

The Relationship between Instructional Leadership and Self-Efficacy in Environmental Education among Malaysian Secondary School Teachers

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Abstract: The aim of this study was to identify the relationship between teachers' perception towards school principals' instructional leadership practices and teachers background factor with teachers' self-efficacy in implementing Environmental Education. This study involved 300 teachers from 30 Malaysian Daily Secondary School from the states of Perlis represents Northern Zone, states of Selangor represents Central Zone, states of Pahang represents Eastern Zone, states of Malacca represents Southern Zone and states of Sarawak represents East Malaysia. Nevertheless, the analyses of the study were based on 263 sets (87.7%) of completed questionnaires from 283 questionnaires collected. Descriptive statistics (mean, standard deviation, frequency and percentage) and inferential statistics (*t*-test, one-way ANOVA and correlation Pearson *r*) were utilized to analyze and present the findings. Overall, the findings showed that the level of teachers self-efficacy in Environmental Education were moderate ($M=3.53$, $SD=.30$). According to teachers' perception, the school principals' instructional leadership practices in Environmental Education ($M=3.36$, $SD=.77$) were also moderate. The findings also showed that there is a significant and positive relationship between teachers' self-efficacy and teachers' background only on teachers academic qualifications factor ($r=.148$, $p=.017$), teachers' perception towards school principals' instructional leadership for all the three dimension that is Dimensional of Defining the School and the Environmental Goal ($r=.185$, $p=.003$), Dimensional of Instructional Management Programs and Environmental Programs ($r=.150$, $p=.015$) and Dimensional of Climate Nurturing Teaching and Learning of Environmental Education ($r=.277$, $p=.000$). This finding proved that there is a relationship between school principals' instructional leadership practices with teachers self-efficacy and this factor also influence teachers' self-efficacy in implementing Environmental Education. According to the findings, several suggestions were suggested to school, Education Ministry and future research.

Keywords: Environmental Education, Teachers' Self-Efficacy, Instructional Leadership

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INTRODUCTION

Educational play an important role in shaping the mind, thoughts and attitude towards the goodness. Environmental Education (EE) also emphasises in changing minds, attitudes and practices towards caring for the environment in any action taken. According to Palmer (1998:7): "Environmental Education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-

relatedness amongst man, his culture, and his biophysical surroundings. Environmental Education also entails practice in decision-making and self-formulation of behaviour about issues concerning environmental quality.” In the Malaysian context, EE has been officially introduced with the publication of Guidebook of Environmental Education Teacher Cross Curriculum for Primary and Secondary Schools (1998) by the Curriculum Development Division, Ministry of Education. For the preschool this book was published in 2005. Nevertheless, according to Pudis, Tagi and Periasamy (2004), the effectiveness of its implementation is still limited and unequal implementation amongst schools. They stated that: "... many strategies have been initiated to integrate Environmental Education into the national education curriculum. Although the Ministry of Education provides a Guidebook on Environmental Education to all schools, the implementation has been limited and uneven. " The question is, whether the teacher is capable or has high self-efficacy to integrate and incorporate the values of EE in the field of curriculum and co-curriculum in school? Are teachers able to produce students who acquired the positive attitudes and have the skills to enable them to play an active role in solving problems related to environmental issues in practical? These questions can be unfolded by motivating teachers to integrate EE in teaching and learning process effectively and meaningfully. Therefore, this study attempted to find out what factors contribute to the improvement of skills, abilities or self-efficacy of teachers in the implementation of EE in schools. Teachers' ability or self-efficacy in general, is not a strange terminology for researchers from other countries. However, these elements are still considered as new issues in our education. In fact, some teachers would not understand the term. This phenomenon occurred probably due to the lack of attention in teachers self-efficacy studies as alleged by Lim and Poon (1997). Although teachers' self-efficacy is less exposed in our education, but does not mean that this issue never existed. A study conducted by Ishak (2001) has identified that teachers' self-efficacy was moderate. Early retirement of teachers showed that teachers felt less confident in their ability to teach and perform duties in their perspective school (Lim and Poon, 1997). Brouwers, Evers, and Tomic (1999) in Teng Lung Kiu (2006), also indicated that teachers' self-efficacy predicted the phenomenon of "teacher burnout."

