachers to teach science that they preferred to give lectures only. Wang and Lin (2009) found that scientific inquiry is the least frequent in both the elementary and secondary school science classrooms in Taiwan.

Participants also feel difficult to manage when implementing classroom teaching of science with experimental methods. It is seen from the results of the survey in Figure 1 which shows 8 out of 12 respondents indicated agree and strongly agree that it is difficult to manage the class when students experiment. According to them, the students are busy, playing and showing disinterest. As a result, the purpose of the experiment is difficult to be achieved in this way.

Eight of the 12 respondents had the perception that the content of the material to be taught in science students is too dense. That perception makes science teacher refused to perform the experiment as the experimental method, not many science concepts can be taught to be a waste of time. Science teachers like this put science into content but not in process to obtain scientific knowledge. Content oriented science teaching is probably due to misunderstanding about science and science education assessment system which only measure the cognitive domain.

Although many theories state that science experiments must be performed in the laboratory, but the results of this survey show that 10 of the 12 participants expressed do not agree and if the absence of the laboratory being a reason to make laboratory experimental method is not implemented. According to them, the science experiments in science teaching can be done in class, when there are no labs in the school.

In general, the lower secondary school there was only one or two science labs separated laboratory science such as physics and biology laboratories. Total class that much cause trouble to arranging schedules for each lab class. Nine participants felt that this factor makes them rarely conduct experiments, although

some of them are of the opinion that experiment not only be carried out in the laboratory only.

Eleven participants noted that the lack of equipment and materials available in the lab to make them not want to perform the experiment. Learning with experimental methods generally performed in groups with 4-5 members of the group. If the experiment is less equipment and materials, the teacher had to create a group with a large size. This large work groups make teaching becomes ineffective and difficult to manage the class.

Lack of skills of science teachers in implementing the experiment is a factor that becomes obstacles for the implementation of the experiment. Seven participants noted that many scientific experiments that are still poorly understood.

Almost all participants (10 out of 12 participants) do not agree and do not agree on hardly experiment in science teaching due to lack of energy or laboratory assistant laboratory assistant. This shows that science teachers are always willing to prepare equipment and materials required for the experiment and update again after the experiment performed. They say that the students can also be involved in updating equipment and materials back experiments.

Some experiments in science teaching on the topic of Light and Optics

The Indonesian government has set the standard household consisting of competency standards and competency base for all subjects at all levels of education except for college. Content standard for the unit Educational Basic and Junior High School include a minimum material and minimum competency level to achieve higher level of competency and graduate at least certain types of education according to Permendiknas No. 22, 2006. In this study, the researchers focused on the competencies of junior high school science education policy on competency-oriented scientific undertaking. Therefore, researchers consider one of the basic competency for science subject is the ability to investigate the nature of light and its relationship to various forms of mirrors and lenses. Summary of minimum competency is demonstrated that key learning outcomes expected after students learn about light and optics is the ability to carry out the research process. Scientific knowledge about light and optics is a product produced by the process of the research. In actual fact, science is considered to be the main product of science teaching on the topic of this light and optics. Offense of science teachers in the interpretation of such basic competence has been going for many years until it has become accustomed.

To make students can achieve this competency, then the minimum required teaching materials among others: the propagation of light, light reflection, reflection on flat and curved mirrors, refraction of light, refraction of light at the lens, and the decomposition of light. Because competency is the ability to set policies do research, the ability to run must be taught. In carrying out this scientific work, a variety of science process skills and scientific attitudes should be taught and exercised to the students. Teaching science process skills are generally

integrated with the experiment conducted. Based on the analysis of teaching material, at least there are 12 types of experiments that can be done in light and optics learning. Figure 2 shows the results of the implementation of the twelfth survey frequency is meant according to the type of experiment 12 participants who have a profession as a science teacher for more than 5 years of working time.

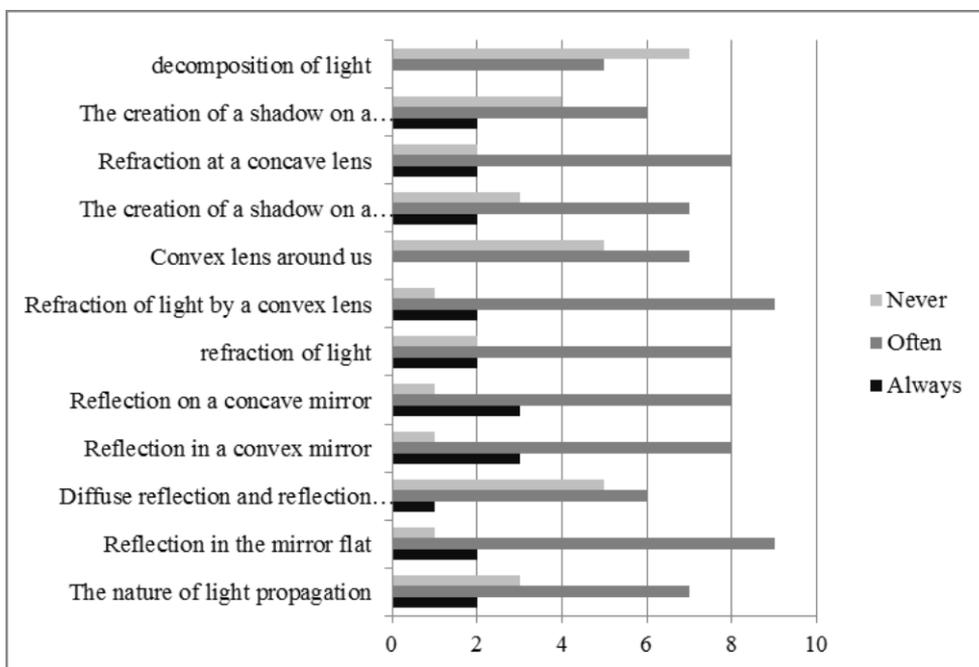


Figure 2. Frequency of the Implementation Science Experiments On Topic Light and Optics

Light is an electromagnetic wave that propagates without the need for a medium and moving in a straight path with speed c , 3×10^8 m / s. The concept of light propagation in a straight path can be obtained through a simple experiment in junior high school. Two of 12 teachers under survey stated that they always perform an experiment to get the concept. Nonetheless, 3 teachers said never implemented and 7 teachers say rarely do them, even this simple experiment prepared teachers and students easily implemented. Equipment and materials used are readily available already.

Reflection experiments on flat mirror needed to acquire concepts about the nature of light reflection and formulating the Law Snellius to rebound. This experiment is very important because the policy of forming a shadow on the mirror. This experiment also easily implemented by teachers for equipment and materials used are simple. Even so, only 2 of 12 science teachers who always implement it, the rest do not perform and rarely implemented.

The experimental reflectivity aggregate and regular reflection, some say rarely implemented, and some said never implemented, and only one science teacher stating always perform. In this experiment required a mirror flat and wavy mirror and light file line. Difficult to get wavy mirror and a light source with parallel files is also a cause of this experiment rarely and never implemented or reflection experiments on convex mirror and concave mirror, little teacher who always carry and many science teachers rarely implement it. Experiment to find the concept of light refraction, light on the nature refraction convex lens and a concave lens used was not even done by a science teacher. Most of the science teachers never asked students to do experiments on convex lens and decomposition of light.

Students' attitudes towards science teaching

Revenue survey of 50 participants who were grade 8 students, from two junior high school in Pekanbaru show the trend of attitudes toward science and their perceptions of the possibility of a science experiment brought it home. The result is shown in Figure 3.

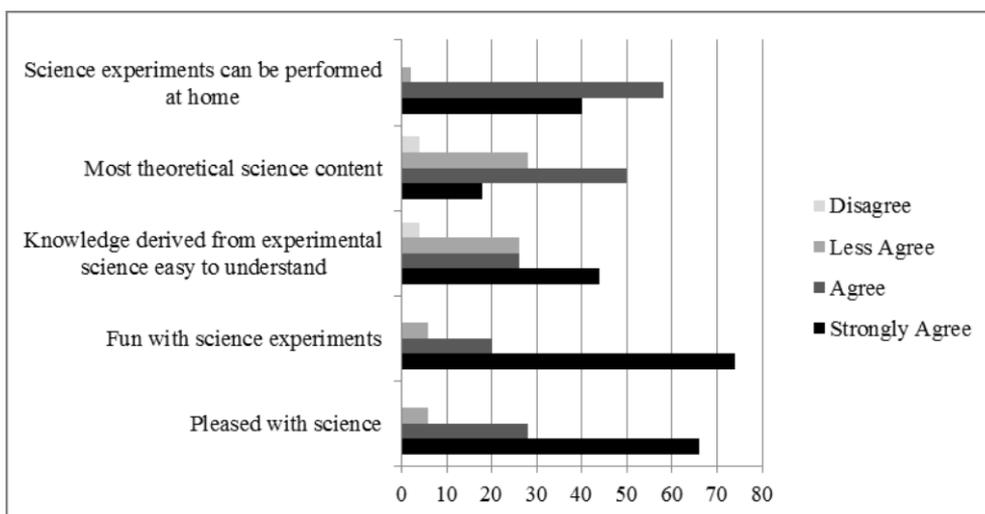


Figure 3 *Students' Attitudes towards Science Teaching*

Almost all students stated that science is a subject they like, even 66% of them expressed very pleased with science. Only 6% felt less pleased with science. Attitudes toward science experiments showed more than 90% of students turned out like science experiments and 70% of them really love science experiments. Only a small portion is less like science experiments. Meanwhile, most of the students stated that the concept of science or knowledge they acquired through scientific experiments give effect to such knowledge can be understood well and stick firmly in the cognitive structure of students. Around 70% of students stated that scientific knowledge acquired from the results of experimental and is not

effective for them. They are more pleased when scientific knowledge is explained by teacher lecture method only.

Almost 70% of the students stated that the content of science education in general theoretical. This attitude is very desirable when associated with science teachers hardly teach science using experimental methods just give lectures. This situation will affect the students that the content of science education in general theoretical.

Because of its rarity and even science experiments conducted in school never to various reasons outlined above, the researchers also want to know how the students' attitudes on science experiments performed on their home. It turned out almost all students agree and strongly agree that they can do science experiments at home or outside of school.

Some of the reasons experiment performed by students at home

In relation to student attitudes that science experiments can be done at home as described by Figure 3, where almost all students felt that agree and strongly agree on science experiments done at home, then ask a few more A survey about their reasons so. Survey result shows that at least there are 6 players that reason science experiments they can do at home, as shown by Figure 4.

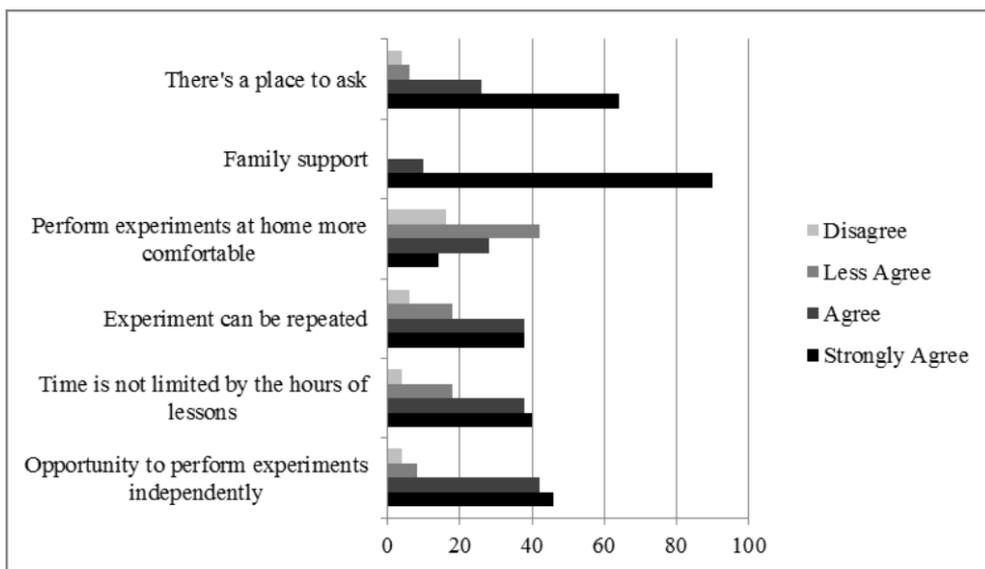


Figure 4 *Some of the Reasons Experiment Performed by Students At Home*

Figure 4 shows that almost all participants stated that when a science experiment brought it home, then there is a chance for them to try out their own science experiments that are assigned to them. This view is due to the lack of participation of all the students in the experiment in school over the years, especially rare

experimental methods implemented by teachers in the teaching of science in schools. Dominance of a few students in the cause of the other students had the opportunity to do a lot of research. Another reason is the desire to be more independent and have a sense of pride on the work itself.

In terms of time, around 80% of the participants felt that the home experiment, they no longer worry about a time limit school hours. They do not have to worry about the turn of the hour lesson, while they have not completed the experiment. When experiment which they run the in home yet to finished, they can extend back at the other the time. In addition, almost 75% of participants also felt that the experiments carried out at home can be repeated at the time they want. According to Abraham and Millar (2008), there is also evidence that students find practical work relatively useful and enjoyable as compared with other science teaching and learning activities.

Unlike the three views described above, more participants gave a negative response to a statement that at home more comfortable to experiment. Approximately 42% of participants agree on the view that is more comfortable to perform experiments at home and 16% felt strongly disagree. The remaining 42% of the participants expressed their agreement and strongly agree. A study done by Turner and Parisi (2008), found that through home experiment kits, students can arrange a time and be able to work in a comfortable atmosphere they desire without the pressures.

Opinion of the participants that the experiment at home will get family support is very extreme. There are 90% of the participants expressed very confident and only 10% of participants feel confident about they will get a family supported in performing science experiments at home. Van Voorhis (2011) said that all parents, regardless of formal education, should be able to participate in the student-family interaction. He also said that the family partner serves as an assistant, never the teacher.

Participants also believe that when they perform science experiments at home there are obstacles, they will have many places to ask. It is seen from the results of the survey indicate that 90% of participants agree and strongly agree will matter. They can ask parents, relatives, friends, and find information on a variety of sources, even though according to Van Voorhis (2011), not all activities should ask students to interview a family partner. Students might like to conduct different interactions such as a game, demonstration, or experiment, or collect reactions, memories, or ideas.

Conclusion

In general, in the interval of 5 years, most of the science teachers tend to rarely perform science experiments, some do not ever perform science experiments and only a fraction of those states regularly carry out scientific experiments in school. Cause rare or never even science teachers undertake experiments in science lessons include: limited experimental time in hours in school, difficulty managing the class

when the experiment progresses, the perception of science teachers that the material compact, laboratory partnerships between the many parallel class, unskilled teachers managing student experiments, lack of equipment and materials in the laboratory, and no energy laboratory assistant who can help provide and update equipment and material experiments.

Revenue survey experiment execution frequency by junior high school science teacher in Pekanbaru on physics lesson on the topic of light show that all kinds of experiments to acquire the concepts and apply the concept of light and optics rare and never implemented by science teachers, although only a small part that always execute. Rarely or never carried out experiments in science class would lead to students almost never exercise their science skills. When the research has not been done then the scientific attitude of students will not be formed. In fact, science process skills and scientific attitudes are important products in the teaching and learning of science.

Meanwhile, students have positive attitudes towards science and science experiments although they rarely realize that they are doing science experiments in school laboratories. Because like a science experiment, and realized that the experiment is rarely implemented in school, so the students felt that they could do experiments at home. There are several reasons that according to the students that the experiment can be carried back to the house: they can try it by themselves, not constrained by the short hours of lesson, can be repeated, getting support from family and provide place to ask. Solomon (2003) pointed out that the equipment used by students for science activities at home are simple items readily available at home. According to him, to understand science at home, everything that came out of the house can be used and when these things have been used wisely, it can use other items that are available at home.

Survey result described above, as a platform for researchers to develop strategies take home experiment more. Although not all experiments will be carried home by students, but at least some important experiments with simple equipment and materials readily available and can be brought back home. Because the primary purpose of the study is a home experiment to practice science process skills and scientific attitude, then in performing experiments, students must follow the rules of scientific work or scientific inquiry. For this reason, the implementations of the experiment, the students are guided by student worksheets. In the early stages, student worksheets will be a full-guided inquiry. When students are trained exercise levels of scientific inquiry, the scaffolding in experimental tasks assigned teacher should be reduced so that students become more independent and more creative.

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CHAPTER 14

Factors Hindering Students' Participation in Co-Curricular Activities in Malaysia

**Mohd Taib Harun
Norlena Salamuddin
Nur Asmara Diana Abdullah**

Introduction

Co-curricular activities are a platform that can strike a balance between academic achievement and personal skills development in students at school. Co-curricular activities are incarnations of the characteristics of knowledge and the value contained in the curriculum. What is nurtured not only emphasizes a balance of knowledge of the characteristics of spiritual and humanitarian values, but also the balance between the formal features of the academic curriculum with informal characteristics through extra-curricular activities.

