THE RELATIONSHIP BETWEEN PRINCIPALS' SELF-EFFICACY AND SCHOOLS' FACTORS AND PRINCIPALS' PERSONAL ATTRIBUTES

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ABSTRACT

The purpose of this study was to develop a scale measuring school principals' self-efficacy and also to explore its relationship with schools' and principals' personal attributes. In the first stage of the study, 40 school principals were invited to provide written description of a number of challenging and difficult tasks, problems and decisions that they had confronted in managing school. Responses from the 40 principals generated a total of 45 problem situations. These problems were then converted into 58 items likert-type scale and named as Malaysian School Principal Self-efficacy Scale (MaSPSES). Experts in the fields of psychology, measurement and school management were invited to review and validate the scale. In the second stage of the study, the scale was administered to 110 school principals. These principals were participants of school management course conducted by Institut Aminuddin Baki. Exploratory factor analytic procedures with varimax rotation were used to determine the structure of the scale. Six components were extracted: managing academic success, managing staff, managing pupil affairs, managing school facilities, managing school finance and managing school-community affairs. Cronbach alpha was used to measure the reliability for each sub-scale. Reliability coefficients for managing academic success was r = .987, managing staff (r = .942), managing pupil affairs (r = .920), managing school facilities (r = .787), managing school finance (r = .823) and managing school-community affairs (r = .719). School's attributes were measured by

pupil enrolment and school-type. Whereas, principal's attributes were age, tenure, number of posts held prior to principalship appointment and peer-support. Statistics used in the study were eta, biserial and point biserial correlations and means comparison. It was found that pupil enrolment was related with principal's efficacy on managing academic success (r_b = - .236, p < .05), managing staff (r_b = -.193, p < .05), managing pupil affairs (r_b = -.311, p < .05), managing school facilities (r_b = -.259, p < .05), and school-community affairs (r_b = -.289, p < .05). Peer-support was found to be significantly correlated with managing school-community affairs (r_{pb} = -.210, p < .05). While number of post held prior to principalship appointment was positively related with principal's efficacy on managing school facilities (r = .255, p < .05). It was concluded that higher pupil population had negative impact on principal efficacy on managing academic success, managing staff, managing pupil affairs, managing school facilities and school-community affairs. On the other hand, peer-support was only related to principal efficacy on handling school-community affairs. Interestingly, the number of post held prior to principalship appointment was only positively related to principal efficacy on managing school facilities and the age of principals did not relate to any of the principals self-efficacy subscale.

INTRODUCTION

A recent addition to the organizational research agenda is self-efficacy. Empirical studies of self-efficacy have yielded several consistent findings such as work-related performance was associated with self-efficacy: faculty research productivity (Taylor, Locke, Lee & Gist, 1984), learning and achievement (Campbell & Hackett, 1986), problem solving skills (Kruger, 1997), school head-masters' performance (Sazali, Zurida & Mustapa, 2004). Also studies have indicated that some training methods can enhance self-efficacy in the areas of self-management (Frayne & Latham, 1987), cognitive modeling (Gist, 1989) and behavioral modeling (Gist, Schwoerer, & Rosen, 1989). However, there have been few research studies investigating the school principals' self-efficacy. Study in Australia found that principals' self-efficacy was significantly related

to their ability to accommodate and cope with change (Dimmock & Hattie, 1996). Similarly, Smith, Guarno, Storm & Reed (2003) found that principals' self-efficacy was positively related to provide effective teaching and learning environments. While Tschannen – Moran and Gareis (2004) found that tenure, gender and socio-economic status of the students were not significantly related to principal's sense of efficacy. Nevertheless, the sources of principals' self-efficacy are not clearly identified. Hence, this study attempts to identify the sources of principals' self-efficacy and also to examine the relationship between principals' self-efficacy and school's characteristics.