OBJECTIVE OF THIS STUDY

- 1) To identify the level of teachers' perceptions towards school principals' instructional leadership and the levels of teachers' self-efficacy in implementation of EE;
- 2) To determine the level of teachers self-efficacy based on teachers background factors;
- 3) To determine whether there was a significant relationship between teachers' perceptions towards school principals' instructional leadership practices and teachers background factors with teachers' self-efficacy in implementation of EE.

RESEARCH QUESTIONS

- 1) What are the levels of teachers' perceptions towards school principals' instructional leadership practices and levels of teachers' self-efficacy in implementation of EE?
- 2) What are the levels of teachers' self-efficacy based on teachers background factors?
- 3) Is there a significant relationship between teachers' perceptions towards school principals' instructional leadership practices factors and teachers' background factors with teachers' self-efficacy in implementation of EE?

SIGNIFICANCE OF THIS STUDY

It is hoped that the results of this study will help to enhance knowledge, cultivate awareness and intensify the involvement of school principals and teachers in implementing the subject of EE cross the curriculum. The importance of this research on teachers self-efficacy, factors of school principals' instructional leadership and the factors of teachers background in implementation of EE is expected to provide information to the relevant authorities in providing exposure and knowledge to school principals and teachers about the importance of preserving and conserving the environment by having courses, workshops, awareness camps, seminars and lectures.

It is hoped through these programs will lead towards a guaranteed teaching process and able to improve the shortage and weaknesses in teaching and learning (Jamaluddin Harun and Zaidatun Tasir, 2003). This can be overcome in order to increase knowledge and positive attitude to the environment because according to Bethel, Ellis and Barufaldi (1982), individuals do not have the understanding and personal commitment to be neutral and even negative for EE.

OPERATIONAL DEFINITION

Self-efficacy is defined as a person's consideration of its ability to manage and implement the actions needed to achieve the performance been set. It is also associated with a person's skill but it is more of a person's judgments about any issues that can be done using skills own (Bandura, 1986). In this study, self-efficacy refers to the two

scales developed by Sia (1992) which are Personal Environmental Education Teaching Efficacy Belief Scale and Environmental Education Teaching Outcome Expectancy Scale, while the factors identified to affect teacher self-efficacy in this study were (i) teachers' knowledge towards EE and environmental issues (ii) teachers' attitudes towards environment (iii) teachers' awareness towards environment (iv) teachers' perceptions towards school principals instructional leadership practices (v) teachers' background factors and (vi) school location factor.

Leadership in environment concept is viewed as a leader who has the passion towards environment. Environmental leadership refers to leaders who have the personality, appreciate and love the environment. Hence, in the context of this study leadership in environment refers to school principals and how the principals show their leadership in instructional field exert to set in motion the energy within a group in order to enhance and applied EE in their perspective schools. Based on the concept model by Hallinger and Murphy (1987), researchers have adopted the instructional leadership to the concept of environmental instructional leadership that has been divided into three dimensions, namely (i) Dimensional of Defining the School and the Environmental Goal, (ii) Dimensional of Instructional Management Programs and Environmental Programs (iii) Dimensional of Climate Nurturing Teaching and Learning of EE. The three dimensions are then divided into eleven functions, namely (i) Functional of formulate academic goals and objectives of the school environment, (ii) Functional of school goals and objectives of the environment, (iii) Functional of observation and evaluation teachers teaching related to EE (iv) Functional of coordinating EE curriculum, (v) Functional of monitoring academic progress and implementation of environmental improvement, (vi) Functional of controlling and protecting instructional time, (vii) Functional of supporting in teaching EE, (viii) Functional of providing an incentive for teachers' efforts to implement EE programs and activities, (ix) Functional of cultivating staff development on EE, (x) Functional of setting and enforcing academic standards and environmental standards (xi) Functional of providing benefits for students.

The level of teachers' self-efficacy and teacher perceptions towards school principals' instructional leadership is determined based on the mean score. Table 1 below shows the interpretation of the levels.