Co-curricular education is not a concept that is isolated from the school curriculum. It is an extension of what learning activities are done in the classroom. Knowledge gained from academic activities can be integrated with practical activities while under the framework in the form of extra-curricular lives.

Co-curricular activities may be conducted both inside and outside the classroom based on the type of activity. With the assumption that students do not have specific experience in the classroom, then the co-curricular activities can provide a wide range of knowledge and experience to mental development, interests, talents, physical, spiritual and aesthetic values formation, and social outlook.

Generally co-curricular activities are activities and learning experiences that are planned and guided by an educational institution in order to achieve a particular purpose. Teaching and learning process in more extra-curricular activities carried out indirectly. Hidden activities such as values, talents, roles, and social leadership are applied. This activity is also known as the hidden curriculum.

The Cabinet Committee Report (1979) has stated that all pupils should be encouraged to take a more active part in extra-curricular activities. Each student

must participate in a body in uniform, a sport or game and a school club or association.

Importance of Co-curricular Activities

Co-curricular activities are part of the school curriculum and each student should participate. According to Abdullah (2007), co-curricular activities is not only an additional activity, but is an urgent need to better know themselves, the ability to measure yourself and improve weaknesses. Involvement in extra-curricular activities also teaches us to be more disciplined and responsible.

Apart from formal education, developments through co-curricular activities are also important, especially at primary level. Through active participation in various extra-curricular activities, pupils will be reinforced the moral values apart from enhancing the skills and confidence (Hishamuddin 2008). In addition, active student participation in extra-curricular activities after school hours can reduce unhealthy social issues.

Co-curricular activities had a strong influence in developing the capabilities and personality traits. One way to hone and achieve the highest level, as the lessons of past shows, is leaving students a while to see the outside world from different angles and compound mixing of various backgrounds of life (Elia 2004).

In an interview with New Strait Times journalist, Minister of Education, Malaysia Datuk Hishamuddin Tun Hussein (2007 in Chok), said that participation in uniformed units can cultivate team spirit, physical and mental endurance, patriotism, discipline and other skills. Active involvement in the field of sports can strengthen the physical and mental health. In addition, extra-curricular activities also promote unity among students.

No doubt co-curricular activities are so significant for overall characters development of students, but how many percent of students' participation in co-curricular activities at present? In 2004, it was found that students' participation in co-curricular activities had not reached its target, with only 56 percent of secondary school pupils took part in the uniformed units. To determine the causes of this problem, several workshops were held and have found weaknesses in the policy statement, budget, facilities and attitudes of parents.

It is the fact that students' participation in extra-curricular activities are still low. What are exactly the causes of this phenomenon? In this paper, a survey was conducted to identify the factors that hinder students from engaging in extra-curricular activities. Many students do not consider the importance of extra-curricular activities because they are not being assessed as other academic disciplines. Whilst extra-curricular contribute to education is recognized, the concepts are still poorly understood and many thought that extra-curricular activities as just a support system to the formal curriculum.

The factors that hinder student participation in extra-curricular activities

Management factors

Teachers play an important role in the management of extra-curricular activities. Interest and leadership styles are important to develop a curriculum unit that would be of interest to participate (Alan 2002). The implementation of the curriculum in schools that are not encouraged or not getting full support from various parties, including the teacher is one of the less interested students to participate in extra-curricular activities. Teachers are also often found to lack the knowledge and skills in the areas of curriculum set by the school. There are also among the students who do not participate in the activities as boring teachers, teachers who are not creative and do not plan fun activities or activities every time meetings. There were also students who complained about the lack of teachers in extra-curricular activities carried out.

Exam-oriented education system

Nowadays, students are too concerned with the examination to the extent that extra-curricular activities are also part of the learning does not get attention. They do not want to participate in activities co-curriculum. According to Abdullah (2007), many of our youth today completed their studies with excellent results. However, they lagged behind the work. This is due to lack of their involvement in extra-curricular activities that lead to their lack of skill in the art of leadership, character work and communicate.

Pupils who are too academic in nature is more concerned with tuition classes, usually held in the evening. Tuition class time will usually coincide with the implementation of co-curricular activities. Thus, the students will certainly choose a tuition class that is seen to provide more benefits than extra-curricular activities.

Often the school itself was also found additional classes for her students, at the same time co-curricular activities carried out. In such cases, students cannot be blamed if they do not participate in the activities as it had to make choices that show benefits.

Lack of resources and facilities

In addition, there is also a factor of lack of resources and facilities available in schools. Mohd Suzli (1987 in Mohd Jaflus) in a research study found that schools with financial difficulties and inadequate scheduling system that is orderly and systematic. This necessarily will prevent proper operation of extra-curricular activities. When resources and inadequate infrastructure, the activity cannot be implemented optimally and thus will affect the involvement and student motivation (Alan 2002).

Many pupils are keen to participate in extra-curricular activities especially sports because there is no satisfaction due to the lack of sports facilities, sports equipment and so on. Sports equipment inadequate and incomplete block students'

participation. Some schools do not have the field for students to play or train for specific sports such as soccer, handball, hockey and netball. Most schools do not have access to courts such as basketball courts, volleyball, tennis, takraw and badminton. Lack of such infrastructure will affect student participation in school activities. Pupils will then turn out of school for other activities that can give pleasure and satisfaction to them.

Peer influence

When asked why they did not number of students participating in extra-curricular activities at school, many replied that they were influenced by peers. According to Roha (2008), k-teen ethics, the role and influence of peer groups for individual great. Typically, adolescents are more often occupied with peer group than other business. They prefer to follow your friends to the entertainment centres, cyber cafes or just hanging out at home a friend from attending extra-curricular activities in schools that are considered boring when compared to time spent with peers rounder. In addition, at this young age, the students want to find their own identity to engage their peers thought 'cool'. They also try to find accommodation and observe the opinions of others, other than wanting the freedom and confidence.

Culture of hanging out in shopping malls and entertainment centres will invite social problems that are not healthy. In early 2008, CAP has conducted a survey on cyber cafes and surprising results have been brought to the attention of the Ministry of Housing and Local Government and the Ministry. Among them, the admission of pupils of this school between the ages of 13-15 that the main purpose of their visit cyber cafes are addicted to playing video games such sexually *Nasty Anime Game, Hentai* and *The Sexy Empire*, all of which reflect the women without clothes.

Family factors

Many students have no support from parents who do not understand the importance of co-curricular activities. Their parents are less encouraging, and some even prevent their children to be active in extra-curricular activities. According to Director of Sports, Arts and Co-curriculum Ministry of Education, Jame Hide (2009 in Utusan Malaysia) co-curricular activities should be given appropriate priority in the national education system. Perceptions of parents who are too concerned with children's academic results need to be changed in line with the introduction of a new student assessment system in 2010. He said the school examination system changes are appropriate to the needs of students who require skills in various aspects.

Some students are forced to give ground to help parents at home or to help parents deal. There were also students who have to care for brothers at home in the evening and did not allow them to participate in extra-curricular activities at school.

Motivational factors

Nowadays, many students are often found to have no motivation to engage in activities planned by the school, even more extra-curricular activities. They noted that co-curricular activities boring and do not give any benefit them. Co-curricular activities are also said to remove the students. Among the reasons given students is too much work home, tired, sleepy, lazy, no 'mood', be back early, to sleep the evening, to watch television (TV series) and others. Clearly, the reasons given show students do not understand the essence of the spirit of co-curricular activities. This turn to the question of students' awareness about the importance of co-curricular activities. Students should be exposed to the importance of co-curricular activities for their future.

Other factors

Results from a conversation with a group of pupils from several schools in the area of Cheras, Kuala Lumpur is found that they provide a variety of reasons that may be realized or not realized by those responsible.

Transportation problems for students returning home after the activities as much. Students who ride school buses to return home if no car missed the bus after school hours because of the lack of public transport facilities. President of the Malay Teachers' Union of West Malaysia (KGGMB), Mohd Sabri Mohd Arsad (2009 in Utusan Malaysia) said co-curricular activities outside the official schedule to some extent inhibited the activities as there are no facilities for school pupils to attend again in the afternoon followed activity. Unstable weather such as rain in the evening is also a barrier to student participation in extra-curricular activities. In the event of rain, the students difficult to return home until very late and sometimes to the house. Some among girls and boys who do not like extra-curricular activities especially sports for fear of sun, heat and fear of black fear. There are some who say that too much sun will cause pimples.

Participation in extra-curricular activities such as uniformed units requires students to buy his uniform unit. Many students who give reason to buy clothes. There is no doubt that the cost of a set of uniform for a related co-curricular activity is relatively expensive, reaching RM100. Although school uniforms are given to students from 2010 but it is limited to parents of students who earn less than RM1000 per month, this provision may be too low.

A large number of students mentioned that they cannot participate in extra-curricular activities in the afternoon as they work. Issues among students working are not something new and it is not only interfere with the implementation of co-curricular activities but also interfere with the teaching and learning at school. Students who work are often sleepy in class because of fatigue. When asked why they have to work, the answer is to help ease the burden of parents. One student said that he had to work to help his mother pay the rent of RM500 per month. This situation is very depressing and may not be noticed by many people. Other factors that cause students not to participate in extra-curricular activities includes health

problems, there is no reward and not appreciated, not given the position, lack of outdoor activities like camping, do not like their adviser, no friends, tired, and no exciting activities except marching during each meeting.

Recommendations

Based on the factors that have been discussed, suggestions were made to the implementation of co-curricular activities in schools can be improved to attract student participation in extra-curricular activities.

Among its recommendations is, to provide training for teachers conducting short courses on curriculum management. Through these courses, teachers are expected to increase their knowledge and skills in extra-curricular interest. Teachers should also be exposed to the interest of overall development of the curriculum for pupils. By removal of this aspect is acknowledged teachers are expected to give more commitment and dedication to duty has been held accountable. Each teacher is responsible as a teacher advisor either to a club or association, sports and games as well as uniformed units. Teachers play a vital role in making the contribution of extra-curricular activities at school.

Parental perceptions of co-curricular activities also need to be changed. Deputy Higher Education Minister Datuk Idris Haron said (in The Star Online, 2008) many parents who are less aware of the benefits of children participating in extra-curricular activities and just to focus on the academic field. It was hope that parents motivate their children to focus and not to worry if their kids active in the co-curricular activities. He added that the role of teachers and the government are not enough to produce quality human capital and society if parents refuse to also serve in such efforts. Therefore, parents should be briefed by the school about the importance of co-curricular activities so that they also gave encouragement to the children to be active in extra-curricular activities. In addition, the school Parents and Teachers Association must give full cooperation and involvement to help solving the problems related to the management of the school curriculum.

Recognition should be given to students who have excelled in extra-curricular activities and mentoring teachers. In addition to fun activities, the students should be rewarded not only to attract but also retain their interest in co-curricular activities. Such extrinsic motivation is believed to increase the level of students' participation in extra-curricular activities. Recognition to the teachers also expected to fuel the spirit of the teachers to strive and succeed in the activities in achieving the award as the best unit in the school.

Malay Teachers' Union of West Malaysia (KGGMB) has suggested that the school curriculum should be reviewed and enhanced to be more systematic and consistent with the guidelines of the Education Development Master Plan (PIPP). Its president, Mohd Sabri Mohd Arsad, (in Straits Times, 2009) noted that the Ministry should review the student's curriculum structure to provide clear guidelines or modules to be used as a framework adopted throughout the country. He called on the ministry to provide expertise to improve the quality of unit

activity, especially as implemented in a cadet uniform police, fire and military assistance of external expertise to many of its members strong and disciplined.

The school also must ensure that adequate facilities are provided to complete the course of co-curricular activities. Every room in the school should be used to have co-curricular activities. Old and damaged equipment must be replaced to ensure the safety of students as well as to create excitement among the students. The school also should strive to create vibrant co-curricular activities. The atmosphere is lively and fun can raise students' interest to remain in school and participate in extra-curricular activities planned. Pupils will feel as if they were feasting and rejoicing together curricular units to another. The school also must diversify the number of extra-curricular activities at school. About 40 types of extra-curricular activities that can be provided by the school but most schools only provide about 20 more kinds of extra-curricular activities only. Diversify the number of extra-curricular activities will provide greater opportunities for the students to participate and get into the activities of their interest as well as the hidden talents among the students.

Conclusion

In fact, there are many factors that hinder student participation in extra-curricular activities. Based on the factors that have been expressed, the parties responsible should give serious consideration to address this phenomenon, starting from the ministries, departments, schools, parents and students themselves. Solution to the problem should be identified and implemented to ensure student participation in extra-curricular activities is enhanced. The goal of the National Education Policy is to create a united Malaysian nation pattern in harmony. This goal could be achieved if the younger generation now can be balanced and complete education. A balanced and complete education have always emphasized to both academic and extra-curricular aspects. Emphasis on education in the school curriculum should be enhanced in order to achieve our national education.

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CHAPTER 15

Teachers Competency in Chemistry Education

Jimmi Copriady

Introduction

Teachers' competency in teaching and learning is an important factor in determining the success of a teaching session. Their abilities and wisdom in handling learning activities will give a direct impact on students' active involvement in learning activities. Therefore, the development of teachers' competency involving the efforts of fostering positive attitudes (Awang et al. 2013) was a major agenda to strengthen the teaching profession and to ensure great development of the education quality in many countries around the world. In the Indonesian context, the government has set specific standards in determining the implementation of quality education in accordance with the education laws which related to education curriculum, competency of teachers, educational infrastructure, organization of learning activities and educational assessment. Everything is interconnected in assuring the standard of quality. To this regard, particular attention is given on the quality of science subjects in order to create a scientific-minded citizen.

Science subject is covering general science and pure Science of Biology, Physics and Chemistry subjects. Science subjects require practical training as well as theoretical studies. Therefore, to be competent, teachers need to be efficient in designing, planning and implementing the lesson. A part from that, teachers need to assess the practical training and laboratory experiment. The country needs more scientific-minded people to accomplish the national mission for Indonesia to be a developed nation. Therefore, students need to be nurtured to love science and to positively practice scientific culture. According to Kamisah, Zanaton and Lilia (2007) positive attitudes towards science and scientific activities will exist through constant monitoring of experiments and continuous assessment of practical activities. Hence, this study is to determine on how teachers use their competencies to carry out the teaching and learning process, as well as assessment of the chemistry experiments at the laboratory.

Science Education

Science education is the main agenda of the Indonesian Ministry of Education. It is part of the country's mission towards developing a scientific and progressive society. In accordance with the goals of the National Education System in providing quality education, hence it is the responsibility of teachers to have a comprehensive plan, to implement and evaluate every subject. In the context of globalization and industrial world today, knowledge and understanding of the scientific aspects can enhance Indonesians to be more competitive in the global arena.

Various efforts were made at the school level to increase students' interest and competency in science. Special attention is given particularly on teachers' efficiency in providing meaningful experiences for students while exploring the science subject. Widyatiningtyas (2010) admits that the process of learning science needs to focus on providing real experience for students to gain a greater understanding of the environment.

One of the ways to improve teachers' competency especially in chemistry is the teachers need to be well versed with the content of the Chemistry curriculum, skillful in using a variety of teaching methods and teaching aids, efficient in coordinating all the necessary equipment and ensure safety of students while conducting laboratory experiments.

Students are unable to conduct experiments and predict the outcome because they are not accustomed to the laboratory activities. During laboratory activities, students should be given the opportunity to ask questions, make hypotheses, experiments and deduce experimental results through observation, data processing and making inferences (McDermott et al. 1997).

The instruments and apparatus needed for an experiment should be ready before the actual lesson. Data, information or test results on students' performance will be taken as the basis for chemistry performance for future students (Popham 1998). Preparation involves pre perception of an activity to create interesting learning experiences that arouse students' interest for a successful learning process (Mulyati 1995).

In addition to preparing and conducting the learning process, assessment is the process of collecting data to determine the achievement of educational goals. Sudijono (1996) defines learning assessment as a process or an activity to get a feedback to determine a progression. This is in line with Djamarah (2006) which says that the function of evaluation or assessment is to provide feedback to the teacher in order to improve the learning process and implement remedial programs for unsuccessful students until they are able to improve their own performance.

According to Popham (1998), the capacity and efficiency of teachers in conducting the activity and learning process will have a positive impact on students learning orientation. Teachers are also required to provide authentic learning experiences and create active learning through active interaction with the subject matter. Therefore, teachers need be really competent in their subjects. For

chemistry subject, teacher's competency in creating and planning will greatly provide significant impact on the teaching process and will greatly influence students to change their behaviours.

Teaching Competency

Competency refers to the skills and personality of a teacher in handling the instructional process with the help of instructional methods, teaching aids and resource. According to Katane and Selvi (2006), competency is "a set of knowledge, skills and proficiency in creating a meaningful experience when organizing an activity".

As a professional, a teacher needs to plan and implement the learning process, evaluate the learning outcomes, provide guidance and training, conduct a research, develop and managing school programs and professional competency. (Competency Standard Of Novice Teachers Graduated From Chemistry Education Course SI 2004).

