THE FACTOR OF PRINCIPAL INSTRUCTIONAL LEADERSHIP ROLES THAT CONTRIBUTES THE MOST TO TEACHERS' CREATIVE PEDAGOGY IN KUALA PILAH PRIMARY SCHOOLS, NEGERI SEMBILAN, MALAYSIA

Rahmad Sukor Ab Samad*, Haris Abd Wahab (PhD) & Lee Yean Nee
University of Malaya
rahmad@um.edu.my

Abstrak: Kajian kuantitatif ini bertujuan menentukan faktor peranan kepimpinan instruksional pengetua yang menyumbang kepada pedagogi kreatif kebanyakan guru-guru di sekolah-sekolah rendah di Kuala Pilah, Negeri Sembilan, Malaysia. Kerangka konsep kajian ini diadaptasikan dan diolah daripada menggunakan Model *Principal Instructional Management Rating Scale (PIMRS)* oleh Hallinger (1983) dan Model *Creative Pedagogy* oleh Lin (2009). Terdapat sepuluh peranan kepimpinan di dalam Model *PIMRS* dan tiga elemen dalam Model *Creative Pedagogy*. Hasil kajian menunjukkan bahawa penganjuran perkembangan profesional merupakan faktor yang paling mempengaruhi pedagogi kreatif guru-guru.

Kata Kunci: *Peranan kepimpinan insstruksional pengetua, pedagogi kreatif guru-guru, penganjuran perkembangan profesional*

INTRODUCTION

Instructional leadership is proven as an essential tool for an effective school. Kabeta, Manchishi and Akakandelwa (2013) described the instructional leadership being implemented as one of the characteristics of effective schools. Furthermore, leadership is the second most important factor after classroom instruction that influence students' learning among all the other school-related factors (Leithwood, Louis, Anderson, &Wahlstrom, 2004). Previous studies have proven that leadership and classroom instruction are the two main elements in improving school academic performance and achievement.

Instructional leaders should be concerned with school routine jobs, as well as with the implementation of curricula, instruction and assessment at the same time (Peariso, 2011). This is aligned with another variable being discussed in this study which is creative pedagogy.Creative pedagogy is a model developed by Lin (2009) which encompasses a more integrated and interactive process of teaching and learning.It consists of three interrelated elements, namely creative teaching, teaching for creativity and creative learning. It focuses on interactions between teacher and learners' creative efforts, as well as the practice that reflects the various types of teacher beliefs (Lin, 2011a).Therefore, instructional principals playa crucial role in developing and encouraging teachers to conduct teaching and learning creatively. A multitude of instructional leadership roles are deemed as important factors inacademic achievement and improvement in teaching pedagogy. Hence, this study is aimed at determining the factor of principal instructional leadership roles that contributes the most to teachers' creative pedagogy.

Background of the Study (Malaysia Context)

In Malaysia, principals have to be responsible in all aspects of things happening in their schools. Their jobs include managing and administering school curricula as well as co-curricular activities, teacher and pupil welfare, motivating teachers and facilitating them in improving teaching and learning activities, promote a comfortable yet healthy school climate and culture, and last but not least, implement education policies successfully (Quah, 2011).Principals in Malaysia have to allocate and divide their time between instructional and administrative activities (Malaysia Education Blueprint, 2013-2025).

However, according to the Malaysia Education Blueprint (2013-2025), research has shown that instructional activities that directly raise the quality of teaching and learning in the school include lesson observations and curriculum

planning which have a more tangible impact on student outcomes than administrative activities. Instructional leadership roles also includecurricular and co-curricular activities to foster pupils' creative thinking skills at the same time (HalizahAwang&IshakRamly, 2008). Each and every secondary school teacher is required to apply teaching and learning approaches which will be able to inspire, as well as develop students' thinking skills (Kuldas, Hashim, & Ismail, 2015).Therefore, teachers are encouraged to promote creative thinking skills among the pupils by using various methods of teaching and learning and at the same time pupils are advised to think creatively and innovatively. Pupils are motivated to be creative thinkers in order for them to train themselves to think critically, to learn effectively and to solve problems efficiently.