Table 1: Mean scores value and scale interpretation for the level of Teachers Self-Efficacy, Attitude, Awareness and Principal Instructional Leadership

Mean Score Value	Interpretation for the level of Teacher Self-Efficacy and Principal Instructional Leadership
1.00-2.33	Low
2.34-3.66	Medium
3.66-5.00	High

METHODOLOGY

This study is descriptive-correlation study. Descriptive statistics were used so that this study can be presented in a simpler, detailed and meant to facilitate understanding. Correlation is a good example of a quantitative exploration study (Langenbach 1994: 88). According to Sulaiman (1991) correlation is one way that can be used to describe the relationship between the two samples or two variables. In addition, this study is a descriptive survey study of teachers in secondary schools in Malaysia. According to Mohd Majid Konting (2005), descriptive research aims to explain a phenomenon that is taking place. Besides this, survey method is the specific way to gather information about a population (Blake & Champion, 1976). In this study, quantitative research methods are based on the collection information from the sample study.

This study involved 300 teachers from 30 Malaysian Daily Secondary Schools selected from the five states of Perlis, Selangor, Pahang, Malacca and Sarawak. The method used is based on a stratified random sampling method. However, only 263 sets of completed questionnaires (out of 283 sets of collected questionnaires) are used to analyse the data. The total of respondent ($n = 263$) meet the sample size that had been calculated by the *GPower* programs with alpha value; $\alpha = .05$, effect size value = 0.15(middle) and the actual power or $1 - \beta$ test statistics inferential value = 0.95.

INSTRUMENTATION

Questionnaire survey instrument was divided into three main sections. Section A seeks to obtain information of respondent background and school background. The respondent background aspects including gender, age, position held, period of holding the post, teaching experience, academic qualifications and staff development program on EE. The school background aspects include the location of schools, whether it's situated in urban or rural area. In order to measure the teachers' perceptions towards school principals instructional leadership practices on EE (Section B), these questions had been adapted from the *Principal Instructional Management Rating Scale (PIMRS)*

questionnaires. PIMRS questionnaire meets the purpose of this study that has been developed by Hallinger and Murphy (1987). To measure the level of teacher self-efficacy (Part C) on EE a questionnaire developed by Archibald P. Sia (Sia *et. al*, 1992) from the Department of Elementary Education, California State University Northridge, entitled Environmental Education Efficacy Belief Instruments (EEEEBI) was used. This instrument consists of two scales namely, *Environmental Education Personal Teaching Efficacy Belief Scale* and *Environmental Education Teaching Outcome Expectancy Scale*. The entire questionnaire used in this study has been validated by experts appointed.

FINDINGS

The findings showed that teachers' perceptions towards school principals instructional leadership practices in EE is moderate ($M=3.36$, $SD=.77$), see Table 1. Specifically, teachers' perceptions towards school principals instructional leadership practices for the first dimension ($M=3.19$, $SD=.87$), second dimension ($M=3.10$, $SD=.92$) and third dimension ($M=3.54$, $SD=.77$) is also moderate.

Table 1: Levels of Teachers Perception towards School Principals Instructional Leadership in Implementation of Environmental Education

Variables	Levels	Frequency (<i>n</i> =263)	Percentage (%)	<i>M</i>	<i>SD</i>
Overall	Low	26	9.9	3.36	.77
	Moderate	138	52.5		
	High	99	37.6		
Dimension 1: Defining the School and the Environmental Goals	Low	43	16.3	3.19	.87
	Moderate	127	48.3		
	High	93	35.4		
Dimension 2: Instructional Management Programs and Environment Programs	Low	56	21.3	3.10	.92
	Moderate	119	45.2		
	High	88	33.5		
Dimension 3: Climate Nurturing Teaching and Learning of EE	Low	19	7.2	3.54	.77
	Medium	111	42.2		
	High	133	50.6		

The findings of this study showed that teachers self-efficacy in implementation of EE is moderate ($M=3.53$, $SD=.30$), refer Table 2. Specifically, the level of teachers self-efficacy for Environmental Education Personal Teaching Efficacy Beliefs Scale is also moderate ($M=3.29$, $SD=.32$). Instead, the results showed the level of teacher self-efficacy for Environmental Teaching Outcome Expectancy Scale were high ($M=3.82$, $SD=.43$).

