A Study of the Relationship between Teachers' Participative Decision-Making and School Effectiveness in Taiwanese Comprehensive High Schools

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Abstract

A fundamental ideal of our democratic republic is that every person has some way through which she/he can participate in decisions which directly affect her/him. To some extent, most teachers are able to recognize this ideal in their private lives. It seems logical that this realization would also carry over and prevail in an individual's working life. This would also include the teaching profession and school administration. With few exceptions, teachers seemed to favor participation in decision-making (Yarborough, 1976). The extent of teacher involvement in decision-making and representation together were strongly related to the effectiveness of the units (Berlinger, 1975). Nowadays, the school effectiveness research has become one of the most dynamic areas of study in education. Schools are complex social systems in which different elements or characteristics combine in different ways and different combinations in various schools (Miller, 1994). The government will increase the number of comprehensive high schools in Taiwan, when the number of comprehensive high school increases, it is essential to understand whether there is a relationship between teachers' participative decision-making and school effectiveness.

INTRODUCTION

In most studies, teachers seemed to favor participation in decision-making. Many studies were found which specifically mentioned the term "school effectiveness" in relation to teacher participation in decision-making (George & Shewey, 1994; Daniel & Shay, 1995; Wu & Tseng, 2000). A classification scheme for participation in organizational decision making has been devised by Alutto & Belasco (1972). Twelve decisional situations were identified: (1) hiring new faculty members; (2) selecting specific instructional texts; (3) resolving learning problems of individual students; (4) determining appropriate instructional methods and techniques; (5) establishing general instructional policies; (6) establishing classroom disciplinary policies; (7) planning school budgets; (8) determining specific faculty assignments; (9) resolving faculty member grievances; (10) planning new buildings and facilities; (11) resolving problems with community group;(12)determining faculty salaries.

Effectiveness has been defined as the "achievement of goals"(Robbins, 1996). It means the degree to which an organization realizes its goals. Bestor's(1953) book entitled, Educational Wasteland was an early example calling for the reform of secondary education and a it was a harbinger of events to come. Since then, and particularly during the 1980s, the number of reports calling for education reform increased dramatically. Toch (1991) traced the growth and status of the excellence in education movement during the 1980s. He cited more than 17 different reports focusing on education reform.

No single ultimate criterion such as student achievement or overall performance can capture the complex nature of school effectiveness, for schools are complex social systems in which different elements or characteristics combine in different ways and different combinations in various schools. In Taiwan, the government has increase the number of comprehensive high schools. When the number of schools increases, we would like to know whether the school effectiveness has increased or not? Is there a relationship between teachers' participative decision-making and school effectiveness?

A larger number of school effectiveness factors suggested by Edmond, Purkey and Smith, and Scheerens & Bosker are summarized in Table 1 (Hoy & Miskel, 2001)

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Table 1. Three sets of factors in the effective-school formula

Edmonds	Smith and Purkey	Scheerens and Bosker
•Principal leadership	•Instructional leadership	•Achievement orientation
•Emphasis on basic skills	•Planned and purposeful curriculum	•Educational leadership
•High expectations for student achievement	•Clear goals and high expectations	•Consensus and cohesion
•Frequent and systematic evaluation of students	•Time on task	•Curriculum quality/opportunity to learn
•Orderly environment	•Recognition of academic success	•School climate
	•Orderly climate	•classroom climate
	•Sense of community	•Parental involvement
	•Staff development	•Evaluative potential
	•Staff stability	•Effective learning time
	•Collegial and collaborative planning	•Structured instruction
	•School site management	•independent learning
	•Parental support and involvement	•Adaptive instruction
	•District support	•Feedback and reinforcement

In this study, the teachers' participative decision-making included six dimensions: (1) academic affairs; (2) student affairs; (3) student guidance and counseling; (4) general affairs; (5) faculty personnel; (6) other affairs. The school effectiveness included eight dimensions: (1) principal leadership; (2) parental participation and sense of community; (3) school climate and culture; (4) school environment, new buildings, and facilities; (5) instruction and evaluation of students (6) administrative support; (7) curriculum; (8) teacher job satisfaction.

