

Principals' Leadership Style and School Performance: Case of Selangor Secondary Schools

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ABSTRAK

Tujuan kajian ini ialah untuk menerang prestasi sekolah secara keseluruhan dari segi gaya kepimpinan pengetua dan beberapa pembolehubah latar belakang sekolah. Data dikumpul daripada 69 buah sekolah menengah negeri Selangor. Empat pembolehubah bebas digunakan dalam model regresi untuk menerang pencapaian sekolah dalam peperiksaan SPM. Keputusan kajian menunjukkan keempat-empat pembolehubah bebas dalam model regresi tersebut, iaitu gaya kepimpinan pengetua, usia sekolah, sekolah pekan kecil dan luar bandar berkorelasi secara signifikan dengan pencapaian sekolah secara keseluruhan.

ABSTRACT

The purpose of this study was to explain overall school performance in terms of principals' leadership style and some school background factors. Data were collected from 69 schools from the state of Selangor. Four independent variables were used in the regression model to explain overall school performance in the Malaysian Certificate Examination (MCE). The results showed all the four independent variables in the regression model, i.e. principal's leadership style, age of school, small town and rural schools correlate significantly with overall school performance.

INTRODUCTION

It is generally agreed that effective leadership is essential in all organizations, whether business, government, religious or educational. Organizations are established for the achievement of a set of goals and objectives. The success of an organization depends largely on the quality of its *leadership*. It is also considered a slippery concept, as evidenced by the number of definitions on it (Owens, 1991). Successful leaders motivate their subordinates to higher levels of productivity, remedy poor performance and lead the organization towards its objectives. Good leaders should be able to influence their subordinates towards the achievement of organizational objectives.

The concept of *leadership style* has attracted interest in business management for its relevance in organization. It is only recently that this concept has been applied to education as a way of examining the behaviour of principals (Weindling and Earley, 1987). In a highly structured organization such as a school with strong

traditions supporting hierarchical authority leadership is synonymous with official position. The leader in the secondary school, i.e. the principal, is a member of a group who helps to develop ways of interacting which facilitate achieving common goals.

School is one of the more important organizations in society, established to achieve specific educational objectives. One of these objectives is to promote student learning and improve academic performance. According to the *classical academic phase model*, the better the teacher the more will students learn (Jones, 1988). But if students do not learn, it is not because they have not been taught enough.

According to another model, namely the *organizational development phase model* (Jones, 1988) the culture and the organization of a school is influenced by its principal. This belief stems from the work of Rutter in 1979 (cited in Jones, 1988) who showed that among the important factors related to better student achievements such as examination performance, are styles and

rules of the organization. This implies that the leadership style of the principal as an organizational leader in the school, plays an important role in bringing about outstanding scholastic performance.

What are the main factors associated with effective schools? In his study on four schools in the United States, Weber (cited in Clark *et al.* 1989) found eight factors present in successful or effective schools. Among these factors were strong administrative leadership, high expectation for student achievement, positive school atmosphere and regular evaluation of student progress. The literature on *In Search of Excellence* (ISE) has shown the importance of the role of the principal as a key factor in school effectiveness (Clark *et al.* 1989).

Principals' leadership has an effect on the school in many ways, such as on school climate (Alageswari, 1980; Rahimah Hj, Ahmad, 1981), its learning situation and level of professionalism among teachers (Mukherjee, 1970), satisfaction among teachers (Thandi, 1972; Noran and Sharifah, 1990), mediating between school and parents (Cohen and Manion, 1981), and school performance (Ogawa, 1985; Eberts and Stone, 1988). Some empirical studies which found significant relationship between the effect of the principal on school performance include those done by Eberts and Stone (1988) and Heck *et al.* (1992).

Another variable which often interests educators and laymen is the location of the school. This ecological variable is considered important because of the varying student characteristics, the educational attainment of parents, and their expectations of their children's performance. Thus, the location of the school is hypothesised to have an effect on the students' scholastic performance.

A third variable is the age of school which reflects its maturity as an organization. It is hypothesised that older schools, because they have a more established culture, would perform better than younger schools. What is meant by culture here is "a system of shared meaning held by its members" (Robbins, 1991: 274).

The best indicator of academic achievement in Malaysian secondary schooling is performance in the Malaysian Certificate Examination (MCE). In 1988, Selangor ranked eleventh in the overall performance in the nation-wide MCE

examination, with 76.4% passes, regardless of scholastic grades.

In the state of Selangor, performance in the MCE examination declined between 1981 and 1983. There was an improvement in 1984, but declined again in 1985, yet improved again in 1986. Based on data available, it may be shown that, between 1981 and 1987, the overall rate of passes in the MCE examination in the state was 68.8%. In obtaining 76.4% passes in 1989, the State showed marked improvement in academic performance in this crucial public examination.