Table 2: Levels of Teachers Self-Efficacy in Implementation of Environmental Education

Variables	Level	Frequency (<i>n</i> =263)	Percentage (%)	<i>M</i>	<i>SD</i>
Overall	Low	0	0	3.53	.30
	Medium	196	74.5		
	High	67	25.5		
Environmental Education Personal Teaching Efficacy Beliefs Scale	Low	1	0.4	3.29	.32
	Medium	233	88.6		
	High	29	11.0		
Environmental Teaching Outcome Expectancy Scale	Low	0	0	3.82	.43
	Medium	81	30.8		
	High	182	69.2		

Based on Table 3, the results have shown that male teachers level of efficacy ($M=3.54$, $SD=.31$) are higher than female teachers ($M=3.53$, $SD=.30$); a teacher who is a Masters holders level of efficacy ($M= 3.65$, $SD=.31$) are higher than teacher who is a Degree holders ($M=3.51$, $SD=.29$); The Senior Subject Teachers ($M=3.53$, $SD=.32$) and The Head of Panel ($M=3.53$, $SD=.29$) showed a high level of efficacy; teachers who attended the staff development programs on EE ($M=3.55$, $SD=.32$) have higher level of efficacy compared to teachers who did not attended the staff development programs on EE ($M=3.52$, $SD=.29$).

Table 3: Levels of Teachers Self-Efficacy Based on Teachers Background Factors

Efficacy	Variables	n	M	SD	t*	df	p
	Gender						
Overall	Male	62	3.54	.31	.262	261	.794
	Female	201	3.53	.30			
Personal Scale	Male	62	3.30	.31	.115	261	.908
	Female	201	3.29	.33			
Outcome Expectancy Scale	Male	62	3.84	.47	.305	261	.761
	Female	201	3.82	.42			
	Academic Qualifications						
Overall	Degree	232	3.51	.29	-2.41	261	.017**
	Masters	31	3.65	.31			
Personal Scale	Degree	232	3.28	.32	-2.10	261	.035**
	Masters	31	3.41	.37			
Outcome Expectancy Scale	Degree	232	3.81	.43	-1.78	261	.076
	Masters	31	3.96	.46			
	Position held						
Overall	Senior Teacher	107	3.53	.32	-0.53	261	.958
	Head of Panel	156	3.53	.29			
Personal Scale	Senior Teacher	107	3.29	.34	-.563	261	.574
	Head of Panel	156	3.31	.32			
Outcome Expectancy Scale	Senior Teacher	107	3.84	.44	.466	261	.641
	Head of Panel	156	3.82	.43			
	Staff Development Programs on EE						
Overall	Had attended	58	3.55	.32	.607	261	.545
	Not attended	205	3.52	.29			
Personal Scale	Had attended	58	3.30	.34	-.037	261	.971
	Not attended	205	3.30	.32			
Outcome Expectancy Scale	Had attended	58	3.88	.43	1.007	261	.315
	Not attended	205	3.81	.43			

Note: **t* value reported based on equality of variance assumptions is met.

**There is significant difference.

Table 4 shows that teachers under the age of 30's have higher level of efficacy ($M=3.62$, $SD=.26$) compared to teachers in the age range of 56-58 years ($M=3.39$, $SD=.37$); new teachers who has taught under 6 years have higher level of efficacy ($M=3.61$, $SD=.26$) than teachers who have taught between 12-16 years ($M=3.48$, $SD=.33$), while teachers who have holding the post for 16-20 years have higher level of efficacy ($M=3.60$, $SD=.29$) than teachers who holding the post for 11-15 years ($M=3.45$, $SD=.37$).

Table 4: Mean Score for Self-Efficacy and Its Subscale Based on Teachers Age, Teaching Experience and Period of Holding the Post Factors

Variables	n	Factors					
		Overall		M		SD	
				Personal Scale		Outcome Expectancy Scale	
Age (years)							
≤ 30	30	3.62	.26	3.40	.34	3.91	.41
31-35	34	3.57	.23	3.34	.27	3.87	.34
36-40	46	3.49	.30	3.27	.30	3.77	.44
41-45	80	3.50	.36	3.25	.38	3.82	.48
46-50	53	3.57	.25	3.35	.28	3.88	.41
51-55	18	3.40	.27	3.22	.26	3.64	.43
56-58	2	3.39	.37	3.19	.49	3.65	.21
Teaching Experience (years)							
≤ 6	40	3.61	.26	3.40	.33	3.89	.38
7-11	43	3.55	.33	3.30	.34	3.87	.45
12-16	69	3.48	.33	3.25	.34	3.79	.44
17-21	56	3.51	.31	3.28	.32	3.81	.47
≥ 22	55	3.53	.26	3.31	.29	3.83	.42
Period of Holding the Post (years)							
3-5	176	3.53	.29	3.30	.32	3.82	.42
6-10	65	3.55	.31	3.30	.33	3.88	.41
11-15	18	3.45	.37	3.30	.39	3.64	.45
16-20	4	3.60	.29	3.23	.23	4.07	.82