Furthermore, promoting creative and critical thinking skills is aligned with Malaysia's National Education Philosophy which emphasizesa balanced education. The students are expected to be knowledgeable, besides having the ability to develop different types of thinking skills such as creative thinking and innovation; critical thinking and reasoning; as well as a high learning capacity (Malaysia Education Blueprint, 2013-2025). Since the 1980s, variety types of programs, seminars and short courses have been conducted to equip teachers and college lecturers in teaching thinking skills (Nagappan, 2001). Based on the findings of previous studies, however, most of the teachers were uncertain in teaching creative thinking skills. They are not well-prepared to teach the skills anddo not adequately understand the concept of creative thinking skills (Nagappan, 2001).

Malaysia's education system places great emphasis on passive learning and is more concerned with scoring in examinations hence favoring rote memorizations as a learning strategy. Hence, emphases are seldom given to collaborative learning approaches such as open discussions and sharing (Ying &Baboo, 2015). This can cause learners to become more submissive and lack independent and creative thinking skills essential for survival in the real world. Principals play a part in ensuring that teachers in their respective schools are well equipped for creative pedagogy to help foster students' creative thinking skills.

Statement of the Problem

Although the importance of principal instructional leadership roles and creative pedagogy is to be recognized and acknowledged, a lot of problems still haunt the education field regarding these two issues. For instance, Blasé's study (as cited in Quah, 2011) pointed out that many school administrators focus only on administrative duties and not on the quality of teaching. McEwan's study (as cited in Quah, 2011) asserted that most of the principals do not view instructional leadership as their main focus.This is largely because they lack skills and training in implementing instructional leadership roles as well as not being sufficiently committed and lacking in enthusiasm for what they are supposed to do as school leaders.

Creative pedagogy is also facing issues such as a majority of teachers are lacking in understanding about what constitutes critical and creative thinking, although they have been trained for teaching students in thinking critically and creatively (Stapleton, 2011). Moreover,Kuldas et al. (2015) highlighted that teachers are given insufficient training on utilizing creative and critical thinking skills among students. Nagappan (2001) indicated that forty-one percent of Malaysian public secondary school teachers did not receive any kind of training in teaching creative thinking skills. Furthermore, the teachers who had under gone training were in doubt whether they can bring any significant improvement on their practices of teaching higher-order thinking skills (Nagappan, 2001). Thus, it appears that secondary school teachers in Malaysia are not competent in integrating creative and higher-order thinking skills into their pedagogy.

Since there are problems in integrating creative and higher-order thinking skills among primary school students by the teachers, instructional leaders play crucial roles in promoting and assisting teachers to conduct teaching and learning in a creative way. Hence it is important to determine the significant predictor or factor of principal instructional leadership roles which can help teachers to manage teaching and learning creatively. The discussion is reflected in the following Figure 1.

Conceptual Framework

Figure 1 illustrates the conceptual framework for this research.The framework was adapted from the Hallinger (1983) and Lin (2009) models.