Self-efficacy

Self-efficacy is a construct derived from social cognitive theory – a theory positing a triadic reciprocal causation model in which behavior, cognitions and the environment all influence each other in a dynamic fashion (Bandura, 1977, 1997). Wood and Bandura (1989) stated that self-efficacy refers to beliefs in one's capabilities to mobilize the motivation, cognitive resources and courses of action needed to meet given situational demands. To put simply, Bandura (1986) defines self-efficacy as:

> *"... people's judgement of their ability to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has but with the judgments of what one can do with whatever skills one possesses"*

(p. 391)

This definition highlights a key aspect of the self-efficacy construct. It indicates the importance of distinguishing between component skills and the ability to organize and execute courses of action. Principal might possess certain management skills but that does not assure him to successfully complete his task. The accomplishment of task depends on how principal perceives or judges his ability to execute the task successfully.

The most influential source of efficacy information is enactive attainment because it is based on authentic mastery experience (Bandura, 1977). Successes raise efficacy appraisals and failures lower them.

However, a strong self-efficacy is developed through repeated successes and occasional failures are unlikely to have much effect on judgements of one's capabilities. Hence, it is plausible to infer that the more posts one held prior to principalship appointment the high one's self-efficacy has. It is because the cumulative experiences that he or she possesses before becoming principal would enhance his or her efficacy in school management. Similarly, the longer the tenure of principalship would also raise their perception on their abilities to accomplish the school management activities successfully. From the above arguments, three null hypotheses were developed:

H_{o1} = There is no relationship between number of post held prior to principalship appointment and principal self-efficacy.

H_{o2} = There is no relationship between principalship tenure and principal self-efficacy.

H_{o3} = There is no relationship between principals' age and principals' self-efficacy.

The second source of efficacy information is verbal persuasion (Bandura, 1977). Persuasory efficacy information is often conveyed in the evaluative feedback given by colleagues. Evaluative feedback highlighting personal capabilities would raise one's efficacy beliefs. Nevertheless, persuasory efficacy appraisal depend on who the persuader are and their credibility and knowledge. Hence, principals who have peer-support would presumably have higher self-efficacy than those who are managing their schools without the help, support, and encouragement by peers or colleagues. The support given by the senior principals for instance would assist one's identification of one's ability to complete tasks successfully. Therefore, the fourth null hypothesis is formulated as follows:

H_{o4} = There is no relationship between peer-support and principal self-efficacy.

The environment where one is positioned may also affect one's perception of one's ability to accomplish task successfully. Hence, school environment such as pupil enrolment and school-type (day-school or boarding school) might have relationship with principals' self-efficacy. Hence, the following null hypotheses were developed:

H_{o5} = There is no relationship between pupil enrolment and principals' self-efficacy.

H_{o6} = There is no relationship between school-type and principals' self-efficacy.

METHOD

Instrumentation

Since the construct of self-efficacy is situationally specific, the scale measuring Malaysian's principals' self-efficacy was specially developed for this study. In the first stage of the instrument development, 40 school principals were invited to provide written description of a number of challenging and difficult tasks, problems and decisions that they had confronted in managing schools. Responses from the 40 school principals generated a total of 45 problem situations. These problems were then converted into 58 items with 6-point likert-type scale, with higher values representing high efficacy. The development of the items was primarily based on the *Malaysian Principalship Standard*. Experts in the fields of psychology, measurement and school management were invited to review and validate the scale. The revised scale is named as *Malaysian School Principal Self-Efficacy Scale (MaSPSES)*.

Procedure

The instrument was administered to 110 school principals who were Institut Aminuddin Baki's school management course participants. They were briefly explained about the questionnaire before giving their responses. Time taken to complete the questionnaire was about 10 – 15 minutes.

Data analysis

The exploratory factor analytic procedure with varimax rotation was used to determine the structure of the scale. Six components were extracted and they were named according to school functions: *managing academic success, managing staff, managing pupil affairs, managing school facilities, managing school finance and managing school-*

community affairs. Sample item on each subscale are as follows: *managing academic success* subscale is 'overall academic achievement are poor', *managing staff* subscale is 'teachers are not committed to their profession', *managing pupil affairs* subscale is 'class absenteeism', *managing school facilities* subscale is 'school facilities are not conducive for learning', *managing school finance* subscale is 'financial management is in mess' and *managing school-community affairs* subscale is 'conflict among teachers and parent-teacher association'. The stem for each item is 'How confidence would you be of securing a successful resolution of the following situations?'. Factor loadings in each subscale were all substantial and reasonably uniform.