This discussion on school performance leads to a crucial question: What school factors are associated with the passing rate or overall performance in the MCE? To what extent do principals contribute to school performance? Is there any difference in the quality performance of urban and rural schools? Is academic performance dependent on age of school? These are the questions that will be addressed in the study. The purpose of this paper is to explain overall school performance in relation to principals' leadership, location of school and age of school.

METHODOLOGY

Subjects

The subjects of the study were all non-residential secondary schools belonging to categories A and B (including former C-category) in the state of Selangor Darul Ehsan, Malaysia. This state is the most developed state in the Federation. Nevertheless, some districts in the state may still be classified as rural (e.g. Sabak Bernam), while Petaling district is urbanised. This urban-rural dichotomy is considered relevant for the purpose of the present research.

Data for the study were procured from all non-residential schools through mailed-questionnaires. Questions relating to leadership style were answered by the principals, while other questions on background information of the school were answered by the senior assistants. The unit of analysis in this study was the school.

Dependent Variable

An overall performance index (Y_i) was computed from the data on school performance based on the 1989 results of the MCE examination.

Since schools differ in size according to student population taking the MCE examina-

tion, and in the distribution of grades among the candidates sitting for this examination, a composite index was devised to measure this "scholastic performance" so that it is independent of the school size but dependent on the grade distribution. Therefore, an overall performance index was developed along the lines of cumulative grade point average (CGPA) of university students.

The index was constructed to give weightage to the number of students obtaining the various grades in the MCE. The grades are 1, 2, 3, and 4. Each grade was then assigned a quality point; Grade 1 was assigned 4 points, being the highest quality point; Grade 2 was given 3 points, Grade 3 was given 2 points and Grade 4, zero point. Grade 4 is "Failure".

An index of overall performance was constructed by the following formula:

$$Y_j = \frac{4N_{1j} + 3N_{2j} + 2N_{3j} + 0N_{4j}}{N_{1j} + N_{2j} + N_{3j} + N_{4j}}$$

where,

- Y_j = Performance index of the j-th school
 N_i = Number of candidates receiving Grade i in the MCE (i = 1, 2, 3, 4)
 N_{1j} = Number of students getting grade 1 in the jth school
 N_{2j} = Number of students getting grade 2 in the jth school
 N_{3j} = Number of students getting grade 3 in the jth school
 N_{4j} = Number of students getting grade 4 (failing) in the jth school.

Independent Variables

(a) **Leadership Style.** Twenty items were developed to measure an index of principals' leadership style. The concept of leadership style in this study relates to several dimensions, namely, principals' administrative style, instructional leadership, concern for academic performance and concern for students. Six items relate to the principals' administrative leadership, five items pertain to instructional leadership, five items touch on academic performance and another four items deal with the principals' perception of students. The six items on principals' administrative style were based on Thandi's (1977) instrument on principals' leadership style. The remaining ones were developed by the researchers.

Four possible responses were allowed for every item, namely, "strongly agree", "agree", "disagree" and "strongly disagree". Based on the scoring criterion, principals' leadership score can range from 20 to 80. The scores were arbitrarily categorised into three leadership styles, as follows:

- 20 through 40 - poor leadership style
 41 through 60 - average leadership style
 61 through 80 - good leadership style

A test of reliability of the principals' leadership style variable by using the Cronbach's Alpha gave a value of 0.60, which is considered acceptable.

(b) **Ecological Factors.** These refer to school setting which was labelled either as urban, small town or rural. The classification of a school into one of these three categories was left entirely to the respective principals responding to the questionnaire who used the Ministry of Education criterion.

(c) **Age of School.** This was measured in years as of the year 1990 from the year the school was established. For example, a school established in 1967 would be 23 years old in 1990.

Hypotheses

The hypotheses for the study are as follows:

- (a) The overall academic school performance is positively related with the age of the school.
 (b) Overall academic school performance is positively related with the principal's leadership style.
 (c) Overall school academic performance differs according to school location.

Analysis

A linear model was used in this study, which took the following general form:

$$Y_j = a + bP + cS + d_2L_2 + d_3L_3 + u$$

where,

- Y_j = the overall performance of the jth school;
 P = Scores of principals' leadership style;
 S = Age of school;
 L = Location ($L_2 = 1$ if small town;
 = 0 otherwise;

$$L_3 = 1 \text{ if rural;} \\ = 0 \text{ otherwise)}$$

a, b, c, d = intercept and regression coefficients, respectively.

and u = error term assumed to have zero mean and constant variance.