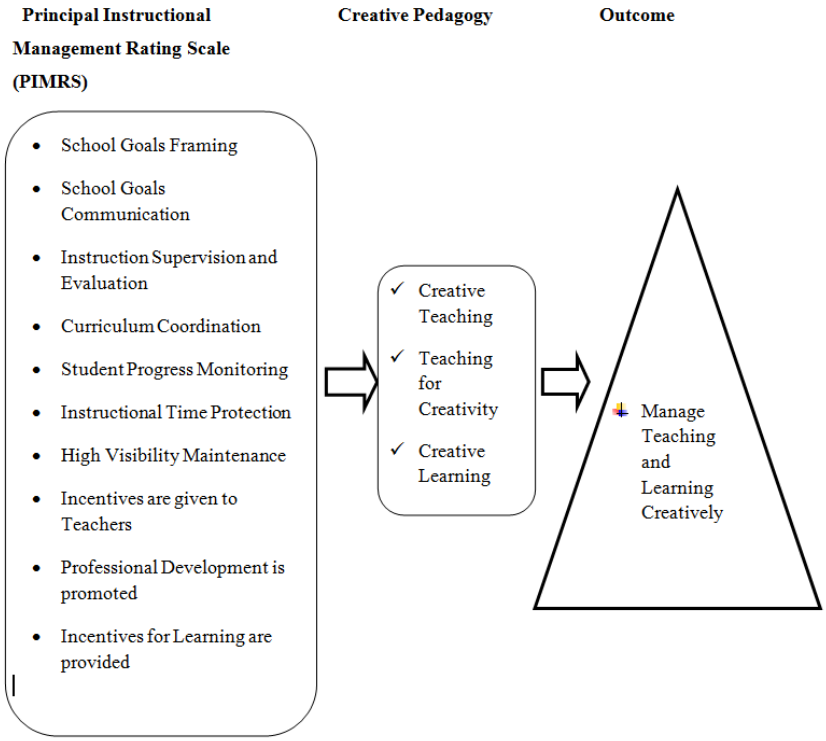

Figure 1. Principal Instructional Management Rating Scale (PIMRS) and CreativePedagogy Conceptual Framework(Adapted from the Hallinger (1983) and Lin (2009) models)

Research Question

What is the factor of principal instructional leadership roles that contributes the most to teachers' creative pedagogy in managing teaching and learning creatively in primary schools of Kuala Pilah?

The related hypotheses are stated in the following:

Ho : School goals framing, school goals communication, instruction supervision and evaluation, curriculum coordination, student progress monitoring, instructional time protection, high visibility maintenance, incentives are given to teachers, professional development is promoted and incentives for learning are provided are not the factors contributing mostto teachers' creative pedagogy in Kuala Pilah primary schools.

Ha : School goals framing, school goals communication, instruction supervision and evaluation, curriculum coordination, student progress monitoring, instructional time protection, high visibility maintenance, incentives are given to teachers, professional development is promoted and incentives for learning are provided are factors contributing most to teachers' creative pedagogy in Kuala Pilah primary schools.

METHODOLOGY

Solving a problem in an orderly and formal way is considered as research methodology, (Rajasekar, Philominathan, &Chinnathambi, 2013). Research methodology is a scientific study in discovering how the research is being conducted. Quantitative approach was adopted as the research design for this study. Survey method was used to collect data by using questionnaires and the data were analyzedstatistically, in order to know the trends or attitudes descriptions of a population (represented in a sample from the population)(Creswell, 2012), in this study. The attitude description for this study was the factor of principal instructional leadership roles that contributes the most to teachers' creative pedagogy in Kuala Pilahprimary schools.

Sample

The targeted population for this study is the total number of primary school teachersinthe Kuala Pilah district, which is 888 as shown in the website of the District Education Office of Kuala Pilah. However, it is not feasible to examine the whole population in most of the cases (Jackson, 2003). Therefore, a representative sample from the targeted population always becomes the choice of researchers. Simple random sampling was chosen as the technique for sample selectionin order to represent the whole population of primary school teachers in Kuala Pilah.First and foremost, the researcher wrote down 48 school names (there are 48 schools in Kuala Pilah) on 888 slips of paper. For example, if National School of Kepis has 30 teachers, hence, there will be 30 pieces of paper written NSK (abbreviation). After all the slips of papers have been written down with the school names clearly, they were put into an empty box. The researcher drew out 300 school names from the box. Hence, the sample was successfully selected. Finally, the researcher grouped the names into their respective schools. Hence, 15 primary schools in Kuala Pilah district were selected to fulfill the number of teachers (respondents) required which is 269.The sample size of 269 for this study was determined using the Krejcie and Morgan Table of Sample Size Determination.

Instrument

A questionnaire is the only instrument applied in this study.Part A of the questionnaire consists of five demographic questions. Meanwhile, the items in Part B were adapted and adopted based on the Principal Instructional Management Rating Scale (PIMRS) model. The model was developed by Hallinger in 1983. Other than that, the items in Part C (teachers' creative pedagogy) were constructed based on a variety of resources that focus on the creative pedagogy framework.