Therefore, the teachers must have professional educational ability. Competency in this study is referred to the four components of the Chemistry teachers competency: preparing and designing an experiment, hands-on practical or experiment plan, implement and evaluate a systematic and effective experiment. See the following figure.

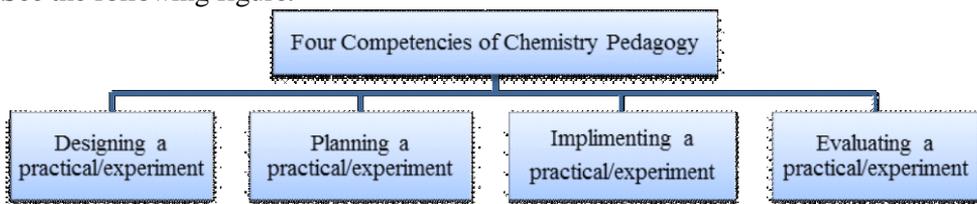


Figure 1 Four Competencies of Chemistry Pedagogy

Katane and Selvi (2006) put forward the definition of competency. It is defined as "a set of knowledge and skills needed to perform an activity". A teacher must have a professional educational competency to conduct the teaching and learning process. Science is knowledge about natural phenomena that involves research and discovery through hands-on practical and laboratory experiments which should be performed under teachers' guidance. Therefore, a competent and professional chemistry teacher will definitely understand on how to guide students in performing experiments and practical implementation (Widyatiningtyas 2010).

Truth in science can only be proven through practical or experiments. However, students' involvement was still low in conducting experiments and they are not effectively guided by the teacher. So they are not given their 100% interest and attention in the laboratory resulting poor outcomes and inability to obtain the actual result of the experiments (Kellough, 1996).

The study shows that teachers are still inefficient in handling laboratory equipment and could not manage a systematic and effective experiment. This might

be due to the fact that they fail to plan and the lesson is not organized and structured effectively (Wruheran et al. 2004).

Effective teaching occurs when teachers have the knowledge and personality. It is because the science concept is proven through observation and analysis of experiment in the science laboratory. Unfortunately, Chemistry teachers still have a low competency level in conducting practical or scientific experiments. There are mechanical and electrical risks in conducting chemistry experiments, it is also related to students' thinking process when conducting a research. Thus, in reality, teachers do not give the chance for students to think, in fact most teachers disregard students' thinking activities.

Based on the study conducted on high school (SMA) Chemistry teachers in Riau, 45% of Chemistry teachers do not evaluate the practical experiment objectively in accordance with the actual situation. This leads to inaccurate and invalid experiment results (Jimmi 2005). Consequently, incompetent teachers significantly influence students' level of interest in the subject.

According to Chang and Ledermen (1994), most students do not have general or specific ideas about the purpose of the inquiry activities in the laboratory and in many practical activities, they do not know what to do.

Truth in science can only be proven through practical activities, but the failure of teachers to prepare their learning materials, improper planning and inappropriate equipment will give negative implications on the implementation and evaluation of practical experiments. The lesson will be useless and will not have any impact on students' behavioral change (Kellough, 1996). Therefore, this study is to examine the relationship between teachers' competency of the Chemistry subjects as the input and the basis for teaching reflection and improvement.

A Case Study of Teacher Competencies

The purpose of this study is to determine the competency of Chemistry teachers in Riau Indonesia and the contribution on Chemistry practical and laboratory experiments. The aspects studied are in terms of designing, planning, implementation and evaluation of practical or chemistry experiments. The contribution is analyzed as a whole by showing the relationship among the four components studied. Contribution and the competency factors identified are expected to help in improving the quality and standards of teaching and learning Chemistry

This is a survey using questionnaires as the main instrument of the study. The questionnaire consists of four constructs related to preparing for practical or experiments which comprising of 24 items, practical planning involves 22 items, there are 27 items for practical implementation and 29 items for evaluation. Those items were adapted and reconstructed based on the instruments done by Sampson (2004), Muijs and Reynolds (2001) and Meehan et al. (2004).

The samples were randomly selected based on the sampling schedule presented by Krejcie and Morgan (1970). There are a total of 474 Chemistry

teachers in Riau province, Indonesia and thus, only 236 Chemistry teachers were selected from 11 high schools of the Indonesian Ministry of Education. A pilot study was conducted of the four constructs using Cronbach Alpha analysis, showed a high level between 0.81 to 0.91 which indicated that the questionnaire is suitable for actual study.

Competency in Designing the Chemistry Experiment/Practical

Teachers competency in designing a practical or chemistry experiment was tested and the finding shows Beta = .686, $t = 2617$, $\text{sig} = 0.00 < 0.05$, and $R^2 = .470$. This means that teachers' competency in designing is moderate, as it only contributes 47% to the planning of Chemistry practical. This situation also illustrates that Chemistry teachers are still unable to prepare and design a robust practical or experiment for the Chemistry lesson. Chemistry teachers should proficient on how to plan better steps. According to Erin and Alicia (2009) designing learning instructions, setting goals and structuring teaching steps are important, as well as determining the evaluation aspects to be used in the Q & A session, exercise, test papers and so on.

Table 1: Regression analysis of the designing/ preparing components for planning Chemistry laboratory experiment

	Model	B	Standar d Error	Beta	t	Sig	R ²	%
Practical planning	Constants	.533	.204		2.617	.009	.470	47%
	Preparation	.865	.060	.686	14.404	.000		
Practical assessment	Constants	1.190	.217		5.486	.000	.347	34.7%
	preparation	.712	.064	.589	11.144	.000		

The findings show that teachers competency in designing Chemistry practical activities for evaluation is Beta = .589, $t = 11144$, $\text{sig} = 0.00 < 0.05$, and $R^2 = .347$. This finding means that designing competency is only accounted for 34.7% of all the practical competency assessment. This illustrates that teachers' competency in designing practical activities is at the low level. Teacher's ability to design through a good plan and preparation of what to be done is very important because past research suggested that they have a positive impact on the effectiveness of practical training (Rhoda et al. 2011). This low level of competency should be taken seriously because scientific studies show that the effectiveness of practical science is depending on the ability of teachers to design the practice and plan the objectives (Abraham & Millar, 2008).

These findings describe that teachers' competency is average in designing Chemistry laboratory experiment but, the competency in designing for practical evaluation is low. This indicates that teachers do not emphasize on designing Chemistry laboratory practical or experiment. Teachers must be able to design and

develop experiments to perform better practical in teaching. Teachers need to have a complete detail of an experiment preparation covering all of the subject identities, competency standards, learning objectives, learning materials, time allocation, teaching methods, learning activities, assessments and learning resources. Implementation of exercises, practical programs and workshops for Chemistry teachers, were actually documented by the Education Department, Board of Education Quality Assurance (LPMP) and Development and Empowerment Center for Educators (P4TK) to help Science teachers in preparing and designing classroom instructions.

Competency in Planning for Chemistry Practical/Experiment

The results show that teachers competency in planning for Chemistry practice is at the moderate level (46.3%). Weakness in planning can affect the effectiveness of teaching and learning (Abraham & Millar 2008). Planning is essential in providing a good experience for students during the scientific experiment, therefore pre-lab planning of providing materials and equipment to be used for teaching and practical activities is very important. This is important to avoid delays and disruptions in the teaching and learning process. Normally, the preparation is done with the help of the laboratory technicians or assistants who have the background knowledge in the appropriate field. According to Mokhtar (2007) the laboratory is very complex, so it is better for the teachers to know the content, apparatus and equipment in the lab. According to Fathiah (2007), a Chemistry teacher should have a high level of proficiency in handling the equipment and installation of apparatus as they are parts of their job scope. If teachers have problems in managing the laboratory equipment, the teachers will also face problems in the teaching and assessing the experiments.

The findings of this study may be influenced by the lack of equipment, apparatus and materials in many laboratories. Although the initial setup is particularly important in preparing for an experiment or scientific practice, but the lack of materials and apparatus undermines the efforts to provide a good Chemistry practical or experiment. Pre-experiment preparation and planning will ensure a smooth process, however, without appropriate apparatus and materials the process will be useless. Furthermore, laboratory apparatus is constantly evolving with new technology being introduced all the times. Due to that, not all teachers are able to use and understand the manual, consequently they cannot use the apparatus effectively.

Table 2 Contribution of Planning Competency in Practical Implementation

		Model	B	standar d error	Beta	t	Sig.	R ²	%
Conducting a practical/experiment	1	Constant	1.856	.112		16.52	.00	.4	46.3
		preparation	.456	.032	.680	14.19	9	0	63
Practical evaluation	1	Constant	1.459	.168		8.699	.00	.4	41.4
		planning	.618	.048	.644	12.87	1	.00	0

This study also shows the contribution of competency in planning a practical evaluation, however the contribution is low at 41.4%. Laboratory management has certain effect on the evaluation process. This is because all aspects of the laboratory experiments and practices will be evaluated and tested during the evaluation process to assess the knowledge, ability and thinking ability of the students. Hence, incomplete experimental apparatus will obviously has negative influence in the effectiveness of its assessment. Competent Chemistry teachers are able to clearly explain the procedure for the students to conduct the real experiments. Bryan (2003) found that teachers who are competent in ensuring students to conduct the necessary experiment steps without mistakes will make the practical effective.

It can be deduced that teachers competency is low in preparing the apparatus and materials and incomplete infrastructure for the practical needs. However, the high Schools (SMA) in Riau Province still need to carry out effective Chemistry practical and experiment to implement the curriculum. Therefore it is suggested that experienced teachers can train and teach the novice teachers on the important skills, especially in preparing the apparatus and materials needed for practical activities.

Competency in Implementing Chemistry Practical

The results show that the competency for practical implementation as predictor provides Beta = .700, t = 14 986, sig = 0:00 <0.05, R² = .490 and showing competency contribution of 49% towards the implementation of practical evaluation. This suggests that the competency to execute a practical experiment is at the moderate level. However, the results show improvement in terms of Chemistry practical evaluation competency (55.3%) on the practical implementation. This finding clearly indicates that proper preparation and systematic pre-lab planning in managing the laboratory equipment have a very positive impact on the practical implementation of the process itself. According to Weintin (1996) good execution will produce good results in the evaluation process. This opinion is proven by the findings, namely the implementation of good Chemistry teaching will produce a good result and outcomes. Whereas, Nurzatulshima, (2008) has listed several elements of physical environment as

important in providing effective learning experiences thereby provide positive impact on the evaluation process. In terms of teaching pedagogy, the lesson will be fun and interesting if the teachers have the ability to attract students through organized and structured experiments.

Table 3 Contribution of Implementation Competency towards Practical Assessment

Model		B	Standar d error	Beta	t	Sig.	R ²	%
Practical implemmentation	Constant	.226	.225		1.002	.317	.490	49
	Practical execution	.977	.065	.700	14.986	.000		
Practical assessment	Constant	1.338	.128		10.489	.000	.553	55.3
	Practical Design	.348	.051	.412	6.843	.000		
	Practical Preparation	.267	.040	.398	6.613	.000		

The findings of this study reinforce the principles of practical effectiveness which covering the aspects of planned and systematic operation (Abraham & Millar 2008). Practical or scientific experiment is a process of inquiry research, observation and analysing experimental results. The results show that those three activities in practical or science experiment require the teacher to walk around the groups of students and provide information about the materials and methods to be used in conducting the experiment in the laboratory. In addition, students should also be able to perform Chemistry experiments consistently and continuously using a Student Activity Sheet (LKS).

The findings of this study may also be associated with teachers' attitudes towards teaching and learning (Awang et al. 2013). Effective practical implementation is determined by teachers' ability in guiding students to perform the experiment and students' ability to translate scientific knowledge in practical until there is a balance between the teacher as mentor and students as the learning subjects. According to Hofstein and Lunetta (2003), inquiry or question and answer session in the laboratory is not effective to deliver scientific knowledge and to develop students' scientific skills.

McLeod et al. (2003) stated that early planning to manage the apparatus and materials is very important. It is good if the teacher has a list of things needed to be given to a group of students. Each group needs to get the right apparatus and materials according to the practical content. This study also shows that self-management is one of teachers' shortcomings. Hardin (2004) and Nurzatulshima (2008) have listed five areas that need to be managed well by teachers to improve their lesson. The areas are the management of material and space, setting of rules and regulations, commitments and students' responsibility, discipline and clear instructions.

Competency of Evaluating Chemistry Practical

The results show the contribution of designing and planning competencies towards practical implementation (53.7%) are higher than the practical evaluation (45.6%). This shows that there is a significant relevance among determination of the subject matter, purpose and learning experiences. Apart from that, there is also a significant relation with teacher preparation of laboratory equipment and documentation through practical forms and worksheets. Execution of authentic learning experience through pedagogical skills will increase the validity of practical evaluation to assess students' behavior. Indeed, teachers' knowledge in identifying the purpose and goals of learning, teaching and restructuring pre-lab setup will ensure the evaluation process of practical experiment can be done objectively and will be easily understood by students.

Table 4 Overall Contributions of Teachers' Competencies towards Practical Evaluation

Model		B	standar d error	Beta	t	Sig.	R ²	%
Practical execution	Constant	.142	.226		.630	.529	.537	53.7 %
	Practical design	.124	.081	.103	1.526	.129		
	Practical planning	.272	.064	.283	4.237	.000		
	Practical implementat ion	.610	.096	.426	6.382	.000		
Practical evaluation	Constant	.958	.201		4.760	.000	.456	45.6 %
	Practical design	.337	.080	.278	4.190	.000		
	Practical preparation	.435	.064	.453	6.824	.000		

The findings of this study indicate that not all teachers are able to provide detail documents of an evaluation. This is an indicator for the teacher training system to formulate a rapid strategic planning to enhance the learning process in order to improve the quality of Chemistry practical. There are standard documenting procedures related to the practical implementation such as the attendance list, student evaluation forms and Student Activity Worksheets (SAW). However, the results show that teachers are incapable to document and keep a good record. According to Mohammad (2007), documenting and keeping a record of documents are very important. Another things that need to be documented are a list of equipment, materials and apparatus needed to be used for every practical and scientific experiments. Other than that, it is important to have practical procedures for a systematic practice based on a specified time frame.

Huey and Lederman (1994) emphasize the need for a clear explanation and instructions before performing an activity. If the teacher fails in explaining the content, students will not be able to understand of what to do and resulting failure in the practical implementation and jeopardizing safety in the laboratory. The teacher needs to be well-versed and knowledgeable of the experiment before the students can conduct their own experiments according to the procedure themselves. Studies by Hamman et al. (2000) and Rosinah (2005) found that most science classroom approaches are teacher-centered. Students are not engage in inquiry activity and the implementation of this approach has not even reached the satisfactory level. This shows that teachers' instructions and lesson control need to be delivered clearly to ensure the experiment or practical training will be carried out smoothly.

Conclusion

In overall, teachers' competencies in planning, designing, implementing and evaluating are at the moderate level. This has a significant impact on the current system and the process of teacher training. A strategic and comprehensive step needs to be done for the benefits of teachers and for them to be able to handle the Chemistry practical or experiments effectively. The rapid development of global science should be followed closely by the government plans to improve the quality of Chemistry teachers. Recognizing the resource constraints in the provision of equipment and chemical apparatus, a combine effort of the economic development elements for the development of science in schools needs to be done. Due to limitations of the state resources, teachers need to use their own creativity and initiative in dealing with practical Chemistry. Teachers should take the initiative to cleverly use the existing resources in the school environment and surrounding to make Chemistry practical and experiments authentic with human life. Thus, teachers can also reduce the need to rely on advanced equipment and at the same time are still able to attract students. Teachers have a greater role in the scientific practice. An effective teacher should be able to give a step by step instruction especially for inactive students, who just wait for the teacher to guide them in performing the experiment or chemistry practical. Teachers are the best source of knowledge and facilitators to facilitate the performance of each group of students. The implication of this study is most teachers fail in facilitating the students especially in handling a large group of students.

Teacher competency is the pillar for practical implementation of a safe and effective science experiment. Students' positive attitude towards Chemistry and their motivation to learn and provide appropriate feedback to the learning activities is significantly depending on how teachers influenced them. On the other hand, teachers need to have a high capability and competencies in developing laboratory instructions, lesson planning, preparing and documenting laboratory equipment, implementing and translating the process in the form of continuous assessment throughout the teaching practice in the laboratory. A concerted effort is urgently

needed to develop the competencies, getting resources and practical equipment for the objective of realizing a science literate society.

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CHAPTER 16

Cue Speech and Hearing Impairment Students

Mohd Hanafi Mohd Yasin
Safani Bari
Rabaishah Azirun
Nur Ain Mat Hassan

Introduction

Hearing problems experienced by children can result in them facing some other problems. Among them will suffer from the inability to speak and a poor command of the language Hallahan and Kauffman 1994. 1997. Reed also said that children with hearing problems indicate poor performance in the subjects that involve the use of language that stems from their inability to hear and speak. Often communication problems exist among students with hearing problems as they learn to use the same syllabus as a typical student. They are also major examinations like UPSR, PMR and SPM. However, they are often left out, especially in terms of learning due to the inability to hear faced. Heward and Orlansky 1992 had stated that numerous studies have demonstrated academic achievement of students with hearing problems are far more downs than the typical student. This is because deaf students have difficulty learning and also the difficulty in understanding the meaning of a word. These children need teaching and learning methods and communication that is different from typical children. The majority of children with hearing problems using sign language when communicating, however there are also some children who communicate using speech cue.