The estimates of reliability for each subscale were calculated by using Cronbach's alpha. Each subscale demonstrated a satisfactory score of Cronbach's alpha, *managing academic success (r = .987), managing staff (r = .942), managing pupil affairs (r = .920), managing school facilities (r = .787), managing school finance (r = .823), and managing school-community affairs (r = .719).*

The construct validity of the scale is good by virtue that the initial development of the scale was based on the responses given by the focus group itself. Furthermore, all the items were analyzed and reviewed by experts in the field of psychology, measurement and school management.

RESULT

Since independent variables were all categorical, eta correlations were carried out to test the relationship between the independent variables and principal's self-efficacy (metric variable). The results of the tests were shown in the Table 1. (Combinations of insignificant relationship at $p < .05$ were not printed).

It was found that the number of post held prior to principalship appointment, peer-support and pupil enrolment were correlated with principal's self-efficacy on school management. The principalship tenure, age and school-type variables were not significantly related with principal self-efficacy. Nevertheless, the direction of the relationship was not clear because eta correlation only has value from 0 to 1. Further analyses were carried out to determine the correlations among the independent and dependent variables.

Table 1: Eta Correlations among Independent Variables Against Principal Self-efficacy (p < .05)

Independent variables	Dependent variables	Eta	Eta²	F
Number of post held prior to principalship appointment	* Managing school facilities	.422	.178	4.51
Peer-support	* Managing school-community affair	.172	.030	3.301
Pupil enrolment	* Managing academic success	.236	.056	6.360
Pupil enrolment	* Managing staff	.194	.038	4.218
Pupil enrolment	* Managing pupil affairs	.311	.097	11.589
Pupil enrolment	* Managing school facilities	.259	.067	7.778
Pupil enrolment	* Managing school-community affair	.289	.083	9.816

Biserial and point-biserial correlations and means comparison were used to further determine the relationship between the independent and dependent variables. The number of posts held prior to principalship appointment was only positively related to principal's self-efficacy on managing school facilities ($r = .255$, $p < .05$). It is inferred that the more posts he or she held before becoming principal the higher the principal's self-efficacy is on managing school facilities. But it was found that the number of posts held prior to principalship appointment did not significantly correlate to other dimensions of principal's self-efficacy.

Peer-support variable was found to be significantly correlated to principal's self-efficacy on managing school-community affair ($r_{pb} = -.210$, $p < .05$). Those principals who have peer-support in handling school-community affair appeared to have higher self-efficacy than those who have no peer-support.

Pupil enrolment variable was found to be significantly correlated to five out of six dimensions of principal self-efficacy on school management. The result is shown in the Table 2 below.

Table 2: Biserial Correlations between Pupil Enrolment and
Principal Self-efficacy Dimensions

	r_b	p
Managing academic success	-.236	.013
Managing staff	-.193	.042
Managing pupil affairs	-.311	.001
Managing school facilities	-.259	.006
Managing school-community affairs	-.289	.002

Principals with less than 1000 pupils enrolment seemed to have higher self-efficacy than those principals with more than 1000 pupils enrolment.

From the above analyses, hypotheses H_{01}, H_{04}, and H_{05} were rejected and hypotheses H_{02}, H_{03} and H_{06} were failed to be rejected. The number of post held prior to principalship appointment, peer-support and pupil enrolment were significantly related to principal self-efficacy in school management. While the principalship tenure, age and school-type were not significantly related to principal self-efficacy.