Instrument Validity and Reliability

The instrumentcontent validity was evaluated by a panel of evaluators. They are two professors from the University of Malaya who are experts in educational management and educational leadership, as well as one expert from the English Language Teaching Centre (ELTC), who is a master's holder in TESOL (Teaching English to Speakers of Other Languages).The panel evaluated the instrument to meet the required standards (Cooper & Schindler, 2006).

Apart from determining the content validity of the questionnaire items, the validity of the instrument was measured by usingthe Normality Test. The results indicated that the researcher could use empirical tests such as *t*-test, Pearson Correlation test, ANOVA and so forth. This is because the data were normally distributed; hence, all types of parametric tests can be used.

The instrument reliability was measured using Cronbach's alpha coefficient. The result showed that the instrument adopted for this study hasa high reliability value of .949.

Data Analysis

In this study, inferential statistical analysis (Multiple Regression Analysis) was used to measure the factor of principal instructional leadership roles that contributes the most to teachers' creative pedagogy in managing teaching and learning creatively.

RESULTS

The final results indicate that four predictors contribute significantly to teachers' creative pedagogy. Furthermore, the four predictors have correlations with teachers' creative pedagogy. The predictors are (a) professional development is promoted, (b) instructional time protection, (c) high visibility maintenance, and (d) school's goals communication. Nevertheless, professional development is promoted was found to be the factor of principal instructional leadership role that contributes the most to the dependent variable which is teachers' creative pedagogy. The following tables indicate the detailed explanations about the regression model of variables entered; relationship between factors of principal instructional leadership roles and teachers' creative pedagogy;regression model of ANOVA[a] test; and lastly coefficients of regression analysis on teachers' creative pedagogy.

Based on Table 1, the four predictor variables in the regression model for teachers' creative pedagogy are (a) professional development is promoted, (b) instructional time protection, (c) high visibility maintenance and (d) school's goals communication at $p < .05$. These four types of predictors are the contributory factors for the dependent variable in this study which is teachers' creative pedagogy. Hence, the other remaining 6 types of factors which were not entered into the regression model are the excluded variables which do not contribute to the dependent variable.

Table 1
Regression Model of Variables Entered/Removed

Model	Variables Entered	Method
1	Promoting professional development	Stepwise (Criteria: Probability- of-F-to-enter < = .050, Probability-of-F-to remove>= .100).
2	Instructional time protection	Stepwise (Criteria: Probability- of-F-to-enter < = .050, Probability-of-F-to remove >= .100).
3	High visibility maintenance	Stepwise (Criteria: Probability- of-F-to-enter < = .050, Probability-of-F-to remove >= .100).
4	School's goals communication	Stepwise (Criteria: Probability- of-F-to-enter < = .050, Probability-of-F-to remove >= .100).

a. *Dependent Variable: Teachers' Creative Pedagogy*

Table 2
Relationship between Factors of Principal Instructional Leadership Rolesand Teachers' Creative Pedagogy

Model	*R*	*R* Square	Adjusted *R* Square	Std. Error of the Estimate
1	.576[a]	.332	.329	.286
2	.641[b]	.410	.406	.269
3	.657[c]	.432	.426	.265
4	.664[d]	.441	.432	.263

a. Predictors: (Constant), professional development is promoted
b. Predictors: (Constant), professional development is promoted, instructional time protection
c. Predictors: (Constant), professional development is promoted, instructional time protection, high visibility maintenance
d. Predictors: (Constant), professional development is promoted, instructional time protection, high visibility maintenance, school's goals communication
e. Dependent Variable: Teachers' Creative Pedagogy

Table 2 indicates that the correlation between teachers' creative pedagogy and the predictor variable of promoting professional development is .576. Meanwhile, correlation between the dependent variable and the combination of promoting professional development and instructional time protection predictor variables is .641. Lastly, the correlation between the dependent variable and the linear combination of the four predictor variables is .664. In conclusion, the four types of predictor variables do have significant relationships with the dependent variable which is teachers' creative pedagogy.