In our country, children with hearing impairment and their family, learn Cued Speech at A Cued Speech Center, managed by Children's Welfare Council of Malaysia (MKKM) Kuala Lumpur. According to the history of special education Cued Speech was invented in 1967 by Dr. R. Orin Cornett of Gallaudet University, Washington USA. It is designed to help students with hearing problems in the country to read lips in English. Cued Speech is trying to give opportunities to students with hearing problems to survive and succeed as ordinary people. Che Omar Hasuria 2009 stated speech cue instead of sign language as BIM and KTBM

but it is a method that uses to help speech reading with hand gestures indicating speech sounds spoken.

Cue speech communication is hand movements to distinguish these sounds with the movements of the lips. For example, the sound of the letters /p/, /b/ and /m/, which are the distinctive sound features such as vowels and nasal sound. The hands will move close to the face of the speaker as a way to identify the distinctive sounds of phonemes. The cues contains four hand positions to differentiate 11 English vowels and eight hand shapes to distinguish consonant with the addition of 25 movements for some diphthongs.

Teaching the language to students with hearing problems is different from typical students. This can be seen in terms of approaches, methods and strategies used in the teaching process. This situation has arisen due to the lack of sustained efforts by their hearing. Spoken language is a communication tool that includes a medium for expressing thoughts and ideas. Language is also the verses that are not spelled out the amount and variety of language teaching approach was implemented in the education system for pupils with hearing problems Tan Chin Guan (1981).

Students with hearing problems often use hand signals as well as finger spelling to communicate. This is due to the fact that they cannot communicate verbally with others. This situation has caused difficulty to interact with the general public. Not many of the general public can understand and communicate using sign language or speech cue. This may happen because they do not learn sign language or speech cue.

Learning Theory

Behaviorism theory also known as behavioral theory is a theory that focuses on the behavioral aspects that can be observed. We cannot see the thoughts, but we can make an observation of treatment is shown. The theory was pioneered by Ivan Pavlov through classical conditioning theory and BF Skinner through operant conditioning theory. In this theory, the teacher must analyze students' behavior and change undesirable behaviors during teaching and learning. The desired behavior or the behavior of the target can be achieved by applying positive reinforcement or negative reinforcement whenever the behavior shown.

Then, cognitive theory sees the growth experienced by the brain of the thought and can be seen through changes in behavior and conversation. This theory was introduced by Jean Piaget and according to his cognitive development of children, learning occurs regularly and teachers need to understand the differences between students in terms of cognitive.

Jean Piaget was a psychologist who contributed greatly to the understanding of how children learn. From studies and observations, Piaget found that children's cognitive development change through four different levels, namely sensory motor 0-2 years, pre-operative 2-7 years, concrete operations 7-11 years and 11 years of formal operation today. However, age is not fixed as it is in accordance with the

student's ability to apply concepts on their own. Piaget, we can see it has to do with the concept of constructivism.

Constructivism is a theory about knowledge and learning that attract, motivate and facilitate student understanding. In addition, constructivism suggests that children actively construct knowledge based on existing knowledge of children's tersebut. In constructivist approach, learning environment child-centered are important while the teacher acts as a facilitator. Children are also encouraged to submit ideas and theory to solve problems. Based learning culture based on principles of constructivist learning brings different cultures of learning that takes place during this time.

Humanistic theories focus more on the question of development of the individual as a whole. The basic model is the belief of every human tendency to achieve their self-esteem. Personal and social factors are also important in determining the development of children with special needs. Learning theory is a combination of cognitive and social environment. This theory has been introduced by Vygotsky to see the importance of the social environment to the development of children. Vygotsky said that the development of children depends on a child's interaction with the people around him. It was also true that the environment has become an instrument of service of a culture that helped them build a view of the surroundings. This theory emphasizes that the development of mental processes such as memory, attention and reasoning involves learning to use the findings of society such as language, mathematics and so on system. Moreover, this theory also emphasizes how a child's development occurs with the guidance of a more experienced person in a particular area or field.

Vygotsky has introduced a number of concepts related to learning. Among them is the Zone of Proximal Development and scaffolding. Vygotsky believed that the development of a child would be better and grow with the interaction with other people. Under this concept, he sees whether someone the child can do without help older adults and whether the child can do something with the instructions given by an adult or in collaboration with their peers. It can be seen that these zones actually emphasize social interaction that will facilitate the development of children. He also introduced the concept of scaffolding. Scaffolding was associated with a zone of proximal development. Scaffolding can be viewed as a supporting framework. Raymond (2000) said scaffolding to which Vygotsky is related to the role of teachers and others in supporting student development. Use scaffolding actually is temporary. When a child is on the rise given the assistance scaffolding will be reduced until the child has mastered the lessons without help from others.

Student Achievement

Using Speech Hearing impaired students more focused on academic achievement, the ability to interact and curriculum. Math teacher perceptions on pupils' academic abilities impaired in terms of understanding this passage is like

... They quickly forget how to find solution in paper 2 on calculation. Like today, ok they got it, but need longer time about an hour to do the calculation. I explained for half an hour for them to understand. After that ok. Given them exercises and remind them to do it... but tomorrow when were asked, they said they forgot to do it.

However teachers Malaysia also stated that the achievement of those who use speech cues in high school is better than the students who use sign language. Math teacher also expressed the same opinion. They said the best Cued Speech to be able to help students easily understand a lesson. It is expressed as the following quote,

.. I myself joined the association of deaf children Kuala Lumpur who use sign language. Far different with our kids, but they are easy to feel inferior because our children are progressing, but they still below.

While the administrators' perceptions of students who use Cued speech is the same as a typical student.

... Looking at performance by subject, they have no problem mastering Mathematics, Bahasa Malaysia or English. But the real weakness is the writing or makes sentences.

The disadvantage of this paragraph makes clear those students with hearing problems or they lack new grammar of language acquisition less. However, he said

I think compared to the only deaf students using sign language, I think they are a little bit further ahead in terms of academic achievement. Not on par with normal children, but I think more to the forefront than those who only using sign language.

In terms of student achievement in UPSR, he said that so far, no student gets 5A but there are students using Cued Speech that get an A in a variety of subjects.

...Thank God, He appeared to be many changes... I Would like to see him again. It used to be not so great. Now she's a right, he's good. He already knows many groceries items. Sometimes I need to cue, that we talk like normal because he's got it. But with some help from modification of tool..

Parents also gave a positive response when he said that their children have changed over the years.

In addition to academics, co-curricular aspect of students also tested positive. They are active in taekwondo, badminton, ping pong and runoff and computer clubs. Students at the center are encouraged to participate and be active in extra-curricular. On Wednesdays, the teacher entered the classroom basic Islam and the teaching staff of Jawi.

We encourage them to be active and confident. We have azan competition, storytelling, we encouraged them to get involve in acting drama. We do not want him to feel inferior. We are often invited to perform in several functions, for example in the celebration of Eid every year.

Factors Affecting Dissemination

In terms of ability to interact and socialize with friends and teachers, Cued Speech indicates good communication. In other cases, such as singing performances in functions, they showed the ability to communicate well. Some students who are using Cued Speech can be found talking like a typical student. Students are also likely to interact and socialize with their classmates. In fact there were times when students worked together to practice singing in addition to collaborate and to provide assistance during an interview. Students also viewed as able to listen to instructions well as a teacher of teachers asked them to perform. Students begin to sing when the teacher asked them to sing and abide by the directions given by the teacher. Similarly, when the teacher asked the students to take wudu' the students can interact with the teacher noted that where there is two-way communication.

The students stated through interviews that they have friends in other schools. Some of them have many typical friends because they always play football together in the evening in the area near the house. Perception socialization of parents about their child's development when interacting with the people is as follows: The parents first told that her son has friends at home a total of 2 to 3 people and they are typical of children. The parents also said that their child is not easy, friendly with strangers. According to him,

He cannot, even though he used to be friendly. People who got close to him, he would be friendly.

However, there are some students with hearing problems who likes to give orders to other siblings at home. This shows the close relationship between the deaf students with their siblings. Some parents said the child he had many friends.

For me, there were many middle-aged he close to about fifteen people.

He did not limit his association because he often plays as typical children of the same age with him. They also said

So far, if given a question, he'll give you the answer we want. So with his friends he or she can play with normal children.

Bahasa Malaysia teachers in the Cued Speech states that students communicate in the Cued Speech, and they knew how to find their own group. While the math teacher said the students also were afraid to ask him so the students would ask other students whether they understand it or not. According to him, the students know how to teach weak students and help them to understand better when their friends explain it to them. Music teachers said, the Cued Speech students are very friendly because they believe they can speak.

Academic Achievement

Student achievement in the academic achievement of students with hearing problems who use speech impaired cue similar to a typical student. There are students who use speech cues got an A in a variety of subjects. However, there are also some of those who use speech cues have low grades. This achievement can be said about the same as students who use sign language. Weaknesses that can be identified are in making the verses or writing. This statement was also supported by the findings of a study by Abdullah in 2001 which found that deaf students write essays and their hard ground in processing sentences.

Deaf Student Socialization

Some findings say that deaf students using Cued Speech is easy to interact with the people around them. Through questions about respondents socialization with their peers found that 4 out of 6 respondents have friends at home. This situation shows that deaf students can use cue to socialize and make friends with typical. This assertion is supported by Ruijs Peetsma (2009) which stated that all students whether special needs students and students normally have the same desire to be friends with their peer.

Music teacher at Cued Speech Center stated that students are always ahead of deaf students who use sign language. He stated that the sign language students feel inferior when in the community. This situation is recognized by Stinson and Yu (1999) which stated that the hearing impaired students as if afraid to interact with typical students because they didn't know how to communicate. This assertion is supported by Abdullah (2001) that the use of different languages between deaf students and typical students causes them to have difficulty communicating with each other and communicate with the public.

Interviews with some of the parents also show that when students can acquire the language, students can interact with the people around him. The findings showed that there were students who were marginalized when they didn't speak to interact with peers in kindergarten. Students who cannot communicate with those around him may feel inferior. When students are not active in the classroom, it's impossible for students to be active outside the classroom. This

assertion is supported by Lewis Doorlag (2006) which stated that a student might feel inferior and will not actively participate in learning activities.

Conclusion

Survey shows that language plays an important role in the education of hearing impaired students. Their achievements in academics also declined due to the little development in their language. More research on language achievement of students with hearing problems is expected to provide an understanding and awareness of the parties involved in helping to raise the achievement of students with special needs hearing in Malaysia. The study is also expected to help the various parties involved with deaf students' education system in addition to being a pioneer of the next studies, especially in terms of Cued Speech.

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CHAPTER 17

Learning Model to Improve Motivation in Learning Science

Sri Erlinda

Introduction

Education is a shared responsibility between families, communities and governments. Efforts to educate the nation and improve the quality of well-being is the objective of education. Gaining to provide quality of education is a challenge for any professional educator. In this case the college is one of the educational institutions that can bridge the learners' progress towards the achievement of better results.

The process of learning in college is still dominated by the lecture method, in which students are always in the position as a lecturer lecture observer. So that the teacher is still learning center. Though the quality and success of learning is strongly influenced by the ability and accuracy of lecturers in selecting and using learning method possible. Moreover, students of the Faculty of Teacher Training and Education is prepared to become professional educators. This is consistent with the vision of FKIP UNRI as a center of education, research, and training excel in the field of professional education in the area of western Indonesia in 2020.

So if this continues, they might be able to teach students to be active later in the study, while they themselves are less patterned with learning actively involves students. Has an urgent need for improvements made in the process of active learning where lecturers pattern became active in student learning patterns PAIKEM. For that one model of learning that can be used to increase student activity and motivation to learn is by using a model of learning Seeking Couples (Make a Match).

In the learning process of the State Science impressed that low student motivation. It can be seen from the number of students who asked only 10% (4-5 people out of 57) and even then it's all his. When given a question, too. In addition, students seem less enthusiastic about learning as much as 60% or 32 people.

Given that the motivation of students who are low on the State Science subjects, presumably because this is a model of learning during lectures, discussions and question and answer. For that one model of learning that can be

used to increase the motivation to learn is by using a model of learning Seeking Couples (Make a Match). Learning model Seeking Couples (Make a Match) developed by Lorna Curran (1994) in Lie, 2008. One advantage of this technique is that students find a partner while learning about a concept or topic in a fun atmosphere. This technique can be used in all subjects and for all ages of students.

Step-by-step learning model Couples Seeking: (1) The teacher prepares a card that contains some of the concepts or topics that may be suitable for review sessions (explaining the test or exam preparation), (2) Each student gets a single card; (3) Each student looking for a partner who has a card that matches the card. For example, the card holder will be paired with reading LIMA PERU card holders, and (5) Students are also joined by two or three other students who hold a suitable card. For example, 3 + 9 card holders will form groups with card holders 3 x 4 and 6 x 2.

While the motivation to learn by Dimiyati (2002) is a mental strength that encourages learning. On students' learning motivation can be weakened. Of motivation or lack of motivation to learn will undermine learning. Furthermore the quality of learning outcomes will be low, therefore the motivation to learn on students' needs to be strengthened continuously. So that students have a strong motivation to learn, to create an atmosphere encouraging learning.

Furthermore Sardiman (2004) states that motivation is a psychological factor that is non-intellectual and distinctive role that fosters passion, feeling happy and enthusiasm in learning which in turn can enhance the enjoyment of learning or learning outcomes. Motivation is a psychological condition that fosters students' passion, happy and enthusiasm in learning. Therefore, the use of learning models in capturing the couple believe can be used as efforts to solve the problem of low student motivation. To research problems in this learning improvement is whether the use of learning model Seeking Couples can increase motivation to learn science at the State University of Guidance and Counseling Program PPKn Riau. While the purpose of this research is to improve, learn and describe student learning motivation in PPKn FKIP UNRI Prodi on course after the State Science uses the model of learning Seeking Couples.

The research was conducted on students of Pancasila and Citizenship Education (CIVICS) FKIP UNRI second half, amounting to 57 people consisting of 16 men and 41 women. Activities of faculty and students in the use of this learning model will be assessed by the observer. While the timing of this study for 5 months with 2 cycles, with each cycle of 2 meetings. In this study there are two variables, namely the use of the model as a variable learning Seeking Couples actions and variables problem is motivation.

Action Plan

Cycle 1

- Planning Phase consists of preparing syllabus and SAP, scenario learning, teaching materials, preparing the observation sheet and determine the observer
- Implementation Phase consists of giving apperception, deliver learning objectives, explaining the steps of learning, teaching core activities: (a) presenting the material in general, (b) set up some cards that contain questions or answers; (c) distributing cards at random to students; (d) ask students to think about the answer or in the hold of the card; (d) ask the students to find a partner who has a card that matches the card (question / answer); (e) record the names of students who got a pair before the specified time (given point if true), (f) with a partner to ask students to read the questions and answers; (g) asking another student to respond or answer activity KBM cover: (a) make inferences with students; (b) reward and (c) provide direction or assignment
- Phase Observation consists of (a) an observer to observe the activities of faculty, student activity during the learning activity, (b) keep records of the observations in the observation sheet and (c) to conclude the observations compared to the standard specified as a measurement success rate
- Reflection phase consisted of (a) observer summarized the observations and the success rate to lecturers, (b) faculty observer had discussions with the level of success based on the standards set and the possibilities causes less successful goal achievement, and (c) developing corrective action plan for the next cycle

The data in this study and how its collection is as follows: (1) The use of this model of learning Looking pair, the data collected through observation sheets for teachers and student activities, (2) Motivation to learn Science State, the data collected through observation sheet.

Data Analysis Techniques

Once the data is collected, categorized, analyzed by a new method in which data is obtained and descriptive given the necessary explanations. Techniques of data analysis are as follows:

a. Lecturer activity.

To view the activities of the faculty in the process of learning or foster improvements in teaching and learning that uses 10 indicators of activity with 5 alternative answers were scored as shown in Table 1.

Table 1 Activity category Lecturer

Interval Score	Category
43 – 50	Very Perfect
35 – 42	Perfect
27 – 34	Simply Perfect
19 – 26	Less Perfect
10 – 18	Not Perfect

b. Student Activity

An observation sheet were used to see the students in a learning activity, where the student activity scored as follows: done = 1 and not done = 0. To determine the interval (I) used the following formula: $I = \text{maximum score} - \text{minimum score}$: the number of classification = $(57 \times 8 \times 1) - (57 \times 8 \times 0)$: $4 = (456 - 0)$: $4 = 114$. So the student activity score category can be seen in Table 2.