DISCUSSION

Malaysian school's principals were normally appointed based on seniority. Beside seniority, they must also possess a high score in annual government servant performance appraisal. More often than not the career path to principalship is through a series of posts such as Head of Subject Panel, Senior Teacher (Subjects), Senior Teacher (Administration), Senior Teacher (Pupil Affair), Senior Teacher (Co-Curriculum) and Afternoon

Session Supervisor. But there were cases whereby principals were appointed from other divisions within the Ministry of Education such as District Offices, State Education Departments, Teacher Training Colleges and Polytechnics which are not through the supposed principalship path. Logically, the more posts they held prior to principalship appointment's the more experiences they should have and this will enhance their self-efficacy in school management. However, this study found that the number of post held prior to principalship only significantly related to one dimension out of six self-efficacy's dimensions, that is *managing school facilities*. The reasons for this phenomenon could be they were not fully entrusted in carrying out their duties, they did not learn anything or most of the tasks were passed to other teachers when they were holding the various senior teacher posts. This need to be explored further in order to understand why the career path provided did not help principals to enhance their self-efficacy.

Ironically, the tenure of principalship was not significantly related to principal's self-efficacy. This finding was similar to Tschannen-Moran and Gareis (2004) study which found that the number of years they had spent as principal did not correlate with principal sense of efficacy. It is believed that school principals would face and handle many school management activities, functions, conflicts and etcetera in their day-to-day duty. This cumulative experience would definitely enhance the principals' self-efficacy. But this study found that there was no significant relationship between years of experience as principal with principal's self-efficacy. The plausible explanation for this phenomenon could be newly appointed principals perceived themselves as capable even though they have yet to face the real situations. While the experience principals who had really encountered various challenges, some were able to find resolutions and some were failed, might lower down their efficacy belief. This need to be explored further in order to better understand the situations at the school level.

Basically, Malaysia has two types of secondary school, which is Day-school and Full-board school. In full-board school, all pupils stay in the school hostel while in day-school, pupils stay home. It is believed that in full-board schools, the challenges are greater than the day-schools because the pupils are within the school area all the time. The longer the time pupils stay in the school the more problems they might creat, *vis-à-vis*

the more challenges the principals must face. Hence, it is presumed that principals' self-efficacy in boarding schools is higher than the day-schools. Nevertheless, this study found that there was no relationship between school-type with principals' self-efficacy. This could be due to all the highly efficacious principals were sent to full-board schools. Less efficacious principals lead the day-schools which are less challengeable, hence these principals perceived themselves as highly efficacious too.

Interestingly, pupil enrolment was found to be related to principals' self-efficacy on *managing academic success, managing staff, managing pupil affairs, managing school facilities and managing school-community affairs.* Principals' self-efficacy on these dimensions decreases as the school enrolment increases. Logically, as pupil enrolment increases, the number of staff and school facilities also increases. This phenomenon might create more conflicts and dissatisfaction among the staff because of everyone is struggling to get the limited resources. It is suggested that more trainings should be given to principals with high school enrolment so that they can cope with the challenges of big schools. Managing big schools seems to be different from small schools as principals perceived themselves as less capable when confronted with many challenges of big schools.

Finally, peer-support was found to be positively correlated with principals' self-efficacy on *managing school-community affairs.* Challenges posed by community were quite difference from school to school, and those principals with peer-support were found to be more efficacious in finding resolutions when confronted with the challenges.

CONCLUSION

The aim of this study was to find the relationship between principals' self-efficacy with schools' and principals' attributes. In view of the fact that the construct of self-efficacy is situationally specific, the principal self-efficacy scale was specially developed for this study. It was found that the number of posts held prior to principalship appointment, peer-support and pupil enrolment were significantly related to principal self-efficacy in school management.

This study is a first step in building a base of knowledge of principals' self-efficacy. As more knowledge is developed, it may prove

useful in areas such as principalship training, developing a career path for principalship and principalship certification. As theories have proved that highly efficacious individuals produced better result, it is vital that the selection of school principals must take into consideration the principals' self-efficacy as one of the criteria.

Since this study was an exploratory in nature, it is suggested that future studies should focus on how these attributes were related to principals' self-efficacy. And also further research should be carried out to investigate the relationships of principals' self-efficacy and other variables linked to instructional effectiveness such as school culture and student self-efficacy, teachers' commitment and job satisfaction.

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