Besides that, the R^2 value of .332 indicates that 33.2% of the change in the dependent variable (teachers' creative pedagogy) is caused by a change in the predictor variable of promoting professional development. Whereas, the combination of promoting professional development and instructional time protection contributes an additional 7.8% change to teachers' creative pedagogy, the combination of promoting professional development, instructional time protection and high visibility maintenance contributes another 1.2% change to thedependent variable. In conclusion, the four predictor variables combined have contributed 44.1% to teachers' creative pedagogy (dependent variable).

Table 3
Regression Model of ANOVA[a]Test

Model	Sum of Squares	df	Mean Square	*F*	Sig.
1	10.836	1, 267	10.836	132.532	.000[b]
2	13.406	2, 266	6.703	92.575	.000[c]
3	14.111	3, 265	4.704	67.181	.000[d]
4	14.402	4,264	3.601	52.045	.000[e]

a. Dependent Variable: Teachers' creative pedagogy
b. Predictors: (Constant), professional development is promoted
c. Predictors: (Constant), professional development is promoted, instructional time protection
d. Predictors: (Constant), professional development is promoted, instructionaltime protection and high visibility maintenance
e. Predictors: (Constant), professional development is promoted, instructionaltime protection, high visibility maintenance and school's goalscommunication

Table 4
Coefficients Regression Analysis on Teachers' Creative Pedagogy

Model	Variables	Standard Coefficients (Beta/β)	*t*-value	Sig.
4	(Constant)		9.554	.000
	Promoting professional development	.236	3.393	.001
	Instructional time protection	.230	3.777	.000
	High visibility maintenance	.176	2.625	.009
	School's goal communication	.147	2.050	.041

a. Dependent Variable: Teachers' Creative Pedagogy

Based on Table 3 and 4, promoting professional development is the factor of principal instructional leadership roles which significantly [F (1, 267) = 132.532, p< =.05] contributes 33.2% of the variance (R^2 = .332) in teachers' creative pedagogy. This means promoting professional development (β = .236, p < .05), or the capability of principals in supporting and promoting professional development among teachers is the main indicator in helping teachers to manage teaching and learning process creatively.

In addition, the combination of professional development is promoted and instructional time protection contributes 7.8% to the change of the variance (R^2 = .410) in teachers' creative pedagogy. Whereas, the other two predictor variables (high visibility maintenance and school's goals communication) do contribute a change in dependent variable, but their contribution is small, at 2.2% and 0.9% respectively. Besides that, the null hypothesis has been rejected as there are four predictor variables that contribute to the dependent variable (teachers' creative pedagogy).

Moreover, the factor of promoting professional development was found to be the factor contributing the most among the four predictor variables.

DISCUSSION

From the analysis, the factor of principal instructional leadership roles that contributes the most to teachers' creative pedagogy has been identified, which is promoting professional development.This was supported by many previous researchers such as Blasé and Blasé (2000); Bredeson (2000); Graczewski, Knudson, &Holtzman (2009); Sanzo,Sherman&Clayto (2011); Khoza (2012).Hallinger& Wang (2015); as well as Wang, Gurr, & Drysdale (2016).

First and foremost, Blasé and Blasé (2000) indicated that one of the major elements of effective instructional leadership in affecting teachers' classroom teaching was promoting professional growth, based on the reports of more than 800 teachers in the United States of America. Other than that, the importance of teacher professional development in pedagogical practices also has been emphasized by Graczewski et al. (2009) where principals in the study were found to be actively participating in professional development and had made it as one of their routine responsibilities. In addition, principals were playing an active role in creating and enhancing access to quality professional development, which was found to be widespread in primary schools across the region. Graczewski et al. (2009) also found that 77% of primary school teachers stated that the principal provided resources and encouraged them to be involved in professional development so that they can discover their own needs.