The findings also concluded that school principals who practiced high level of instructional leadership showed their teachers with high level of efficacy ($M=3.60, SD=.30$) than school principals who practiced low level of instructional leadership ($M=3.46, SD=.35$); refer Table 5.

Table 5: Teachers Self-Efficacy Mean Score and Its Subscale Based on Teachers Perception towards School Principal Instructional Leadership

Variables	n	Leadership					
		Overall		M		SD	
				Personal Scale		Outcome Expectancy Sale	
Level of Leadership Overall							
Low	26	3.46	.35	3.32	.42	3.64	.44
Moderate	139	3.49	.28	3.30	.32	3.73	.40
High	98	3.60	.30	3.30	.31	4.00	.41
Level of Dimensions 1: Defining the School And the Environmental Goals							
Low	43	3.50	.34	3.33	.40	3.71	.47
Moderate	127	3.49	.30	3.28	.34	3.76	.42
High	93	3.60	.26	3.31	.26	3.97	.40
Level of Dimensions 2: Instructional Management Programs and Environmental Programs							
Low	56	3.48	.34	3.32	.40	3.68	.44
Moderate	119	3.51	.27	3.30	.30	3.79	.39
High	88	3.58	.30	3.28	.30	3.97	.44
Level of Dimensions 3: Climate Nurturing Teaching and Learning of EE							
Low	19	3.47	.39	3.31	.41	3.67	.51
Moderate	111	3.46	.26	3.28	.31	3.70	.40
High	133	3.59	.30	3.30	.33	3.96	.41

The study also showed that there was a positive significant relationship (see Table 6) between teachers self-efficacy with academic qualification factors ($r=.148, p=.017$) and teachers' perceptions towards school principals' instructional leadership practices factors for all the three dimension namely Dimensional of Defining the School and the Environmental Goals ($r=.185, p=.003$); Dimensional of Instructional Management Programs and Environmental Programs ($r=.150, p=.015$); and Dimensional of Climate Nurturing Teaching and Learning of EE ($r=.277, p=.000$).

Table 6: Pearson *r* Correlations between Teachers Self-Efficacy and Its Subscale with Independent Variables that are studied

Variables	<i>r</i>		<i>p</i>			
	Overall		Personal Scale	Outcome Sale	Expectancy	
Gender	-.016	.794	-.007	.908	-.019	.761
Academic Qualifications	.148*	.017	.129*	.037	.109	.076
Position Held	.003	.958	.035	.574	-.029	.641
Staff Development Programs on EE	-.038	.545	.002	.971	-.062	.315
Age	-.118	.057	-.114	.066	-.077	.216
Teaching Experience	-.099	.110	-.084	.177	-.076	.219
Period of Holding the Post	-.042	.499	-.011	.859	-.056	.365
Level of school principal instructional leadership practices	.23**	.000	.020	.748	.358**	.000
• Dimensions 1	.185**	.003	.762	.263	.277**	.000
• Dimensions 2	.150*	.015	-.032	.611	.270**	.000
• Dimensions 3	.277**	.000	.048	.434	.395**	.000

Note: ** Significant at 0.01 (2 tailed)

* Significant at 0.05 (2 tailed)

DISCUSSION

The findings from this research proved that according to teachers' perception, school principals' demonstrated experience and confidence characteristics in instructional leadership at moderate level but according to school principals' perception, they practice a high level of instructional leadership (Shafari, 2001). Meanwhile, a study done by Shahrom (1999) showed that school principal had played their role in all aspects of instructional leadership. Instead Basset, Crame and Walker (1974) in their findings indicated school principals as instructional leaders are at a level that is less favourable. Findings of a study done by Peter & Rijeng (2000) and Munira (2000), found that school principals practiced leadership abilities and performed their function as instructional leaders. The study done by Baharom (1998) and Abdullah Ismail (2001), shows the school principal implement functions of instructional leadership frequently and satisfying. The study done by Baharom (1998) also found that teachers' perceptions towards school principals' instructional leadership affect their job satisfaction. This indirectly gives the impression that the instructional leadership of school principals can lead to motivate teachers in performing their duties.