PURPOSE OF THE STUDY

The extent to which teachers were actually involved and wished to be involved in the decision making was examined (Alutto & Belasco, 1972). The difference between the teachers' perceived actual and desired levels of involvement was determined; resulting in a decision on conditions of deprivation, equilibrium, or saturation which were then related to school effectiveness. The purposes of this study are:

1. To analyze the difference in teachers' participative decision-making (desired and actual) of different teacher biographical variables.
2. To analyze the difference in teachers' participative decision-making (desired and actual) of different teacher job background variables.
3. To analyze the difference in school effectiveness of various teachers' biographical variables.
4. To analyze the difference in school effectiveness of various teachers' job background variables
5. To analyze the differences of three conditions of decision in participative decision-making (actual and desired) and school effectiveness.
6. To explore the relationship between the teachers' participative decision-making (actual and desired) and school effectiveness.
7. To explore which variables can predict the teachers' participative decision-making and school effectiveness.
8. To explore the predictiveness of biographical and job background variables in school effectiveness.
9. To explore the predictiveness of teachers' participative decision-making in school effectiveness.

METHODS AND PROCDURES

The study was divided into two parts. The first part reviewed the literature of participative decision-making and school effectiveness. The second part surveyed teachers of comprehensive high schools in Taiwan, R.O.C. The pretest was carried out in December 2001 to survey 250 teachers from 10 comprehensive high schools. The data of the questionnaire were then analyzed statistically with SPSS 8.0 for Windows, assessing reliability, validity, item analysis and factor analysis.

The teachers' participative decision-making questionnaire included six dimensions: (1) academic affairs; (2) student affairs; (3) student guidance and counseling; (4) general affairs; (5) faculty personnel; (6) other affairs. The reliabilities were between .73 and .91; the whole reliability of the questionnaire was .96. The school effectiveness questionnaire included eight dimensions: (1) principal leadership; (2) parent participation and sense of community; (3) school climate and culture; (4) school environment, new buildings, and facilities; (5) teaching and evaluation of students (6) administrative support; (7) curriculum; (8) teachers' job satisfaction. The reliabilities were between .63and .89; the whole reliability of the questionnaire was .95. The item analysis included two parts: (1) the Pearson product-moment correlation coefficient; (2) critical ratio. In the teacher decision-making questionnaire, items with the Pearson product-moment correlation coefficient over .65 and critical ratio over 7.4 were maintained. In

the school effectiveness questionnaire, items with the Pearson product-moment correlation coefficient over .5 and critical ratio over 6 were maintained.

Factor analysis analyzes the intercorrelation among a large set of measures in order to identify a smaller number of common factors. The study analyzed the responses of 152 subjects to the 30 items in the teachers' participative decision-making questionnaire and extracted six factors that were being measured by the 30 items. The analysis is shown in Table 2. In the factor analysis, the varimax was used. The factor loading was over .491 and the eigenvalue was over 1.

The study analyzed the responses of 152 subjects to the 36 items in the school effectiveness questionnaire and extracted eight factors that were being measured by the 36 items. The analysis is shown in Table 3. In the factor analysis, the varimax was used. The factor loading was over .486 and the eigenvalue was over 1.

After the review of literature and analysis of pretest data, a questionnaire was constructed in this study to survey 1975 teachers from 79 comprehensive high schools by using stratified random sampling in January 2002. The effective sampling is 709. The data was analyzed statistically. The statistical methods used were T-test, Pearson product-moment correlation, one-way ANOVA and multiple regressions.