Besides that, Bredeson (2000) emphasized that school leaders are important contributors to teacher professional development. Highly effective principals are able to motivate teachers toward greater levels of independence and professional autonomy. These principals behave as role models, instructional leaders, facilitators and coaches to the teachers besides ensuring students' learning outcomes. They should not become the controller or director who always inspect and oversee teachers' and students' work. The rigidity and power exerted bythe leaders will threaten professional development of teachers. Furthermore, according to Khoza (2012), personal development was deemed as crucial in enhancing a sound culture for teaching and learning. Teacherswho get supportfrom school leaders are able to improve their teaching and learning. These teachers feel grateful and appreciated when school leaders encourage them to pursue studies and participate in other kinds of training.

In line with Hallinger and Wang (2015), the encouragement given toteacher professional learning brings the greatest impact on students' learning outcomes. Principals are encouraged to arrange for, provide, or notify teachers about relevant opportunities for professional staff development programs or training.Wang et al. (2016) also asserted that among the four successful school leadership elements examined in their studies, promoting professional development was found to be the most common strategy for enhancing school capabilities. Successful principals redesigned the school structures, facilitated improvements in teachers' work and enhanced teachers' competency in teaching via professional development programs. Sanzo et al. (2011) highlighted that it is crucial to provide meaningful professional development to teachers and the school as a whole. To instill a culture that values the importance of professional development and implements it effectively in schools is a complicated process. Hence, principals have to manage professional development programs carefully in schools for maximum benefit.

CONCLUSION

Overall, it is crucial for a principal or a school leader to support and provide opportunities as well as training to teachers so that teachers can develop themselves and gain more knowledge. Instructional leaders should promote lifelong learning and encourage teachers to pursue studies as well as participate in the required training so that they can deliver quality and creative instruction. Since a majority of primary and secondary school teachers are found lacking in creative thinking skills and many are ambiguous in conducting creative pedagogy in schools, the Ministry of Education inMalaysia should put more effortin addressing this issue in order to cultivate more capable and competent teachers in implementing creative pedagogy in education. Creative pedagogy requires a lot of support and encouragement from instructional leaders so that creative thinking skills can be instilled among the students.

Therefore, the Ministry Education and instructional leaders have to collaborate with teachers to achieve the ultimate goal of cultivating creative thinking skills in students for the future.

REFERENCES

Blasé, J. & Blasé, J. (2000).*Effective instructional leadership: Teachers' perspectives on how principals promote teaching and learning in schools.* Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.456.5752&rep=rep1&type=pdf

Bredeson, P.V. (2000). *The School Principal's Role in Teacher Professional Development.*Retrieved from http://www.tandfonline.com/doi/pdf/10.1080/13674580000200114

Cooper, D. R., & Schindler, P. S. (2006).*Business research methods* (9th ed.). New York, NY: McGraw-Hill
.

Creswell, J.W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Retrieved from https://www.google.com/webhp?sourceid=chromeinstant&ion=1&espv=2&ie=UTF8#q=creswell%202014%20educational%20research

Graczewski, C., Knudson, J., &Holtzman, D. J.(2009). *Instructional leadership in practice: What does it look like, and what influence does it have?* Retrieved from http://asge6130instructionalleadership.wikispaces.com/file/view/Instructional+Leadership+in+Practice.pdf

HalizahAwang,&IshakRamly. (2008). *Creative thinking skill approach through Problem-Based Learning: Pedagogy and practice in the Engineering classroom.* Retrieved from http://waset.org/publications/15369/creative-thinking-skill-approach-through-problem-based-learning-pedagogy-and-practice-in-the-engineering-classroom

Hallinger, P., & Wang, W. C. (2015).*Assessing instructional leadership with the Principal Instructional Management Rating Scale.*Retrieved fromhttp://ezproxy.um.edu.my:2433/book/10.1007/978-3-319-15533-3

Jackson, S. L. (2003). *Research methods and statistics: A critical thinking approach.* Belmont, CA: Wadsworth/Thomson Learning.