This finding showed that secondary school teachers in Malaysia have moderate level of self-efficacy in implementation of EE. In particular, teachers were found to have moderate levels of self-efficacy for Environmental Education Personal Teaching Efficacy Belief Scale. But otherwise, secondary school teachers in Malaysia showed high level of self-efficacy for Environmental Education Teaching Outcome Expectancy Scale. The findings of this study are to support research done by Sia (1992) which showed the low level of teachers' self-efficacy in Environmental Education Personal Teaching Efficacy Belief Scale and high level of teachers' self-efficacy for Environmental Education Teaching Outcome Expectancy Scale.

The findings of this study has identified that there was a positive significant relationship between teachers self-efficacy in implementation of EE based on academic qualification factors and teachers' perceptions towards school principal instructional leadership practices factors in implementation of EE.

The result of this study clearly shows that academic qualifications factor has a significant relationship with teachers' self-efficacy. These findings support the study done by Hoy & Woolfolk (1993), Moore & Esselman (1992) and Milson (2001). A study done by Hoy & Woolfolk (1993) found that academic qualifications influence teachers' personal teaching efficacy (PTE). The study done by Moore & Esselman (1992) also discovered that academic qualification is a significant variable for teachers PTE. They found that non-graduate teachers have a higher PTE than the graduate teachers. Study done by Milson (2001) also concluded that academic qualification factors affect teachers' self-efficacy.

The findings had identified that there was a significant relationship between teachers self-efficacy with teachers' perceptions towards school principal instructional leadership practices. This result shows school principals instructional leadership practices improve teachers' beliefs on their ability. Instructional leadership will not only improve the effectiveness of the performance of subordinates, but it also increases a person self-efficacy to produce any results beyond expectations (Bass & Avolio, 1990). These findings support the study done by Hipp (1996) that showed there was a significant relationship between leadership and teachers general teaching efficacy (GTE), $r=.142$, and teachers personal teaching efficacy (PTE), $r=.142$. Research done by Short and Spenser (1990) also found teachers perception on effective instructional school principals' leadership had positive relationship with teacher teaching in classroom. The research findings by Hallinger and Murphy (1987 & 1985), found that teachers perception on school principals who have effective instructional leadership always involved in the teaching

supervision and curriculum management. The study done by Narimah (1997), Chan (1992), Brandt (1987) and Andrews, Soder & Jocoby (1986) also showed existence of positive significant relationship between instructional leadership and academic achievement. The study found that high scoring students came from schools with principals who practice effective instructional leadership.

The findings of this study also prove the model by Hallinger & Murphy (1985) which stated that the effectiveness and excellence of a school is based on the principals' instructional leadership and this includes the effectiveness in implementation of EE which is closely related to the commitment of principals and teachers teaching. For Hallinger & Murphy (1985), instructional leadership is an activity undertaken by the school to enhance the successful of teaching and learning process and the development of school. Environmental activities should be implemented to further enhance the quality of teaching and school environment.

Instructional leadership researches views that functional of instructional leadership should be applied in schools. Leadership is considered dominant in the leadership of principals. This is due to instructional leadership can enhance motivation and confidence of subordinates towards greater excellence. The study done by Andi Audryanah (2007) also proved that to be an effective principal, and to ensure that EE effectively implemented a school principal should adopt the functions of instructional leadership because leadership influenced many aspects of education towards achieving the goals and vision of education to form a pattern of leadership excellence and quality in accordance with the global changes and current science and technology developments. Research had proven that school principal instructional leadership could enhance the effectiveness, commitment, satisfaction and effort of teachers. Hence, instructional leadership which is based on organizational management can be regarded as effective leadership practices.