Table 2 Student Activity Score category

Interval Score	Category
343 – 456	Very High
229 – 342	High
115 – 228	Low
0 – 114	Very Low

c. Motivation

Measurement of student motivation is "done = 1", "not done = 0". So if all students do as expectations on all components, then score a maximum of $57 \times 6 = 342$. To determine the classification of learning motivation in using learning model for couples can be calculated as follows: $I = \text{score maximum} - \text{minimum score}$: $4 = (342 - 0)$: $4 = 85.5$. Determine the classification table in the standard implementation of student learning activities in Table 3 as follows:

Table 3 Motivation Levels

Interval Score	Category
257,6 – 342	Very High
171,1 -256,5	High
85,6 - 171	Low
0 - 85,5	Very Low

This study was done to improve the learning process in the State Science courses second semester students numbering 57 people consisting of 16 men and 41 women using a model of learning Seeking Couples. Implementation of the research carried on within five (5) months from April 2012 to August 2012. This study was conducted in two cycles in which each cycle of two meetings. In the implementation of the teaching model Couples Seeking assisted by an observer is Supentri. While the data in the observation is activity faculty, student activities and motivation to learn.

Description Cycle 1

Improvement of the learning process in the first cycle one was performed on April 10, 2012 with a time of 2 sessions (2 x 100 minutes) at the meeting of 8 and 9, it is implemented as learning model is more suitable Seeking Couples in review sessions.

Implementation of measures implemented by the following steps: greetings, motivate, apperception and identifies the steps of learning models Looking Couple. Step-by-step models for this pair is as follows convey material in general, set up some cards that contain questions or answers, randomly distributed cards to the students, asking students to think about the answer or in the hold of the card, ask the students to obtain the pair have matching cards with the card (about / answers), noting that the name of student get a pair before the specified deadline (later given point if true), ask the students with his partner forward to reading the questions and answers, ask other students to provide feedback or questions, give awards and make conclusions. In the implementation of this learning model in observed by an observer. Based on observations in the learning process can be described in Table 4 below:

Table 4 Activities Lecturer in Cycle I

No	Activity Lecturer	Score
1	Delivering materials generally	5
2	Setting up the most cards containing questions and answers part	4
3	Distribute cards randomly to students	4
4	Ask students to think of an answer or a question card is on hold	5
5	Ask students to find a partner who has a card that matches the card (question / answer)	5
6	Record the names of students who get a pair before the specified deadline (later given point if true).	4
7	Ask students to the front with a partner to read the questions and answers	5
8	Ask other students to give feedback or question	5
9	Rewarding	4
10	Making inferences with 5 students	5
Total		46
Categories		Very Perfect

Based on Table 4 can be explained that the activities of teachers in general with a score of 46 categories of "Very Perfect", because a score of 46 is in the range of 43-50. The activities are carried out by teacher "Very Perfect" there are six (6) step and the category "Perfect" four (4) steps that can be described in more detail as follows: (1) Delivering materials generally are conducted with the category "Very Perfect "because the faculty have delivered material to repeat material that has been studied, (2) Setting up some cards that contain questions or answers on doing with the" perfect "because there are still two cards contain the

same answer; (3) Distribute cards randomly to students is done with the "perfect" because there is still one person students who have missed the card because the card is lost, which can eventually under the seat one of the students, (4) Ask students to think about the answer or in the hold of the card is done by "It is perfect" because all the students think of an answer or a question of card they receive; (5) Ask students to find a partner who has a card that matches the card is done by "very perfect" because all students understand that they have to find pairs of cards respectively, (6) Record the name of the student who got the couple before the specified time limit (the point when the answer will be correct) is done with a "Perfect" for students who have earned all the couples scramble forward to in the note name. This occurred at the suspect because faculty are not clear explanations so that all students who have received a couple straight forward; (7) Ask for student with his partner to the front to read the question and answer conducted with "Very Perfect" because all the students in the next call with a partner; (8) Ask other students to give feedback or inquiries carried out by the "very perfect" for each student read the questions and answers, teacher feedback or questions to ask another student; (9) Provide awards carried out with "Perfect" for awards applause only be given so that students gradually tired of giving applause, and (10) Making inferences carried on with "Very Perfect" because professors make conclusions with students. Activities teachers can affect student activities as shown in Table 5 below.

Table 5 The Student Activity Cycle I

N	Student Activity Porsentase	Total	%
1	Noting explanation lecturer	50	87,71
2	cards accepted answers or about	57	100
3	Thinking about the answer or in the grasp of the card	57	100
4	Looking partner	57	100
5	Reading the questions or answers to	57	100
6	Provide feedback or questions	35	61.40
7	Awarded	56	98.24
8	Making inferences with lecturers	40	70.17
	Total	409	717.52
	Average	51,125	89.69
	Category	Very High	

Based on Table 5 can be explained that the total activity of 409 students with a category of "Very High", because it lies at rank 409 343-456. Of the eight indicators of activity there are 4 students who obtained the highest score of 57 in which all students do. While most students of low activity by a score of 35 provided feedback or questions. Students are asked teachers to respond to a friend who read the questions and answers ahead, by declaring right and wrong. Because of all the questions answered correctly, so no need to ask. As for the award as many as 56 students received awards, only one person who was not rewarded for

getting the card when all the students are the future. One card is lost when shared, so he cannot card at first. It turns out that one card falls under his chair. To be able to explain the motivation to learn based on the table 6 below:

Table 6 Motivation In Cycle I

No	Motivation Indicator	Total	(%)
1	shows the increase in learning activities	57	100
2	There is an increasing effort to learn	50	87.7
3	Excited to learn	54	94,7
4	Do not ever complain in learning	45	78,8
5	Not easily discouraged in learning	48	84,2
6	Learning with serious	51	89,4
	Total	305	534,8
	Average - Average	50,8	89,13
	Category	Very High	

Based on Table 6 can be explained that the level of motivation to learn the category Very High due score is at rank 305 257.6 to 342). The highest motivation indicator is showing an increase in activity learning with a score of 57, this means that all students do. Activity which they were accustomed like reading, listening, and attention lecturer in explaining the material and his friends when the next class to read and answer questions from the cards they could.

Indicators excited in learning gain score of 54 (94.7%), who obtained the second highest value. Students look very excited when implementing this model of learning, because they can stand up and walk around the classroom to find an answer or a question of the cards they hold. Additionally faculty provide feedback or comments to a student who came forward, thus making the students laugh. One of the comments from professors like to say that this is a great couple, couples polygamy and so on.

A total of 89.4% or 51 students, studying seriously. This they did because if it is not serious in learning it will be difficult to find an answer or a question of card in the can. It can be concluded that the research in the first cycle can be said to be successful, according to performance indicators which states that the study is successful if the level of student motivation to learn at least the category of "High". While the level of motivation to learn in cycle 1 is the category of "Very High", which means higher than the determination of success.

Noting the description of the learning process described above and see student learning motivation in the State Science course, then based on the results of the discussion with the observers on the implementation of the first cycle of learning, there are some strengths and weaknesses in learning that can be described as follows: (1) learning management by research carried out in accordance with the stages contained in Unit Teaching Event. However, the use of learning model Looking Couple, in the learning process, there are still weaknesses (still the category "Perfect"), (2) In general, the activity of students in the learning model is the category of "Very" High ". This show has been an increase in students' learning

activities, where before the implementation of this model of learning activities of students is low, (3) learning motivation after learning model Seeking Couples use is the category of "Very High" and (4) It is concluded that the research in the first cycle This can be said to be successful, when compared with the performance indicators which states that the study is said to be successful if the level of student motivation to learn at least the category of "High". While the level of motivation to learn in cycle 1 is the category of "Very High", which means higher than the determination of success. Weaknesses in cycle 1, will be improved in cycle 2.

Description Cycle II

Implementation of instructional improvement process in the second cycle was conducted in 2 meetings are 4x50 minutes, ie on May 30, 2012 from 8:00 to 11:20 o'clock pm. Implementation of instructional improvement in the second cycle to the meeting held on 14 and 15. Couple looking to use this learning model in the second cycle is managed by Events Teaching Unit. The learning process begins with learning objectives that deliver and explain the steps that must be done students.

The next process is explained in brief summary of the subject matter. Improvement in the implementation of the learning process is held on the second cycle improvements in indicators are still the perfect category. Data observations lecturer activities in teaching and learning with the use of the model finding this pair in the second cycle, can be seen in Table 7 below:

Table 7 Activities Lecturer in Cycle II

No	Activity Lecturer	Score
1	Delivering materials generally	5
2	Setting up the most cards containing questions and answers	5
3	Distribute cards randomly to students	5
4	Ask students to think of an answer or a question card is on hold	5
5	Ask students to find a partner who has a card that matches the card (question / answer)	5
6	Record the names of students who get a pair before the specified deadline (later given point if true)	4
7	Ask students to the front with a partner to read the questions and answers	5
8	Ask other students to give feedback or question	5
9	Rewarding	4
10	Making inferences	5
Total		48
Categories		Very Perfect

Based on Table 7 the activities of teachers in general with a score of 48 categories of "Very Perfect" (score 43-50). The activities are carried out with the teacher so perfect (six (6) steps) and with the category of "Perfect" (four (4) steps).

Lecturers activity increased from perfect category (first cycle) to be very perfect (cycle II) is (1) Prepare a partial card contains questions and some answers.

There were changes in the implementation of activities perfect category being "very perfect" because there is no longer the same card. Because the card or the answers that will make students confused, and (2) Distribute cards randomly to students. Increase in the activity of this faculty of "Excellent" to "Very Perfect" because all students get a card.

For activities undertaken lecturers still (has not changed from the first cycle) with the category of "Perfect" and noted that there are two names of students who get a pair before the specified deadline (later given point if true) and give awards. It is still the case with the same reason the first cycle, because it is still difficult to change as search for other forms of educational awards. Increased activity score lecturer is also accompanied by an increase in student activity score. For more details can be seen in Table 8 below:

Table 8 In the Student Activity Cycle II

N	Student Activity	Total	%
1	Noting explanation lecturer	55	96.49
2	cards accepted answers or about	57	100
3	Thinking about the answer or in the grasp of the card	57	100
4	Looking partner	57	100
5	Reading the questions or answers to	57	100
6	Provide feedback or questions	46	80.70
7	Awarded	57	100
8	Provide conclusions with 45 lecturers	45	78.94
	Total	431	756.13
	Average	53.87	94.51
	Category	Very High	

Based on table 8 can be explained that a total of 431 student activity with categories of "Very High", because it lies at rank 431 343-456. Of the eight indicators of activity there are 5 students who obtained the highest score of 57 in which all students do.

Can be explained on any indicators of student activity in the second cycle is an increase if we compare the number of student activities in the cycle I. In the second cycle all students get a card and find their partner. They managed to answer all answer correctly. While the awards are given lecturer is adding value, because the applause which continually asking the students making them reluctant to give applause of boredom. To score the level of motivation to learn in the second cycle is also increased. This can be seen in Table 9 below:

Table 9 Motivation In Cycle II

No	Student Activity	Total	%
1	shows the increase in learning activities	57	100
2	There is an increasing effort to learn	54	94.7
3	Excited to learn	55	96.4
4	Do not ever complain in learning	50	87.7
5	Not easily discouraged in learning	54	94.7
6	Learning with serious	57	100
	Total	327	573.5
	Average	54.4	95.58
	Kategori	Very High	

Table 9 can be explained by the level of motivation to learn the category of "Very High" because 327 is the rank score from 257.6 to 342. An increase in learning motivation score of 309 on the first cycle and the second cycle increased to 327 which together with the category of "Very High". The most high motivation indicators (100%) is an indicator showing increased activity in learning and learning seriously.

Noting the description of the learning process in the second cycle, and based on the results of the discussion with the observers on the implementation of the first cycle of learning, there are some strengths and weaknesses in learning that can be described as follows: (1) learning management by research carried out in accordance with the stages were loaded in Unit Teaching Event. However, the use of learning model Looking Couple, in the learning process, there are still weaknesses (still the category "Perfect") such as: (a) Record the name of the student who got the couple before the specified deadline (later given point if true). Still with the category of "perfect" because it cannot determine that first pair get a pair, as students scramble to the front of his name in the record, and (b) Give the award. In the just reward of praise and value only, so impressed bored students and faculty are less creative; (2) In general, the activity of students in the learning model Seeking Couples also the category of "Very" High "with a score of 431. This show has been an increase in students' learning activities, where before the implementation of this model of student learning activity remains low, rising in the first cycle category of "Very High" with a score of 403 and the second cycle increased to 431, and (3) learning motivation after the use of the model Couple Seeking learning is the category of "Very High". It can be concluded that the research on this second cycle was successful, because it was on top of the performance indicators have been set.

Conclusions

Based on the research results can be explained that the activities of lecturers in the first cycle (score 46) and second cycle (score 48) with the category of "Very Perfect". For students in the first cycle activity (score 409) and second cycle (score 431) with a category of "very high". While the level of student motivation in the first cycle (score 305) with the category "High" increased in the second cycle

(score 327) with the category of "Very High". It can be concluded that the usage model of learning Seeking Couples can increase motivation to learn at the State Science courses in Prodi PPKn FKIP UNRI. It is suggested that educators try this learning model, as one of the variations in the learning process so as to increase the motivation to learn.

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CHAPTER 18

Transition program from school to work for special needs students

**Aliza Alias
Nadzimah binti Idris**

Introduction

Being able to work and earn a living independently after leaving school would be an issue faced by individual with special needs. With disabilities such as physically or mentally challenged that substantially limits one or more major life activities, these group of people might not be able to function accordingly in the work environment. In Malaysia Act 685, persons with disabilities are those who have long term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society (Person with disability act 2008).

There are three major categories of disabilities such as hearing impairment, visual impairment and learning disabilities. Both hearing and visual impairments are related with sensory, but learning disabilities have wider aspect that cover individuals who are slow learner, Down Syndrome, Attention deficit hyperactive Disorder (ADHD), cerebral palsy, Autism Spectrum Disorder (ASD), dyslexia, mental retardation and also gifted. Usually, people with learning disabilities have difficulties in acquiring basic skill such as the ability to comprehend and read even simple sentences. They also have difficulties to listen actively, to speak so others can understand and to convey ideas in writing (Ju, Zhang, and Pacha, 2012).

Thus, individual with disabilities is often labelled as a dependent person in every aspect in his or her life. Most of the parents who have children with disabilities are concerned with their children future after leaving the school system. They worry and wonder whether their children would be able to find a job and earn a living on their own. These concerns were highlighted by Edward and Eric (2005) research's findings that many students with disabilities as well as those with chronic achievement problems, dropped out of high school before even graduating, leaving them even more unprepared for and less likely to obtain a job. Furthermore, individual with disabilities generally achieved poorer employment

outcomes and they encounter issues such as unemployment or underemployment, low wages, and lack of support in the workplace (DeLeire 2000, Yamaki & Fujaira 2002). According to Ju, Zhang, and Pacha (2012), one of the barriers to successful employment is a lack of employment skills.

On the other hand, Shandra and Hogan (2008) stressed that the successful transition from education to employment is crucial for establishing independence among young adults with disabilities. As being employed is a major aspect of social integration and positively related to various dimensions of quality of life (Ju, Zhang & Pacha, 2012). Therefore, transition program from school to work would be able to help these students to gain work experience at the real work environment after they finished their secondary education. This program is designed to train the special needs students to acquire the workforce readiness for future that is timely needed. This transition program should start as early as 14 year-old as it would give the students the opportunity to identify their own strengths and interests in the workforce area.

Transition program

The transition program for students with disabilities is essential as it assists and prepares these students the working skills needed before they are placed in the real work environment. According to Sarah, Laurie, and Wayne (2003) transition program is multidimensional that involves various important areas such as employment, education, independent living, and community inclusion. While, Ecaterina and Traian (2012) defined that transition from school to work is about choices, about career options, living and social arrangements, economic options that may have long consequences in one's life. Transition program is also defined as a coordinated set of activities for a special needs student, designed within an outcome-oriented process that promotes movement from school to out-of-school activities (Shogren & Plotner 2012).

Special education school and vocational rehabilitation services concentrate on the transition of youth and adolescents with special needs by acquiring vocational skills and referring them to suitable internship and jobs (Johoda, Kemp, Riddell & Banks 2008; Rutkowski, Daston, Van Kuiken & Reihle, 2006; King, Baldwin, Currie & Evans 2005; White & Weiner, 2004). In Malaysia, there are vocational schools for special needs students which offer pre-vocational and vocational courses. Although these vocational schools offered variety of program that focus to train special needs students the vocational skills but not many are fortunate to attend the schools. Thus, some of the special education program in mainstream school takes the initiative to teach pre-vocational skills and implement transition program which include the internship for a period of time at the workplace.

Employability

It is difficult for these students to get a job if they do not acquire the specific skills needed in the work environment. Therefore it is essential to prepare students with learning disabilities for the workforce readiness. As their disabilities would be an issue in the process of applying for a job. Even employer might be reluctant to accept them as their employees. Therefore a program that provides and train these students the needed working skills and employability skills needs is essential to be implemented as curriculum activities. After they have acquired the skills, the next step is to place the students in the real working environment to gain work experience (Aliza, 2014).