Kabeta, R.M., Manchishi, P.C. &Akakandelwa, A. (2013). Instructional leadership and its effect on the teaching and learning process: The case of head teachers in selected Basic Schools in the Central Province of Zambia. Retrieved from http://www.ijsr.net/archive/v4i4/SUB153255.pdf

Khoza, J.F. (2012). *The relationship between the school principals' instructional leadership prole and the academic performance of pupils in Swaziland primary schools.*
Retrieved from
http://uir.unisa.ac.za/bitstream/handle/10500/13245/dissertation_khoza_jf.pdf?sequence=1

Krejcie, R.V. & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.

Kuldas, S., Hashim, S., & Ismail, H. N. (2015). *Malaysian adolescent students' needs for enhancing thinking skills, counteracting risk factors and demonstrating academic resilience.*Retrieved fromhttp://www.tandfonline.com/doi/pdf/10.1080/02673843.2014.973890

Leithwood, K., Louis, K. S., Anderson, S., &Wahlstrom, K. (2004). *How leadership influences student learning.* Retrieved from
http://www.wallacefoundation.org/knowledgecenter/schoolleadership/keyresearch/Documents/How-Leadership-Influences-Student-Learning-ExecutiveSummary.pdf

Lin, Y.-S.(2009). Teacher and pupil responses to a creative pedagogy —Case studies of two primary classes in Taiwan. Unpublished Doctoral Thesis, Exeter: University of Exeter.

Lin, Y. S. (2011a). *Teacher and pupil responses to a creative pedagogy: Case studies of two primary sixth-grade classes in Taiwan.* Retrieved from https://ore.exeter.ac.uk/repository/bitstream/handle/10036/79393/LinY.pdf?sequence=2

Lin, Y. S. (2011b). *Fostering creativity through education: A conceptual framework of creative pedagogy.*Retrieved fromhttp://www.scirp.org/journal/PaperInformation.aspx?paperID=6710

Malaysia Education Blueprint 2013-2025(Preschool to Post -Secondary Education).(2013) Retrieved from http://www.moe.gov.my/cms/upload_files/articlefile/2013/articlefile_file_003108.pdf

Nagappan, R. (2001). *The teaching of Higher-Order Thinking Skills in Malaysia.* Retrieved fromhttp://nsrajendran.tripod.com/Papers/asiapacificjournal.pdf

Peariso, J. F. (2011). *A study of principals' instructional leadership behaviors and beliefs of good pedagogical practice among effective California High Schools serving socio economically disadvantaged and English learners.*Retrieved from http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1456&context=doctoral

Quah, C. S. (2011). *Instructional leadership among principals of secondary schools in Malaysia.*Retrieved from http://www.interesjournals.org/full-articles/instructional-leadership-among-principals-of-secondary-schools-in malaysia.pdf?view=inline

Rajasekar, S., Philominathan, P., &Chinnathambi, V. (2013).*Research methodology*. Retrieved from http://www.researchsystem.siam.edu/images/independent/Role_of_Entrepreneurship_in_Future_Economic_ Development_of_Taiwan/Chapter_3.pdf

Sanzo, L.K., Sherman, W.H., &Clayto, J. (2011).*Leadership practices of successful middle school principals.* Retrieved from http://ezproxy.um.edu.my:2128/doi/pdfplus/10.1108/09578231111102045

Stapleton, P. (2011). *A survey of attitudes towards critical thinking among Hong Kong secondary school teachers: Implications for policy change.* Retrieved From https://www.researchgate.net/publication/251707958_A_survey_of_attitudes_towards_critical_thinking_among_Hong_Kong_secondary_school_teachers_Implications_for_policy_change

Wang, L.H.,Gurr, D.,&Drysdale, L. (2016).*Successful school leadership: Case studies of four Singapore primary schools.* Retrieved Fromhttp://ezproxy.um.edu.my:2128/doi/pdfplus/10.1108/JEA-03-2015-0022

Ying, N. I. &Baboo, S. B. (2015).*Creative pedagogies and video making: a study on Malaysian adolescents' participation in environmental issues.* Retrieved from https://www.academia.edu/12775605/CREATIVE_PEDAGOGIES_AND_VIDEO_MAKING_A_STUDY_ON_MALAYSIAN_ADOLESCENTS_PARTICIPATION_IN_ENVIRONMENTAL_ISSUES