Multiple regression was used to estimate the parameters of school performance. Thus, four variables were included in the regression model to explain overall MCE performance. These variables are: two dummy variables (TOWN and VILLAGE) representing the location factor (with city schools as the control group), age of school in years (AGESCH), and principal's overall administrative style (ATT).

Prior to the regression analysis, a correlation analysis was carried out on the two continuous independent variables to be used in the model, namely, leadership style score and age of school. The results of the correlation did not show these two variables to be highly correlated, implying no multicollinearity.

The linear form was used in the estimation process. The analysis was done by the SPSS/PC+ package using the "ENTER" method.

RESULTS

Principals' Leadership Style

Results of principals' leadership score ranged from 50 to 73, with a mean score of 60.83 and a standard deviation of 4.36. There was only slight variability in the leadership score (coefficient of variation of 7%). From these results, it was inferred that all principals perceived themselves as having either an average or good leadership style. Based on the categorisation of scores, slightly more than half (52%) of principals came under the category of having average leadership style, with the remaining 48% as having good leadership style.

Results of cross-tabulation of leadership scores with three background variables, namely gender, school location and grade of school, showed that leadership style was not associated with any of these background variables.

Overall School Performance

A total of 11,615 students from the 69 schools in Selangor sat for the MCE in the 1989 academic year. The lowest passing rate was 49 percent, while the highest rate was 98 percent, with a

mean passing rate of 75.4%. The mean of 75.4% was comparable with the state's overall performance of 76.4%. The overall school performance also indicated 30 schools (43%) were below the mean passing rate.

Of this number, 2446 (or 21%) obtained Grade 1, 3073 (or 26.4%) Grade 2, and 3450 (or 30%) Grade 3. The failure rate for this examination (23.8%) for that year.

Breakdown of students by grade obtained and location of schools showed urban schools to have the most number of first graders (28.9%), followed by small town schools (14.5%) and rural schools (12.7%). More students from small town schools (27.8) obtained a second grade, followed by rural schools and urban schools (both 27.2%). As for third graders, the majority (36.2%) were from rural schools, followed by small town schools (34.4%) and urban schools (26.6%). Rate of failure was about equal in rural (23.8%) and small town schools (23.3%) but lower in urban schools (18.2%) (Table 1).

TABLE 1
Overall school performance by location

Performance	School Setting		
	Urban %	Small Town %	Rural %
Grade One	28.9	14.5	12.7
Grade Two	26.3	27.8	27.3
Grade Three	26.6	34.4	36.2
Failures	18.2	23.3	23.8
Total	100.0	100.0	100.0

The overall mean academic performance based on the computation was 2.101 points which was equivalent to about Grade 3, with a minimum score of 1.24 points and a maximum score of 3.21 (slightly above Grade 2).

Results of the ANOVA showed that the overall mean performance differed significantly according to location (Table 2). The overall mean performance of urban schools was 2.36, followed by small town schools (1.98) and rural schools (1.96). The overall performance of urban schools differed significantly from that of small town and rural schools. However, there was no significant difference in the overall performance between small town schools and rural schools.

TABLE 2
ANOVA of school performance by location

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Ratio
Between Groups	2	2.4256	1.2128	8.6150	.0005
Within Groups	66	9.2913	0.1408		
Total	68	11.7169			

Regression Results of Overall School Performance

The overall results of the regression gave an R-Square of 0.035 while the adjusted R-Square was 0.241. Therefore, about 24 percent of the variance in the MCE performance was jointly explained by the four independent variables. ANOVA of the regression gave an F ratio of 6.33 which was significant at $p < .001$ (Table 3).

Principal's Leadership style and School Performance

The composite leadership score was used as an explanatory variable in the regression equation

of school performance. A high leadership score implies a good leadership style, while a low score indicates poor leadership. The results of the regression showed this variable to be significantly related with performance at $p < .05$ (Table 4).

This finding is similar to those of other studies on the effect of the principal on school performance. For example, Eberts and Stone (1988), in their study on 14,000 primary school children in the United States, found principal's instructional leadership and conflict resolution

TABLE 3
Overall results of regression analysis of performance in the MCE examination

R Square	0.286		
Adjusted R Square	0.241		
Standard Error	0.354		
Analysis of Variance			
Source	DF	Sum of Squares	Mean Squares
Regression	4	.66647	1.6662
Residual	63	1.95053	.03096
F = 6.326		Sig. F = 0.0002	

TABLE 4
Regression analysis of overall performance

Variable	B	SE B	Beta	T	Sig. T
ATT	.01986*	.01029	.21280	1.930	.0500
TOWN	-.37340**	.11660	-.41455	-3.202	.0021
VILL	-.29589*	.11342	-.35821	-2.609	.0113
AGESCH	.00595377*	.00254695	.27606	2.337	.0226
(Const.)	.95024	.62816		1.513	.1353

Note: ** Sig. at .01 level; * Sig. at .05 level

to be significantly related with student performance. A similar finding was reported by Heck *et al.* (1990) in their study on 332 teachers and 56 principals.