Table 2. Factor analysis of teacher' decision-making

Factor	Item number	Factor loading	Eigenvalue	Cumulative variance
General affairs	30	.791	13.358	44.5%
	29	.784		
	27	.779		
	28	.738		
	26	.720		
	22	.540		
Student affairs	9	.808	2.341	52.3%
	8	.744		
	10	.713		
	6	.678		
	5	.611		
	4	.529		
	3	.511		
Academic affairs	17	.647	1.746	58.1%
	24	.581		
	20	.580		
	18	.528		
	23	.524		
	25	.517		
	21	.491		
Faculty personnel	15	.793	1.279	64.0%
	16	.780		
	14	.660		
	7	.568		
	19	.517		
Student guidance and counseling	13	.726	1.143	66.2%
	11	.652		
	12	.650		
Other affairs	1	.649	1.018	69.6%
	2	.589		

Table 3. Factor analysis of School effectiveness

Factor	Item number	Factor loading	Eigenvalue	Cumulative variance
Principal leadership	1	.825	15.80	43.9%
	4	.818		
	3	.756		
	2	.743		
	5	.725		
Administrative support	33	.765	2.11	49.7%
	34	.730		
	32	.715		
	31	.698		
	30	.574		
	35	.572		
	36	.491		
Instruction and evaluation of students	20	.730	1.72	54.5%
	18	.658		
	29	.593		
	19	.548		
	21	.533		
	27	.521		
Parental participation and sense of community	25	.780	1.57	58.9%
	24	.773		
	26	.650		
	28	.555		
School environment new buildings and facilities	8	.827	1.50	63.0%
	7	.787		
	9	.740		
	6	.550		
Teacher job satisfaction	10	.685	1.26	66.5%
	12	.670		
	13	.650		
	11	.570		
School climate and culture	15	.754	1.11	69.6%
	14	.678		
	16	.518		
	17	.186		
Curriculum	23	.768	1.02	72.5%
	22	.749		

RESULTS

The significant differences of biographical variables and job background variables on teachers' participative decision-making and school effectiveness were listed in Table 4

Table 4. The significant difference table of variables

background variables		Teachers' biographical variables					Teachers' job background variables					
	factor	Gender	Age	Education level	Length of service	Teaching courses	Job position	School magnitude	School location	School type	School specialization before changing	School history
$D^{\leftarrow}$	General affairs	***				**	***		**	*		
	Student affairs	*		**		**	**			***		**
	Academic affairs					**	***			***		*
	Faculty personnel	*			***	*	**					
	Guidance and counseling			***	**	**				***		
	Other affairs	***		**		***	***			**		
	Total score	**		*		***	***			***		
$A^{\uparrow}$	General affairs	***					***		**			
	Student affairs	*		**			***			***		*
	Academic affairs	**					***					
	Faculty personnel	***					***		**			
	Guidance and counseling			**			***			***	*	
	Other affairs	**					**		*	*		
	Total score	**					***		**	*		
$S^{\rightarrow}$	Principal leadership						*	*	***	**	**	**
	Administrative support				**		***		***		**	
	Instruction & evaluation							**	***		***	
	Parental participation..							**	***	*	***	*
	Environment, building..						*	**	***	***	***	
	Teacher job satisfaction		**	**			***	***	***		**	
	Climate and culture						**	***	***		***	
	Curriculum						*	***			***	
	Total score						**	**	***		***	

***p<.001, ** p<.01, *p<.05

Note. $D^{\leftarrow}$ represent the teachers' desired participative decision-making, $A^{\uparrow}$ represent the teachers' actual participative decision-making, $S^{\rightarrow}$ represent school effectiveness.

According to the data analysis of the questionnaire and the related literature review, the several generalizations were reached in this study.

1. There was a significant difference of the biographical variable (gender, education level, teaching course) on teachers' actual and desired participative decision-making.
2. There were significant differences of some job background variables (job position, school location, school type) on teachers' actual and desired participative decision-making.
3. There was not a significant difference of the biographical variable on school effectiveness.
4. There were significant differences of some job background variables (job position, school magnitude, school location, school specialization before changing to comprehensive high school) on school effectiveness.
5. There were significant differences for each decisional situation on teachers' participative decision-making.
6. There was a significant relationship between teachers' participative decision-making(actual and desired) and school effectiveness.
7. There were some biographical variables and job background variables that successfully predicted the teachers' participative decision-making and school effectiveness.
8. Teachers' participative decision-making successfully predicted the school effectiveness.