CONCLUSION

The study was conducted to identify the relationship between teachers' perception towards school principals' instructional leadership practices and teachers background factor with teachers' self-efficacy in implementation of EE in the states of Perlis, Selangor, Pahang, Melaka and Sarawak in Malaysia. Therefore, this study can only be generalized to teachers in five states involved with this study at the time research data collected. The results of this study showed that there is a significant relationship between teachers' perception towards school principal instructional leadership practices as well as teachers academic qualification with teachers self-efficacy in implementation of EE

Information derived from these thesis research findings will be a good source of information to Ministry of Education; in particular Curriculum Development Division and policy makers to take into account these factors in updating the curriculum and syllabus for EE. This is to ensure that EE can be truly implemented effectively and achieve the goals and objectives as set out in the Teachers' Guidebook of Environmental Education Cross Curriculum for KBSM, 1998. Therefore, the level of teachers' self-efficacy or the teachers' ability to teach EE should be given serious attention and should not be taken lightly. It is hoped that the information obtained from this study will help to enhance knowledge, cultivate awareness and intensify the involvement of principals, teachers and students in implementation of EE as a cross curriculum subjects. The findings of this study is also expected to help the District Education Office, Department of Education, Institute of Aminuddin Baki, Institute of Principalship Studies, University of Malaya, Institute of Malaysian Teachers Education and other organizations to provide exposure and knowledge of school administrators and teachers about the importance of preserving and conserving the environment by way of holding conventions, seminars, courses, workshops, camps and lectures. Finally, this study hopes to contribute useful knowledge by enrich and expand the research in the field of EE in addition to help and to be a source of reference to others researchers in the near future.

REFERENCES

- Abdullah Ismail. (2001). *Persepsi guru terhadap kepemimpinan pengajaran pengetua-pengetua sekolah menengah daerah Temerloh dan Bera*. Unpublished Masters Thesis. Serdang: Universiti Putra Malaysia.
- Andi Audryanah. (2007). *Kepemimpinan pengajaran dan efikasi sendiri pengetua sekolah menengah dan hubungannya dengan pencapaian akademik sekolah*. Unpublished Masters Thesis. Skudai: Universiti Teknologi Malaysia.
- Andrew, R. L., Soder, R., & Jocoby. (1986). Principal instructional leadership and student achievement. *Instructional Leadership*.
- Bandura, A. (1986). *Social Foundations of Thought and Action*. Englewood Cliffs. NJ:Prentice Hall.