Before the transition from school to job placement, the special needs students not only have basic academic skills but also have to meet the employer's requirement on some basic skills and knowledge on their specific jobs. Therefore they need to be trained and acquired these skills at school as part of the curriculum. The students would be carefully selected through several assessments on basic academic skills, and also social and emotional development. Hence, the transition activities and training were planned accordingly to the student's capabilities so that he or she could continue the learning process at their workplace (Aliza, 2014).

Implementatin of transition program

In Malaysia, even though some of the teachers for special need students in secondary schools are committed in implementing the transition program, but only a few students have the opportunity to participate in the transition program from school to workplace (Aliza, 2013). This program not only exposes the students the vocational skills but also provide the hands-on training for the students to acquire the employability skills. The training activities would be based on the students' abilities and capabilities in completing the tasks related to the job requirement. Thus, this program objective is to prepare the students the working readiness to work in the real work environment.

According to Aliza (2014), during the internship program, the students with learning disabilities need to face with several challenges such as adapting to the work environment, lack of communication skill, and student's attitude in completing the task in order to gain work experience through this transition program. Therefore, according to Carter, Lane, Pierson & Glaeser (2006), the teachers should also identify specific areas of strengths and needs; develop instructional objectives and curricular materials; and design effective intervention efforts to increase appropriate behaviour and coping mechanism that are crucial in working environment.

Before the teacher could start the program, an assessment should be done to identify student to be trained in the program. After several observations and assessments were done, the student would be selected based on his communication skills and ability to adapt socially and emotionally in new environment. Usually the teacher would select student who are above 14 years old. This special needs student

should have basic academic skills such as able to read and write simple and short sentences, and basic arithmetic's skills. The students were trained some of the skills related to the working task that need for the internship. Furthermore, the students were also trained and prepared to be able to function socially and emotionally in the real working environment.

As some of the students might have mild behaviour problem such as easily gets angry, the activities in the program should also focus on this matter so they were also trained to cope with the behaviour issue. These activities usually help the students to improve not only the self-confidence but also the social skills which include the communication and interaction skills. These are important elements planned in the program, in order to ensure that the students would be able to adapt, manage and complete the tasks given successfully. It also helps them to interact effectively with new friends including co-workers and employer in the working environment.

Internship

Before the students start the workplace, they had to sign a contract with the employer and understood the rules and regulations working at the premise. The transition teacher should brief and explain to the supervisor/employer and the co-workers about the students' disabilities, attitude, social skill, personalities, and the strength and weakness. It is important for the supervisor and co-workers to understand the special needs students' characters and issues, so that they could build a good rapport for the teamwork and assist the students throughout the internships.

At the beginning of the internships, usually the teachers assisted the supervisor and co-worker on how to interact with the students and built conducive environment so that the students would feel independent and comfortable to work with them in the new surroundings. The students were observed and guided to adapt to the new working environment, to communicate with others, to understand instructions given and to manage any behaviour issue. After the internship finished, usually for six weeks, the teacher should get feedback from the co-workers and supervisor, and analyse it in order to understand how a learning disabilities students can adapt into the real work environment.

The transition program was designed specifically to train the student who has learning disabilities. The objective of the program was to give opportunity to students with special needs to gain some working experience as part of working readiness in preparing them mentally, physically, socially and emotionally in the real work environment. It is not easy for an individual with special needs to get a job placement when they are labelled as disabled. Therefore, a candidate for internship program has to be selected based on the criteria that meet the employer's requirements and also the ability to be trained during the internship program as suggested by Leconte (2006). Although the student faced several challenges during his internship due to feeling insecure and uncomfortable working or rather learning

in a totally different and new environment (Aliza 2014), but he managed to overcome the challenges and finished his internship successfully.

Adapting to the work environment

Being able to adapt with the new working environment is a big accomplishment for a student with learning disabilities. Usually students with learning disabilities feel uncomfortable with the new environment and new people at work (Aliza, 2014), it ignited behaviour and attitude problems as they were trying to make adjustment to their new found work environment. Fortunately, the student can overcome this problem although it took some time for him to get along with his co-worker and supervisor. Getting along well with others and adapting to new surroundings are two important elements for employability skills expected from employees with disabilities (Ju, Zhang, and Pacha, 2012).

Therefore, with the guidance and assistance from the supervisor, co-worker and the teacher, the student not only successfully gained work experience but also self-confidence to overcome communication difficulties with other people. Hence, it is essential to brief the supervisor and co-worker at the beginning of the internship program, so they would understand the student's emotional issues, personalities, and learning disabilities. The awareness of the student's special needs is crucial to make the transition program successful. This program also educates employer about the capability of special needs person to work and earn a living if he or she were given the opportunity to be trained for the job and then given the job placement.

Impact of the transition program

The impact of the transition program on the student's self-confidence and communication skills indicates that if students with special needs were given the opportunity to be trained and placed in the real work environment, they would be able to gain work experience and get the job done. The transition program also stressed on the importance of rules and regulation including work ethics such as personal integrity and honesty because these are valued as employability skills by the employers (Ju, Zhang, and Pacha 2012). Even tough, at the beginning of the internship, students with special needs would face some difficulties in adjusting to the new or work environment (Aliza, 2014), but with the support from the people involved in the working environment they might successfully embrace the working world. Being able to communicate is one of the important skills in employability. The students' communication skill improves with the encouragement from the co-workers and employer. It also increases their self-confidence and manages to overcome the social issue at work.

Even though the transition from school to work was successfully completed by the student but the program activities and training varies accordingly to the student's special needs and employer's requirement. This transition program has given a lot of benefits to the students with learning disabilities because they could

gain new experience working in the real work environment. Although there are some barriers in order to be successful in the transition program, the special needs students have proven that they were able work in the real working environment if they were given the opportunity to do so (Aliza, 2014).

This precious experience also has changed the student's personalities and increased his self-confidence and communication skills. But without the commitment and collaboration from teachers, parents, and employers this program would not be able to be implemented successfully. According to Aliza (2013) the commitment of special education teachers in implementing the transition program from school to working environment is the real element of the program's success.

Conclusion

The transition program is a platform for special needs student to gain work experience and to develop their social and communication skills. The impact of the program on the student's social and communication skills has developed the employability skills that are essential in workforce. The transition from school to work is a process of preparing the special needs students with work readiness before they leave the school to join the workforce. In Malaysia, this transition program is still in the development stage, as special education teachers take the initiative with the support from the school administration to implement the program in their schools. It's still a challenge to build a network or collaboration between the employers, schools and the parents for the program to be implemented successfully, but we are getting there, eventually.

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CHAPTER 19

The Role of Lecturers and Students in the Quality of Teaching and Students' Satisfaction

Suarman

Introduction

Higher education must implement continuously a comprehensive quality culture. Implementing the teaching and learning quality need to be integrated into the culture of quality. Nor Hidayu Shahadan study (2006) stated that lecturer who did have professional background in education would show lack skills in teaching methods and less emphasis on learning objectives in teaching and learning. This clearly shows the importance of teachers' professional training in universities to ensure that their teaching is more effective. To deliver an effective teaching of content, the lecturer must think about teaching methods used as teaching methods will ensure smooth and effective delivery of a subject, and also meaningful and enjoyable to the students (Abdul Ghafar, 2003). The method of teaching is an important element to ensure the process of learning is interesting and good. During the lesson, the content should be taught with appropriate methods and tools to the students. The use of correct language should be clear and accurate pronunciation with appropriate flow of speech. Handwriting should be neat and clear in order to be seen and read clearly by all students. The lecturers should also be able to control the time efficiently during the teaching process.

Higher education institutions that have effective leadership, highly knowledgeable and professional teaching staff, good facilities of teaching and learning, produce quality students and relevant curriculum will be more competitive in the face of global competition. Umaedi (1999) pointed out that the main role of educational institutions is a human construction quality for a country. The quality of education can be defined as a system of education that provide the needs and expectations of users through the process of continuous improvement. This success can be measured in terms of the country's higher education system's ability to produce quality graduates in line with the aspirations and the National Education Philosophy such as marketability by industry demand, the ability to create success in entrepreneurship and the ability of graduates to contribute to the

society. Effective leadership to lead the higher education institutions is essential to ensure the implementation and achievement of the institution's strategic objectives. The lecturers are knowledgeable and competent to educate and produce quality students.

The roles and responsibilities of staff and lecturers are to provide services and effective teaching. Efforts to improve the quality of teaching and learning are not only the agenda of every institution of higher education, but it also part of the agenda of the government in an effort to improve the quality of teaching and learning. Higher education institutions must adopt a culture of service in making the quality of teaching and learning, better and suitable process of teaching, learning needs, and can anticipate what customers and stakeholders need in teaching and learning, the appearance of physical facilities and friendly staff, and faster administrative services. Marsh and Hocevar (1990) stated that the quality of teaching and learning as an effective teaching. The quality of interaction between lecturers and students are interaction with students in the class, information from institutions to students or how to facilitate and motivate the students in the learning process.

The courses are part of the higher education curriculum objectives for students. The course are the major component in teaching and learning in higher education. According to Knight (2002), that higher education courses designed to maximize the opportunities associated with the experience, development and deep learning. Then Hamida (2004) explained that the subject of the courses offered by universities do not burden the students but to meet the needs of the market as they were the internal motivation in conducting teaching and learning activities. Activities that are conducted with high motivation would give great impact on the efforts of lecturers in the lecture hall. Without motivation, the learning process becomes meaningless and ineffective.

Instructional design will run into obstacles and constraints during the process of determining whether the objectives of teaching, teaching methods or using instructional media. In instructional design lecturers also determine the achievement of the objectives by students with evaluation. This is in line with the views of Groundwater et al. (2003) state that the syllabus and curriculum framework should write down every important knowledge, skills, processes and results of each stage of learning. Quantity and quality of students' interaction in teaching and learning should be a concern for the lecturers. Quantity is the frequency of students' interaction and learning, while discussing the subject under discussion is an aspect of the quality of students' learning related to the subject. Interaction between students is a social relationship in the classroom. According to Mohammad Asrori (2007) that social interaction is a natural relationship between some individuals, where the individuals interact with each other simultaneously.

Students' relation with lecturers is a key factor for the quality of teaching and learning in the classroom. Better quality of relationship can help a lecturer in conducting teaching empathy and students can receive a good learning process.

Good and effective interaction when lecturers also managed to create a two-way interaction between with students by questioning students or otherwise inquiries and students to teachers, Kamarul Azmi (2010). So, good relationship is very important in teaching and learning as it create two-way communication between students and lecturers.

Lecturers must have competency in relation to teaching and learning, such as knowledge of teaching materials, pedagogy, teaching media, teaching methods and others. Each student hoped that their lecturers have better efficiency in teaching. Roediger, Thorsten and Isabelle (2007) found students want professors who are knowledgeable, enthusiastic, approachable and friendly. According to a Hill et al. (2003) found the quality of the lecturers of the most important factors in providing high quality education.

The students' satisfaction in a program of study is the cumulative satisfaction of student during their studies. The role of students is focused to put the interests of satisfaction as the dependent variable. According Guolla (1999) students have a role as customer satisfaction as the product or service is the result of educational interaction between teachers and students during the teaching and learning process. Each of teaching and learning process has obstacles and students would learn to resolve barriers and constraints with higher satisfaction. Students who are successful know themselves and are able to develop the ability of self-learning.

This study was conducted to survey the various domains of the quality of teaching and learning on students' satisfaction and apply the theory of educational psychology study on a group of students enrolled in higher education programs. This approach attempts to implement a customer satisfaction survey into the level of education in higher education institutions, such as the present where most of the studies tried to correlate the various factors to measure the quality of customers' satisfaction (Dutka 1994).

Methodology

The respondents in this study are the population group of male and female students at the University Riau. The selection was done through random sampling stratified by gender. The number of sample is 177 male students and 273 female students. A set of questionnaires measure the quality of teaching in courses (4 items), motivation (6 items), planning (5 items), the relationship of lecturers and students (item 8) and lecturers' competency (4 items). While students' satisfaction is consists of 6 items. The findings of the pilot study involving about 200 students, indicating the validity and reliability of the instrument is of course high (0.78), motivation (0.83), instructional design (0.74), the relationship of lecturers and students (0.82), lecturers' competency (0.82) and students' satisfaction (0.92). The objectives of this study are to determine the quality of teaching and students' satisfaction between male and female students; and to examine the influence of quality of teaching on gender and satisfaction of the students.

Findings

The findings of the difference in the quality of teaching and student satisfaction between male and female students are shown in Table 1 below by using MANOVA analysis.

Table 1 The difference in the quality of lecturers' teaching and students' satisfaction based on gender

Variables	Male (n=117) Min (sp)	Female (n =273) Min (sp)	Cohen's d	Sig.
1. Courses	2.04 (0.51)	2.19 (0.56)	0.017	0.006
2. Lecturers' motivation	2.72 (0.48)	2.84 (0.48)	0.015	0.010
3. Teaching design	2.78 (0.56)	2.68 (0.53)	0.008	0.061
4. Lectures' relation with students	2.85 (0.46)	2.87 (0.35)	0.001	0.526
5. Lecturers' competency	2.66 (0.54)	2.64 (0.53)	0.001	0.633
6. Students' satisfactions	3.75 (0.77)	3.93 (0.53)	0.019	0.003

In terms of the quality of the lecturers' teaching the male students scored higher mean than female students in teaching design. While female students have higher satisfaction compared to male students. To assess whether the mean difference between the genders is significant, Cohen d analysis was conducted to determine the effect size. Cohen's d values as a whole is at a low level (Kelley & Preacher 2012) which indicates all the differences were not significant. Cohen's d values for each variable is as follows: course (0.017), lecturers' motivation (0.015), teaching design (0.008), lecturers' relation with students (0.001), lecturers' competency (0.001) and students' satisfaction (0.019).

The Effects of the Quality of Teaching on Gender and students' Satisfaction

The SEM analysis was done to identify the quality of lecturers' teaching in the university on gender and students' satisfaction. Results of SEM path analysis model showed that the size of the Chi Square / df = 20,792, Root Mean Square Error Approximation (RMSEA)=0.02, Goodness of Fit Index (GFI)=1.00 and Comparative Fit Index (CFI) = 1.00. All sizes assessment used to show that the data used in this study has proven to be a reasonable adjustment for the proposed model (Byrne, 2010).

0.12

Teaching quality

0.33

Gender

Students' satisfaction

Figure 1 The Effects of the Quality of Teaching on Gender and students' Satisfaction

Figure 1 shows the effect of teaching quality on gender and students' satisfaction. Three utilities to perform analysis as proposed by Baron & Kenny (1986) and Hays (2009) were performed. First, the independent variables (gender) significantly predict the dependent variable (students' satisfaction). The overall effect of gender on student satisfaction was significant ($\beta = 0.12$, $p < 0.05$). Female students showed higher satisfaction. Second, the independent variables (gender) significantly predict the dependent variable (the quality of teaching). The overall effect of gender on the quality of lecturers' teaching was significant ($\beta = 0.10$, $p < 0.05$). Boys showed preferred quality of teaching. Third, the effect of lecturers' teaching quality significantly predicted the dependent variable (students' satisfaction) ($\beta = 0.33$, $p < 0.05$). Teaching quality significantly predicted the students' satisfaction after controlling for gender variables. Sobel's test results to investigate the effect of mediation showed significant decisions, $z = 2.78$ ($p < 0.05$). Sobel's test findings reinforced that gender plays a role in students' satisfaction which was significant ($Ed = 0.110$, $p < 0.05$). Indirect effects of gender on student satisfaction through the medium of teaching quality of lecturers is not great, but significant too ($Ei = 0.072$, $p < 0.05$).

The of effect relations between students and on teaching quality and students' satisfaction

The analysis using SEM was done to see the relation between lecturers and students effect the lecturers' teaching quality and students' satisfaction. The results of SEM path analysis model showed that the size of the Chi Square / $df = 12,104$; Root Mean Square Error Approximation (RMSEA) = 0.04, Goodness of Fit Index

(GFI) = 0.94 and Comparative Fit Index (CFI) = 0.91. All sizes assessment used to show that the data used in this study has proven to be a reasonable adjustment for the proposed model (Byrne, 2010).