However, it should be realised that principals' impact on student performance is not the same as that of ordinary teachers who are involved in direct classroom interaction. A principals' impact on performance is felt through school decisions such as formulating school goals, setting and communicating high achievement expectations, support for teachers in acquiring teaching-learning materials, supervising teachers' performance, monitoring student progress, promoting a positive environment for learning and superior instructional leadership.

Age of School and School Performance

Among the schools studied, many were established before 1957, the year Malaya achieved independence from Britain. The regression coefficient for age of school was positive, giving a t-value of 2.337 and significant at $p < .05$. In other words, the older schools performed better.

School Performance by Location

The dummy variable TOWN was used to compare performance of town schools with the control group, i.e. the city schools of Petaling Jaya. The regression coefficient was negative, giving a t-value of -3.202, significant at $p < .01$. Thus, compared to city schools, overall performance of small town schools was lower, other things being equal.

The overall performance of rural schools was also lower than that of city schools, and significant at $p < .05$.

CONCLUSION

The findings of the study indicate that, other things being equal, the older schools performed better in the MCE examination. A few notable "old" schools were two Chinese schools and five "controlled" schools, which at one time were missionary schools, noted for their excellent academic performance. Teachers in these schools have a good reputation for diligence and conscientiousness. Their principals are strong disciplinarians and task-oriented. Parents compete to get their children into these schools. The students, once admitted, study very hard to keep

their places and strive to maintain the good image of their alma mater.

As a school becomes more established its performance improves in linear fashion. The "old" schools in this study have a track record of good academic performance. It is expected that teachers from these "old" schools share common beliefs and values in terms of academic excellence (Deal and Kennedy, 1983) and work as a team to create a more productive learning environment.

It is suggested, therefore, that principals from the "younger" schools adopt a similar approach in the running of the schools and emulate the good practices of these established schools. Younger principals attached to the newer schools have a lot to learn from their senior colleagues from the more established schools. It would seem desirable to appoint school principals from their own alumni, since this would create a greater sense of commitment. This is widely practised by the mission schools, and has been recently adopted by most of the fully-residential schools.

The performance of small town and rural schools was significantly lower than that of urban schools. The better performance in urban schools may be attributed to several factors, such as better school facilities, more parental involvement through PTA (PIBG) activities and teachers trained to teach particular school subjects.

As expected, proportionately more parents from the urban schools are professionals who directly or indirectly exert their influence on their children's schools through PTA activities. These parents normally play very active roles in PTA activities. Also, there is more communication regarding expectations of students and teachers.

Another important factor related to good individual academic performance is private tuition. It is common knowledge that a higher proportion of urban children attend tuition classes compared to children from the rural areas. Apart from small-scale home-based private tuition conducted by individual teachers, there are several commercial tuition centres in urban areas like Petaling Jaya. These centres are patronised not only by affluent parents but also by the less rich. In the smaller towns and villages, private tuition centres are less numerous, although they are on the rise in the smaller towns. Fewer centres exist in the villages perhaps be-

cause the pressure of the "paper chase" may not be felt as strongly as in urban areas or that parental expectations are also lower.

A third significant variable in the explanation of performance was principals' leadership style. The results of this study suggest that the higher the composite score of a principal's leadership style, the better the school performance. As an academic leader, the principal is the most important person in the school. He or she plays a crucial role in bringing about good or poor performance, through instructional leadership and setting high standards for teachers and students. Good academic output may also be realised in an indirect manner, where principals' leadership affects teachers in terms of job satisfaction and commitment to academic excellence. There are also other factors that might be correlated with student performance, such as the teacher variable which would have a more direct influence on students' performance; there is also the student variables (e.g. SES, study habits, etc.).

The results of the present study indicate that the four independent variables used in the research model, namely, leadership style, age of school, town and village school significantly correlated with overall school performance, as hypothesised. However, based on the beta weights of each explanatory variable, the ecological factor had the greatest influence on school performance, followed by age of school, and principals' leadership style. The results also point to the need for preparing principals for leadership roles in school improvement. There is a need to provide in-service training to principals to upgrade their leadership role, which has a positive effect on school academic performance.

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