- Baharom Mohamad (1998). *Persepsi guru-guru terhadap kepemimpinan pengajaran pengetua sekolah harapan negara di negeri Johor: Satu Tinjauan*. Unpublished Masters Thesis. Skudai: Universiti Teknologi Malaysia.
- Bass, B.M. & Avolio, B.J. (1990). *Transformational Leadership Development: Manual for Multifactor Leadership Questionnaire*. Palo Alto: California: Consulting Psychologist Press Inc.
- Basset, G. W., Crème, A. R. & Walker, W. G. (1974). *Headmaster For Better School*. St. Lucia: University Queensland Press.
- Bethel, L.J., Ellis, J.D. & Barufaldi, J.P. (1982). The effect of a NSF institute on in service teacher's views of science and attitudes toward science education. *Science Education*. 66(4): 643-651.
- Blake, J. A. & Champion, D. J. (1976). *Method and Issues in Social Research*. New York: John Willey and Sons.
- Brandt, R. (1987). On the leadership and student achievement: A conversation with Richard Andrews. *Educational Leadership*. 45. 5-16.
- Chan Yau Chi. (1992). A study of the principals' instructional leadership. *Educational Leadership*. 54-61.
- Hallinger, P., & Murphy, J. (1985). Instructional leadership and school socio-economic status: A preliminary investigation. *Administrator's Notebook*. 31(5): 1-4.
- Hallinger, P., & Murphy, J. (1987). Assessing and developing principal instructional leadership. *Education Leadership*. 45(1): 54-62.
- Hipp, K.A. (1996). *Teacher efficacy: Influence of principal leadership behaviour*. Paper presented at the Annual Meeting of the American Educational Research Association, on April 8-12, 1996, New York). ED396409.
- Hipp, K.A. and Bredson, P.V. (1995). Exploring connections between teacher efficacy and principals' leadership behaviour. *Journal of School Leadership*, 5(2), 136-150.
- Hoy, W. K., & Woolfolk, A.E. (1993). Teacher's sense of efficacy and the organizational health of schools. *Elementary School Journal*. 93(4): 355-372.
- Ishak bin Sin. (2001). *Pengaruh kepemimpinan pengajaran, kepimpinan transformasi dan gantian kepada kepimpinan ke atas komitmen terhadap organisasi, efikasi dan kepuasan kerja guru*. Unpublished PhD Thesis. Bangi: Universiti Kebangsaan Malaysia.
- Jamaludin Harun dan Zaidatun Tasir. (2003). *Multimedia dalam pendidikan*. Kuala Lumpur: PTS Publication dan Distributors Sdn. Bhd.
- Kementerian Pelajaran Malaysia. (1998). *Buku Panduan Guru Pendidikan Alam Sekitar Merentas Kurikulum KBSR dan KBSM*, Curriculum Development Divisions, MOE, Kuala Lumpur.
- Langenbach, M., Vaughn, C. & Aagaard, L. (1994). *An introduction to educational research*. Boston: Ally and Bacon.
- Lim, B.L. & Poon, M.L. (1997). Kesan efikasi sendiri terhadap komitmen, daya usaha dan prestasi kerja di kalangan guru sekolah. *Educational Journal*, 18, 37-55.
- Milson, A.J. (2001). *Teacher efficacy and character education*. Paper presented at the Annual Meeting of the American Educational Research Association. (Seattle, WA, April 10-14, 2001). ED4542122.
- Mohd Majid Konting. (2005). *Kaedah Penyelidikan Pendidikan, Edisi Ketujuh*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Moore, W. & Esselman, M. (1992). *Teacher efficacy, power, school climate and achievement. A desegregating district's experience*. Paper presented at annual meeting of the American Educational Research Association, San Francisco, CA.
- Munira Mohsin. (2000). *Persepsi guru terhadap amalan konsep kepimpinan pengajaran di kalangan pentadbir ke arah sekolah berkesan*. Unpublished Masters Thesis, Serdang: University of Putra Malaysia.
- Narimah Abd. Malek (1997). *Keberkesanan kepimpinan pengajaran pengetua terhadap pencapaian akademik pelajar*. Unpublished Masters Thesis, Kuala Lumpur: University of Malaya.
- Palmer, J.A. (1998). *Environmental education in the 21st century: Theory, practice, progress and promise*. New York: Routledge.
- Peter Songan, & Rijeng Jishet. (2000). Instructional leadership roler of secondary school in Sarawak. *Jurnal Pendidikan Universiti Teknologi Malaysia*. Oktober 2000. 6: 22-34.
- Pudin, S., Tagi, K. & Periasamy, A. (2004). *Environmental education in Malaysia and Japan: a comparative assessment*. Available online at <http://www.ceeindia.org/esf/download/paper20.pdf> (accessed 3 January 2009).
- Sia, A. P. (1992). *Preserves elementary teachers' perceived efficacy in teaching environmental education: A preliminary study*. East Lansing, MI: National Centre for Research on Teacher Learning. Paper presented at the ECO-ED North American Association for Environmental Education Annual Conference, Toronto, Canada, October 28, 1992. (ERIC Document Reproduction Service No.ED362487).
- Shafari Mohamed Nor. (2001). *Kajian Amalan Kepemimpinan Pengajaran Pengetua Dari Persepsi Pengetua dan Guru Sekolah Menengah Di Kuala Pilah*. Tesis Sarjana Sains yang tidak diterbitkan. Serdang: Universiti Putra Malaysia.
- Shahrom Sukari (1999). *Persepsi Guru-guru Terhadap Kepimpinan Pengajaran Pengetua Sepatut dan Sebenarnya Di Sebuah Sekolah Menengah Daerah Kulai*. Tesis Sarjana yang tidak diterbitkan. Skudai: Universiti Teknologi Malaysia.

- Short, P. M. & Spencer, W. A. (1990). Principal instructional leadership. *Journal of Research and Development in Education*.
- Sulaiman Ngah Razali. (1991). *Penggunaan statistik dalam penyelidikan pendidikan*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Teng Lung Kiu. (2006). *Pengaruh faktor terpilih terhadap efikasi sendiri guru sekolah menengah di negeri Sarawak*. Tesis Doktor Falsafah Fakulti Pendidikan, Serdang: Universiti Putra Malaysia.