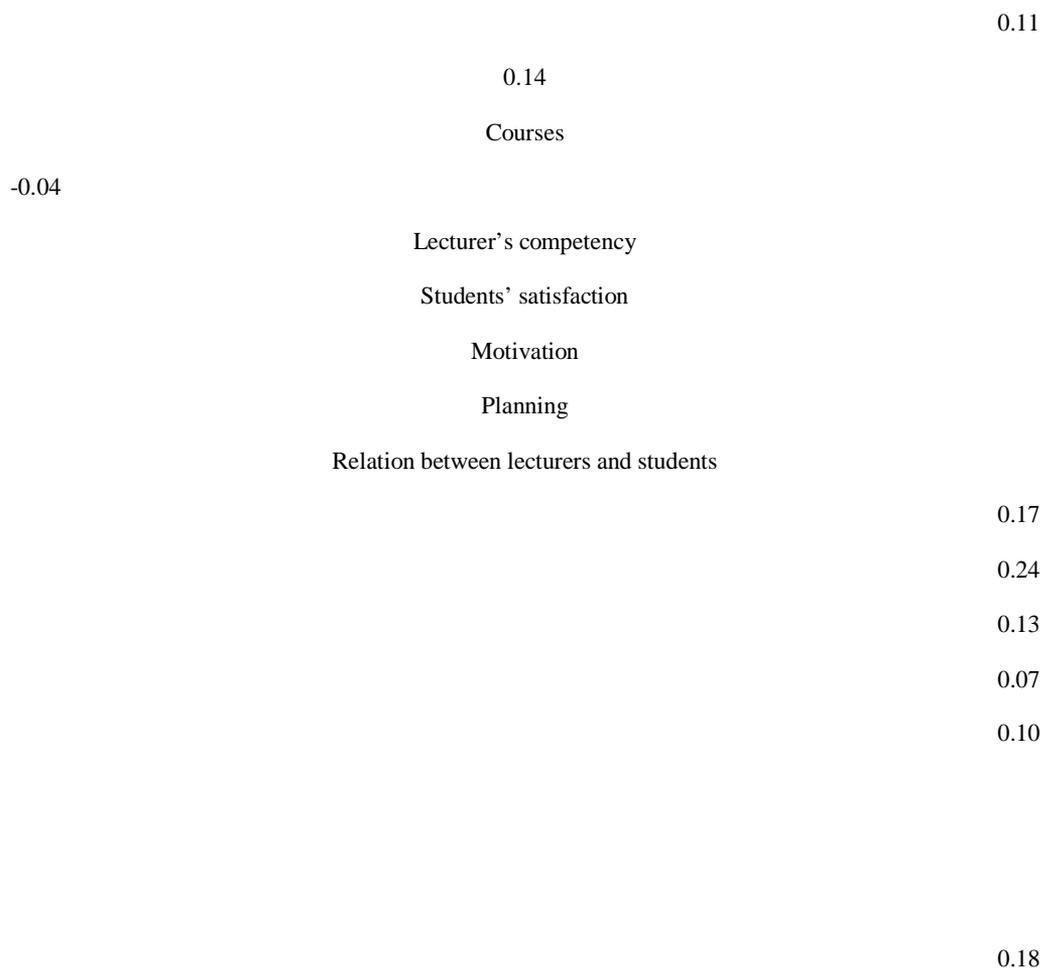


Figure 2 The effect of relation between students and lecturers' teaching quality and students' satisfaction

Figure 2 shows the effect relations between students and lecturers' teaching quality and students' satisfaction. First, the independent variable (course, motivation, planning and lecturers' competency) significantly predict the dependent variable (students' satisfaction). The overall impression of the course, motivation, planning and competency on student satisfaction was significant ($\beta = 0.11$, $\beta = 0.17$, $\beta =$

0.07, $\beta = 0.10$, $p < 0.05$). Second, the independent variable (courses, motivation, planning and competency) significantly predict the dependent variable (the relation of lecturers and students). The overall effect of motivation, planning and efficiency lecturer on relationships with students in university lecturer was significant ($\beta = 0.24$, $\beta = 0.13$, $\beta = 0.14$, $p < 0.05$) but not the course which did not contribute to the relationship of lecturers and students. Third, the relationship of lecturers and students significantly predict the students' satisfaction ($\beta = 0.18$, $p < 0.05$). The relation between the lecturers and students significantly predicted the students' satisfaction after course, motivation, planning and competency were controlled.

Discussion

The findings show there are differences in students' perceptions about the quality of teaching and learning such as: the subject courses, lecturers' motivation and satisfaction of students by gender. While instructional design constructs, relation between lecturers and students and lecturers' competency showed no significant differences by gender. The findings similar to Hamida et al. (2004), that lecturers provide motivation and support to students at a moderate level. Highly motivated lecturers in teaching and learning process would also motivate students in the learning process. The quality of teaching and learning should be done accordingly to the students' needs and produce satisfaction of every student. Differing views about the quality of teaching and learning and satisfaction are not bound gender.

This finding means that increasing the quality of teaching and learning will increase the satisfaction of students in the University of Riau. This is evidenced in the findings of this study that the students' perceptions about the quality of teaching and learning contribute to students' satisfaction. It supports research by Kusumandari (2006) that factors ranging from the learning process, campus environment, administrative services and safety facilities have contributed significantly to the students' satisfaction. The study also shows that the gender impact directly and indirectly in the students' satisfaction. The quality of teaching is a factor gender with student satisfaction. Similar results have found in a study Prasetyaningrum (2009) which stated that a variable learning to students' satisfaction indicated positive contributions. The results of research by Kara (2004) showed that the relationship between college students' experiences with satisfaction was the positive and significant. There was a significant relationship between self-efficacy and student evaluation that indicated most of self-efficacy beliefs closely related to good teaching and teachers' ability to organize teaching with clear instructions (Ozgungor 2009).

The satisfaction derived from the extent to which universities can provide service and administration in accordance with the expectations of the students. Satisfactions come from the experience of students involving in various activities at the university. The findings prove that the relation between lecturers and students in the course, motivation, instructional design and competency of the

lecturer have influenced the student s' satisfaction. Elliott and Shin (2002) argued that satisfaction is appropriate outcome variable for study because it has some benefits for students and course-related, increased motivation. Overall, it was concluded that the relation between lecturers and students contributes positively and significantly to the improvement of students' satisfaction. Therefore, it is important for lecturers to have good relations with students to strive and improve the students' satisfaction as important clients of the university. Lecturers who have a good relation with the students in the teaching and learning process, would be able to encourage and motivate students to participate and performance better in their studies. Moreover, factors such as the competency in teaching and learning must also be acquired by lecturers to produce teaching and learning activities that are more meaningful.

Conclusion and Implications

As a professional, lecturers have a responsibility to contribute towards improving the quality of teaching and learning at the university level. Thus, each lecturer should master the methods, strategies and techniques of effective teaching and learning. The effectiveness of the lecturers teaching on student learning is important for students' perception of the lecturers. This is because the perception will affect the reaction in the creation of lecturer-student relation in the classroom, thus contribute to academic performance, either positively or negatively. The competency of teaching and learning must be acquired and mastered by lecturers. The development of competence in teaching must continually developed in line with developments in science and technology, so as to provide a better quality education. It can be conclude from the finding that the lecturers at University of Riau at a moderate level in the quality of teaching.

Lecturer is the most important factor as relates closely with the responsibilities for the success of the students' achievement through teaching and learning. The professionalism of lecturers and professional development are key factors for improving the competency of teaching or improving an institution. Lecturer is not simply delivering knowledge, but also play a key role as supporter, counselor, facilitator and even as a parent. Therefore, the relation between lecturers and students also need to be improved to achieve these objectives, in addition, effective teaching should diversify teaching methods, provide teaching aids, master the content to be taught, have knowledge of the ability of students to receive education, motivate students, control the behavior of the students and give a final assessment. Quality teaching means the ability of lecturers to deliver a lesson or skills that are easily understood by students, memorable and enjoyable.

This study has demonstrated that female students have a higher perception of satisfaction and teaching quality of lecturers compared to male students. The relation between lecturers and students is a factor that can be a predictor between the quality of teaching and students' satisfaction. In addition, the lecturers must have the passion and efficiency, warm and friendly, have a sense of humor,

willingness to help students, and exercise of freedom in learning in the class. The views, opinions and wishes of the students should be taken into account to ensure the quality of teaching and learning is good. Efforts to improve the quality of teaching and learning are not only the agenda of every institution of higher education, but this is part of the agenda of the government in an effort to improve the quality of teaching and learning.

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CHAPTER 20

Leadership Approaches and Developing a School's Capacity for Improvement

**Jamalullail Abdul Wahab
Mark Hadfield
Linda Ellison**

Introduction

The literature on school leadership points out that leadership has been described as building and maintaining an organizational culture (Hoy & Miskel 2005, Ibrahim & Wahab 2012), establishing a mission for the school, and giving a sense of direction (Louis & Miles 1990, Walker 2004). In addition, Foster and Hilaire (2003) have argued in support of this but say that 'there is a lack of consensus within the field of organizational study around the definition of leadership.' (p. 2) Nevertheless, Bass (1990) and MacGilchrist, Mortimore, Savage, and Beresford (1997) conclude that leadership is often regarded as the single most important factor in the success or failure of institutions and effective leadership is essential if a school is to develop or improve.

The role of school principal is one of the most crucial in the education system; it is recognized that pupils' learning depends on good leadership of the schools in which that learning takes place (Neil et al. 2001; Wahab et al. 2014). An attempt to define leadership commonly focus on debate and argument that there are various definitions of leadership as many scholars engaged in this study (Bennis & Nanus 1997; Stoll et al. 2002; Ibrahim & Wahab 2012), although the interpretations and understandings of it vary (Yukl 2002).

Concept of leadership and school for improvement

Leadership

The literature reflects the assumption that leadership involves a process of social influence whereby intentional influence is emanated by one person or group over other people or groups to structure and facilitate the activities and relationships in a group or organization (Bush & David 2002, Yukl 2002; Hoy & Miskel 2005). The

effective development of the vision or goal of a school is undoubtedly highlighted as a major part of successful leadership (Bush & David 2002).

Leadership is a process of influence leading to the achievement of desired purposes. Successful leaders develop a vision for their schools based on their personal and professional values. They articulate this vision at every opportunity and influence their staff and other stakeholders to share the vision. The philosophy, structures and activities of the school are geared towards the achievement of this vision. (p. 5)

Within the above definition, the role of leadership relates most clearly to the influence on staff to engender action to the achievement of the shared vision. Moreover, Yukl (2002), a major source of organizational studies, points out in support of this:

Most definitions of leadership reflect the assumption that it involves a social influence process whereby intentional influence is exerted by one person (or group) over other people (or groups) to structure activities and relationships in a group or organization. (p. 3)

DuBrin (1995) extends this, believing that a definition of leadership as the ability to motivate people within an organisation to achieve organisational goals implies that key characteristics are the ability to set an agenda for the organisation, win commitment to that agenda, motivate and enable others to carry out necessary changes to achieve the agenda. Hopkins et al. (1994), Little (1995), Stoll and Fink (1996), Hargreaves (1997), Leithwood et al. (2004), Ibrahim and Wahab, 2012, Cosner 2014 and Lai, E. (2015) point out that effective leadership, which requires vision and the capacity to motivate and manage others, is the key to school improvement success.

Leadership is identified with solving problems, and the purpose of leadership is to find solutions. The term 'leadership' as an influencing process is clearly implied from the quotation below, when Sergiovanni (2001) argues that leadership is not just about helping people to understand the problems they face, it is also about helping people to get a handle on how to manage these problems. Leadership is a struggle – a quest to do the right thing. We can appreciate this struggle when we realize that leaders are ordinary people who are required to make uncommon commitments to try to fulfill their obligations. They do this by serving purposes and seeking to help others to be successful. They do this by inviting and receiving the help of those for whom they are responsible (Sergiovanni, 2001, p. ix).

Furthermore, Spillane, Halverson and Diamond (2001) similarly suggest a way of understanding leadership that focuses upon the interaction and the complexity of social exploration. In this sense, leadership is best understood as an

important part of shaping a pattern of social interaction and of building a kind of relationship in a group or organization (Hoy & Miskel, 2005; Ibrahim & Wahab, 2012). The relationship view of leadership incorporates the activities of multiple groups of individuals in a school that work together in a team and share knowledge and skills with each other in such a professional development activity.

In a similar vein, central to effective working together is the development of the organizational culture (Hoy & Miskel, 2005). School culture, however, is complex because it is largely implicit and we only see surface aspects, for instance staff who work in isolation, or in collaboration (Stoll, 1999), or in balkanized groups (Hargreaves, 1997). The types of school cultures that tend to support improvement are those that: are collaborative, have collegiate working relationships and have a climate for change (Harris, 2002; 2002b; 2004; 2005); are focused on people rather than systems, make time for learning, encourage open communication and have approachable leaders (Stoll, Collarbone & Bolam, 2002). It has been emphasized within the literature that leadership has an important part to play in defining and shaping school culture. Stoll et al. (2002) have argued that the key leadership functions for an effective organization are to create, manage and re-engineer the culture. If the culture of a school is not appropriate then the principal's leadership has limited impact on the school's capacity for improvement (West-Burnham, 1992; Ibrahim & Wahab, 2012). Various leadership approaches are needed which directly address the facet of school culture (Hopkins et al., 2003). In line with this, a multi-level approach is likely to be more successful involving staff, parents, governors, the community and the local school district (Hopkins, Ainscow & West, 1994; Stoll and Fink, 1996). Encouraging this involvement through procedures and by the creation of an open climate has been stressed by Hoy and Miskel (2005).

In a growing number of countries, leadership is viewed as a shared process where principals and teachers together negotiate goals and collaborate on strategies for improving the learning of teachers as well as children within schools (Hopkins et al., 1994; Stoll & Fink, 1996; Mitchell & Sackney, 2000; Spillane et al., 2001; Lambert 2006; Harris, 2005; Ibrahim & Wahab, 2012). Although this study is focused on the leadership of the principal, an important aspect of this is the way in which the principal allows for leadership in depth in the school. In the United Kingdom recently, the concepts of 'teacher leadership' and 'distributed leadership' have emerged as a significant way of looking at leadership (Harris, 2003) and distributed leadership 'has come to prominence in school management discourse' (Hatcher, 2005, p. 253). Woods et al. (2004) define distributed leadership as an emergent property of a group engaged in concrete action, creating a new organizational culture based on trust rather than regulation in which leadership is based on knowledge not position. In a review of the literature on distributed leadership, Harris (2005) argues that, in terms of distributed leadership, leadership is assumed from a different perspective:

Distributed leadership, like democratic, shared, devolved or diffuse leadership, assumes that leadership is a social phenomenon rather than a set of individual characteristics, traits or competencies. (p. 164).

Nevertheless, the literature shows a reasonable consensus that a concept of distributed leadership is contra to traditional notions of leadership premised upon an individual managing hierarchical systems and power structures of schools (Harris, 2005; Hatcher, 2005). In fact, a number of research studies reveal how, in practice, schools' leaders had to deal with the contradiction between the hierarchical power structure of schools and the use of distributed leadership (Hatcher, 2005). For instance, distributed leadership may not succeed in reinforcing the commitment of teachers to government or management education agendas and in some cases, the teachers 'may take advantage of the opportunity offered by distributed leadership to challenge and resist the dominant policy agenda' (Hatcher, 2005, p. 260).

However, Harris (2002) and Leithwood et al. (2004) advocate distributed leadership as an alternative to traditional top-down leadership models and Hatcher (2005) postulates distributed leadership 'as a means to achieve the participation and empowerment of teachers and to create democratic schools' (p. 253). Moreover, Gronn (2003) pointed out that the conventional orthodoxy of the individualistic leader has proved unable to cope. In their recent review of the literature on distributed leadership, Leithwood et al. (2004) point out that the concept of distributed leadership overlaps substantially with shared, collaborative and participative leadership concepts (Hatcher, 2005). Furthermore, Harris (2005), a major source in school improvement and distributed leadership studies, has characterized distributed leadership as 'a form of collective leadership in which teachers develop expertise by working together' (Harris 2005, p. 165). Goleman (2002) offers some support for this facet believing that 'every person at every level acts as a leader' (Goleman, 2002, p. 14). In a similar vein, Fullan (2001) affirms that 'strong institutions have many leaders at all levels' (p. 134). Therefore, distributed leadership 'focuses on how leadership practice is distributed among formal and informal leaders' (Harris, 2005, p. 165) and, 'it assumes a high degree of involvement in the process of leadership and the mutual interdependence of those undertaking the leading' (Harris, 2005, p. 166). However, Spillane et al. (2001) and Gronn (2000) see distributed leadership as an analytical tool so that most of the staff will be involved in the decision-making process, and this will increase their commitment (Hatcher, 2005; Ibrahim & Wahab) to organizational goals and strategies. Distributed leadership is an unfamiliar concept in many Asian organizations, especially government schools in Malaysia but it could offer significant scope for capacity building.

Clearly from the above discussion, leadership approaches is defined as those practices used by principals in dealing with their staff, systems and the school as a whole in the process of achieving the school's vision or goals. In other words, the

concept of leadership approaches will be referred to as the way a principal exercises or practises his/her leadership on a daily basis within the school, and seeks to work with and through people towards the identification and achievement of organizational goals (Hopkins et al., 2001; 2003). These approaches might be varying in terms of time and circumstances (Hopkins et al., 1994; 2003), and their impact on the schools' capacity for improvement would be perhaps in a direct or indirect way.

While distributed leadership is often seen to refer to middle leaders, the concept of teacher leadership is also important in building a school's capacity for improvement. Research on teacher leadership shows that students' outcomes are more likely to improve where leadership approaches focused on educational quality are distributed throughout the school community rather than concentrated in the hands of a few individuals, and where teachers are empowered in areas of importance to them (Spillane et al. 2001, Silins & Mulford, 2002; Hatcher, 2005; Ibrahim & Wahab, 2012). Although, teacher leadership is at the heart of building leadership capacity, Harris and Lambert (2003) explained that the role of a head teacher is more important than ever,

The leadership of head teacher is still the most vital and urgent form of intervention; because heads set the climate for improvement, they can empower others to lead and they can provide the much needed energy for change and development. Heads are the catalysts for change and development, they may not implement the changes but they enthuse others to take responsibility for change and development. They engage others in the emotional work of building collaborative, trusting relationships. (pp. 37-38)

Clearly, from the above quotation, in working with their staff to lead changes and enhance their school capacity to improve, leaders should empower, delegate, build good relationships and collaborate with their staff, and trust them. Moreover, in his suggestion earlier regarding the concept of invitational leaders, Sergiovanni (1992) asserts that empowerment is a sharing of power and authority to invite others to share and develop their vision, because he believes that leadership is not just about leaders; it is about followers. The above discussion focuses on leaders bringing about 'school improvement', a concept which is examined in the next section.

School improvement

There are significant differences in opinion on how to define school improvement. Gray et al. (1999) point out that school improvement secures year-on-year improvement in the outcomes of successive cohorts of similar pupils. Improvement is measured in terms of raising attainment of all students over time (Chapman 2003; Cosner 2014; Lai 2015) meaning increases the school's effectiveness over time. In contrast, Mortimore (1998) describes school improvement as the process of improving the way a school is organized, aims, expectations, ways of learning,

methods of teaching and organizational culture. For Gray et al (1999), student outcomes are pre-eminent, whereas for Mortimore (1998) it is the process that is vital.

Hopkins (2001) combines school improvement and school's capacity by describing school improvement as 'a distinct approach to educational change that aims to enhance student outcomes as well as strengthening the school's capacity for managing change' (p. 23). He is concerned with raising student achievement through focusing on the teaching-learning process and the conditions that support it. According to Hopkins (2001), 'authentic' school improvement focuses on enhanced student learning and achievement, in a broader sense than mere examination results or test scores and it provides those involved in the change process with the skills of learning and 'change agents' who will raise levels of expectation and confidence throughout the educational community. He also stresses that all the strategies used for school improvement must be based on research and theory.

School improvement initiatives thus have two main purposes: to enhance student achievement; and to strengthen the school's capacity for managing change whilst accomplishing educational goals more effectively (Hopkins et al., 2003; Cosner 2014; Lai, 2015). In a similar vein, school improvement, has been defined by van Velzen et al. (1985) as,

A systematic, sustained effort aimed at change in learning conditions and other related internal conditions in one or more schools, with the ultimate aim of accomplishing goals more effectively. (p. 48)

In the late 1980s a number of researchers began to explore ways in which schools could bring about improvement from within (Levine 1992, Murphy 1992, Hopkins 1994, Stoll & Fink 1996). The action research movement predominated in the field of school improvement and that research was carried out within schools as part of teacher professional development and school-based curriculum development. Researchers have focused on the process of school improvement by examining actions within the school, for example through a school improvement project, and looked at the management of change in schools (Stoll & Fink, 1996), reflecting on the need to have a catalyst for change, referred to as a combination of pressure and support, if a school is to succeed (Louis & Miles, 1990).

Since all school improvement involves change, it requires staff development and learning together through a process of collaboration within school (Barth, 1990; Hargreaves, 1997). Moreover, the right climate for school improvement is one in which time has been devoted to establish trust and openness between staff, pupils and the community (Reynolds & Parker 1992, Stoll & Fink 1996, Ibrahim & Wahab 2012, Cosner 2014, Lai 2015).

School improvement also cannot be done alone and is dependent on collaboration with external support, e.g. consultants, researchers, universities or

local school district (Hopkins et al., 1994; Stoll & Fink, 1996). Furthermore, the key to school improvement success is the leadership of the process, which requires vision and the capacity to motivate and manage others and, consequently, work in the field draws upon research into leadership and staff development (Hopkins et al., 1994; Stoll & Fink, 1996; Hargreaves, 1997; Ibrahim & Wahab 2012; Cosner, 2014; Lai, 2015). Other internal aspects that contribute to school improvement are collegiality and teamwork or school culture (Louis & Miles, 1990; Riddell & Duffield, 1996; Harris, 2003; Hopkins & Jackson, 2003; Ibrahim & Wahab 2012; Cosner, 2014; Lai 2015), the quality or the improvement of teaching and learning (Stoll & Fink, 1996; Hopkins, 2001; Hopkins et al., 2003; development planning (Hopkins et al., 1994; Stoll & Fink, 1996; Fleming, 2000: Myers & Reed, 2000), monitoring, evaluation and review (Levine, 1992; Brighouse & Woods, 1999) and changes to the curriculum (Little & McLaughlin, 1993; MacBeath & Mortimore, 2001).

The significant external aspects which potentially contribute to school improvement are: local government support (MacBeath & Mortimore, 2001), and national government policy (Myers & Goldstein, 1998). In order to strengthen the school's capacity for achieving its improvement purposes, Hopkins (1996) indicated support for this that the key to school improvement projects is the notion that the school is the centre of change, and owns that process and teachers are an integral part of it. In the UK, the 'Improving the Quality of Education for All' (IQEA) project focused on building collaborative cultures in school and developing the internal conditions of the school and its capacity for change (Hopkins et al., 2003).

Because schools are subject to many pressures to change and the nature of change means they are not stable organizations, a relevant perspective on organizational improvement comes from quality and business models described by Harris et al. (2005). These business management approaches, such as Total Quality Management (TQM), have influenced approaches to school improvement. The TQM concept is a way or philosophy of running an organization where the main features are concerned with satisfying the customer, emphasizing leadership, management, empowering the staff, staff involvement, teamwork, responsibility, process control, continuous improvement, investment in training and development, and the use of statistics (Ibrahim & Wahab, 2012) to determine the correct areas in which to make changes and improvements. Although TQM has been recognized as a system for contributing to school improvement in terms of self-review and ensuring certain standards are met (Merrett, 2004) but there is still insufficient educational practice to provide a definitive answer to the appropriateness of TQM to education (Ibrahim & Wahab, 2012). Some school improvement projects have been unsuccessful because they were not school centred and failed to take into account the school context and culture (Ibrahim & Wahab, 2012).

Developing a school's capacity for improvement

According to Hargreaves (2001), school improvement is closely linked to teacher effectiveness at classroom level:

An improving school increases its intellectual capital (especially its capacity to create and transfer knowledge) and its social capital (especially its capacity to generate trust and sustain networks) to achieve the educational outcomes of intellectual and moral excellences, by learning successfully to use higher leverage strategies based on evidence of 'what works' and/or innovative professional practice. (pp. 490-491)

In the following, the DFEE (2001) describes building capacity as,

The successful implementation of radical reform has never been a matter merely of investment, important though that is. It is also crucially a matter of ensuring that at every level in the system there are people with skills, knowledge, understanding, time and attitudes which enable successful change to occur. In short, it is a matter of building capacity. (p. 84)

The school's capacity for managing improvement initiatives brings together four components: resources, structure, culture, and the skills of staff and all these different elements are synergistic (Hadfield, 2003). As Hadfield (2003) points out:

School capacity can be described as the collective competency of the school as an entity to bring about effective change. This implies four core components: knowledge, skills and dispositions of individual staff; a professional learning community in which staff work collaboratively; programme coherence; technical resources. (p. 6).

In their review of the international reform literature, Harris and Lambert (2003) pointed out that 'capacity building' has appeared over the past 20 years. For instance, since the early 1990s in the reform climate in England, capacity building has taken on new and more urgent importance. Furthermore, Harris and Lambert (2003) concluded that the internal capacity of schools, rather than external mandate, is vitally important to sustain school improvement:

Many of the top-down, externally mandated reform strategies have failed to sustain improvement once initial enthusiasm or funding has been removed. Like so many other externally driven improvement initiatives year-on-year improvement is hard to sustain, unless the internal capacity exists within school to sustain it. They have focused on the wrong variables – looking at systems rather than classrooms, emphasizing development accountability rather than promoting development. They have failed to recognize that without investing

substantially in capacity building in schools through teacher enquiry, shared leadership, collaboration and collective responsibility, the potential for sustained school improvement is inevitably diminished. (p. 23)

In line with this idea, Stoll (1999) explains a school's internal capacity as:

the power to engage in and sustain continuous learning of teachers and the school itself for the purpose of enhancing student learning. The three key influences of a school's internal capacity are the individual teachers within the school; the school's social and structural learning context; and the external context. (p. 506)

Clearly, both the above perspectives demonstrate that three key elements of a school's internal capacity have potential influence on building or sustaining a school's capacity for improvement: the professional development of teachers; the culture of a school which is conducive such as shared leadership, collaboration and collective responsibility amongst teachers, and; the teaching and learning context in the classroom.

The notion of school capacity is crucial to school improvement and principals are guardians of capacity creation (Jackson, 2000; Ibrahim & Wahab, 2012). Stoll et al. (2002) suggested that capacity building is at the heart of leadership for change or improvement. Related to this, they point out that there are four leadership dimensions: ensuring learning at all levels; using evidence to promote inquiry; building an extended community; and bridging community - dealing with the school-system interface (Ibrahim & Wahab 2012; Cosner, 2014; Lai 2015).

Stoll (1999) describes schools' capacity building for improvement comprehensively, including facets of relationship, sharing professional development and working together:

The right place to start building capacity is from within. Put people at the centre – don't neglect emotions; establish a positive climate; challenge low expectations as part of your learning vision; develop deep understanding of the change process; model, promote and support professional learning; cultivate 'development friendly' norms; work together within, between and beyond schools; change where necessary; foster creativity and empowerment; give inquiry and reflection pride of place; promote self-accountability and collective responsibility. (p. 504)

This is supported by the work of Sergiovanni (2001) who concluded that schools' capacity for improvement has more emphasis on the professional development of staff:

It creates intellectual capital by emphasizing the development of knowledge, competence and skill of teachers, parents, and other locals in the school community ... Teacher development can help build the intellectual capital that teachers need to keep up by increasing their knowledge of the disciplines and the pedagogical-content knowledge teachers need to teach these disciplines effectively. (p. 48)

In order to build capacity for improvement, certain conditions are required to be in place at school and classroom level which these conditions mutually support and sustain school improvement (Harris, 2002; Ibrahim & Wahab, 2012; Cosner, 2014; Lai, 2015). For instance, Hopkins et al. (2003) identified a number of the following school and classroom conditions that contribute directly to building school capacity to improve:

- transformational leadership approaches;
- a school-wide emphasis on teaching and learning;
- the use of performance and training;
- the use of performance data to guide decisions, targets and tactics;
- teamwork both within staff groups (collaborative planning, effective communication) and with stakeholders (involvement of teachers, pupils and parents in decision-making);
- a focus on reflection and research.
- a commitment to staff development;
- involvement of staff, students and the community in the school policies and decisions

A particular challenge for principals, however, is to create all above preconditions for successful improvement within the school. In other words, principals need to apply their leadership approaches wisely in new and creative ways to build high levels of capacity for improvement (Ibrahim & Wahab, 2012). Empirical evidence in education is still limited, but growing (Harris, 2002b; Stoll et al., 2002; Youngs & King, 2002; Hallinger & Kantamara, 2003). In terms of 'collaboration', Hallinger & Heck (2003), reported from a piece of their research, that a collaborative approach is likely to be most effective and that the principal's role involves creating structures that facilitate communication and collaboration among staff around the school's valued purposes. In order to involve staff, students and the community in the school policies and decisions, Silins and Mulford (2002) argue that school leaders need to establish the systems within school such as involving teachers and the school community in shared decision-making.

From their research findings based on a multiyear, qualitative study of principal leadership for professional development in urban elementary schools, Youngs and King (2002) identified three aspects of school capacity: 'teachers' knowledge, skills, and dispositions; professional community; and programme coherence' (p. 643). Furthermore, they commented that:

All teaching staff must be professionally competent in curriculum, pedagogy, assessment, and classroom management, and they must maintain high expectations for student learning. (p. 646)

In a similar vein, Sammons et al. (1995) suggested that developing capacity for school improvement needs two prominent aspects: first, a high emphasis on the quality improvement of teaching and learning through staff professional development; and second, the allocation and utilization of time and resources into the teaching and learning process. In relation to the facet of teacher capacity, often seen reflected by their knowledge and skills, empirical studies suggest that the capacity to teach in different ways is directly connected to views of self, to teachers' beliefs concerning their role in the classroom activity, and to the personas they adopt in the classroom (Harris, 2002). Furthermore, Youngs and King's (2002) empirical investigation found that the influence of individual teachers' knowledge, skills and dispositions on student achievement is well recognized in the literature on teacher education and professional development. This concern is encapsulated in Huberman's (1992) graphic warning that:

By not addressing the impact on pupils, we will have indulged in some magical thinking as before: that option meant implementation ... that implementation meant institutionalisation ... that enhanced teacher capacity means enhanced pupil achievement or development ... If changes in organisational and instructional practices are not followed down to the level of effects on pupils, we will have to admit more openly that we are essentially investing in staff development rather than in the improvement of pupils' abilities. (p. 26)

It would appear from the literature that systematic staff development is a key aspect of school improvement, a significant link between teacher development and student development (Ibrahim & Wahab, 2012), and that good staff development promotes teacher collaboration for improvement (Wahab et al. 2014). Following this, there are agreement amongst researchers (Hopkins & Jackson, 2003; Ibrahim & Wahab, 2012) that developing teachers is necessary to improve the quality of teaching and learning for schools to improve. Jackson (2000) believes that if the learning processes involve sharing and collaboratively-acquired knowledge, there is much greater potential for school improvement. In parallel with this, leadership needs to be fostered at all levels (Day 2003, Hadfield 2003, Harris 2003, Hopkins & Jackson 2003).

In fact, traditionally, the school improvement research recognized the importance of influencing teaching and learning processes in order to build the internal capability for improvement. As Harris (2001) concluded:

It was also clear that those departments that were improving recognized that without a central focus on teaching and learning, their improvement efforts would become marginalized and the possibility of sustaining improvement would be substantially reduced. (p. 483)

Jackson (2000) articulates that there are two capacity-related themes in school improvement.

... where the first relates to professional development as the ways in which teachers within the school learn together, expand their capacities and their personal masteries. A second issue consistently referred to in the school improvement literature is the development of the schools' capacity for improvement – where capacity is often quite narrowly conceived. (p. 11)

Beresford (2001), a researcher on the Improvement Quality of Education for All (IQEA) project, points out his view on building capacity for improvement as the following,

The IQEA project ... was based on the premise that schools needed to develop their capacity to manage change, while pursuing their own reform agendas to provide quality education for their students ... this capacity-building would involve most schools in a process of change in how they conducted their internal process and in how they conducted their professional relationship. (p. 123)

Jackson (2000) points out that there are three interconnecting elements, which are crucially important to capacity improvement: the generation of contextual knowledge through enquiry; the utilization of that knowledge to challenge organizational development dysfunctional ties; and the internal and external transfer and utilization of knowledge as a vehicle for developing leadership capacity. Schmuck (1990) argues that collaboration within schools and with school stakeholders is the major lever for enhancing teaching and learning as the core for a school's capacity for improvement.

Many of the difficulties experienced by staff, during periods of change, may be traced to the culture of the school. Thus, most deliberate attempts at school improvement affect not only the principal and faculty, but also the relationships between them and their collective relationships with the students and parents (p. 899).

In the review of the literature on distributed leadership, Ibrahim & Wahab (2012) point out that, where teachers share good practice and learn together, the possibility of securing better quality teaching is increased. Moreover, there is consensus among researchers (Hopkins, 1996; Ibrahim & Wahab 2012; Cosner, 2014; Lai, E.

2015) that, the transformational leader is able to share a vision with the school staff and to involve staff in making decisions. Day et al. (2000) and Wahab et al. (2014) have identified a post-transformational leadership style, suggesting that a post-transformational leader is effective by being people-centred and understanding that a positive psychological contact between a leader and his/her staff is fundamental to improving performance (Day et al. 2000). The linkage between school leadership approaches and school improvement will be discussed in the following section.

Conclusion

From the literature reviewed discussed earlier, it appears that schools principals exercise their leadership by emphasizing: (i) relationship and involvement among staff and stakeholders, (ii) staff professional development and teaching-learning, (iii) teachers and students as an individual, and (iv) bridging networking with outsiders, will develop the school's capacity for improvement. Those four key elements of a school's capacity for improvement are assumed to be impacted by principals' leadership approaches. In this sense, the literature suggests that those key elements are not isolated from each other but interact and influence one another (Hopkins, 1996; Day et al. 2000; Stoll et al., 2002; Ibrahim & Wahab, 2012; Cosner, 2014; Lai, (2015). Each of those four key elements and the combination of them together will influence the developing of a school's capacity for improvement. Following this, if the leadership approaches have a high positive impact on all of the four key elements, a high school capacity for improvement will be built.

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