9. The decision condition that comprehensive high school teachers most favored was equilibrium (37.5 %).

The Pearson product-moment correlation between the teachers' participative decision-making (desired and actual) and school effectiveness was shown in Table 5 and Table. According to the data analysis, there was a positive correlation between teachers' participative decision-making and school effectiveness.

Table 5. The Pearson product-moment correlation between participative decision-making (desired) and school effectiveness

school effectiveness / teachers' participative decision-making	Principal leadership	School environment buildings and facilities	Teachers' job satisfaction	School climate and culture	Instruction and evaluation of students	Curriculum	Parental participation and sense of community	Administrative support	Total score
Student affairs	.16**	.24***	.23***	.25***	.16**	.21***	.15*	.23***	.25***
Counseling, guidance	.14*	.20**	.23***	.26***	.17**	.16**	.14*	.19**	.23***
Academic affairs	.16**	.22***	.23***	.24***	.16**	.14*	.13*	.21***	.23***
Other affairs	.07	.14*	.15*	.18**	.10	.08	.06	.18**	.14*
General affairs	.15*	.22***	.27***	.28***	.18**	.13*	.18**	.25***	.25***
Faculty personnel	.10	.16**	.17**	.20**	.11	.13*	.09	.18**	.17**
Total score	.16**	.23***	.25***	.27***	.17**	.17**	.14*	.24***	.26***

***p<.001, ** p<.01, *p<.05

Table 6. The Pearson product-moment correlation between participative decision-making (actual) and school effectiveness

school effectiveness / teachers' participative decision-making	Principal leadership	School environment buildings and facilities	Teachers' job satisfaction	School climate and culture	Instruction and evaluation of students	Curriculum	Parental participation and sense of community	Administrative support	Total score
Student affairs	.26***	.34***	.28***	.32***	.27***	.32***	.19**	.26***	.34***
Counseling, guidance	.21***	.28***	.21***	.31***	.19**	.25***	.16**	.22***	.29***
Academic affairs	.28***	.37***	.25***	.33***	.26***	.28***	.18**	.27***	.35***
Other affairs	.18**	.28***	.11	.23***	.17**	.26***	.11	.15*	.24***
General affairs	.26***	.32***	.28***	.35***	.25***	.26***	.23***	.28***	.34***
Faculty personnel	.17**	.30***	.21***	.30**	.20**	.25***	.15*	.23***	.28***
Total score	.79***	.87***	.84***	.87***	.78***	.81***	.78***	.69***	.37***

***p<.001, ** p<.01, *p<.05

A summary of the multiple regression analysis for biographical and job background variables predicting the teachers' desired participative decision-making is shown in Table 7. A summary of the multiple regression analysis for biographical and job background variables predicting the teachers' actual participative decision-making is shown in Table 8.

Summary of multiple regression analysis for biographical and job background variables predicting school effectiveness is shown in Table 9. A summary of the multiple regression analysis for the teachers' desired and actual participative decision-making predicting school effectiveness is shown in table 10.

Table 7 Summary of multiple regression analysis for biographical and job background variables predicting teachers' desired participative decision-making

Variable	R	R^2	B	β	F
Job position	.1460	.0210	3.845	.123	15.49***
School type	.1950	.0380	4.492	.098	12.06***
Teaching course	.2190	.0480	-4.016	-.098.	7.56**
Length of service	.2350	.0550	-1.175	-.092	5.37*
Gender	.2510	.0630	-3.595	-.089	5.71*

***p<.001, ** p<.01, *p<.05

Table 8 Summary of multiple regression analysis for biographical and job background variables predicting teachers' actual participative decision-making

Variable	R	R^2	B	β	F
Job position	.2380	.0570	6.898	.2080	42.59***
Teaching course	.2900	.0840	-7.396	-.1700	21.01***
Gender	.3040	.0920	-3.961	-.0920	6.14*

***p<.001, * p<.05

Table 9 Summary of multiple regression analysis for biographical and job background variables predicting school effectiveness

Variable	R	R^2	B	β	F
School magnitude	.1420	.0200	3.427	.101	14.52***
School type	.1740	.0300	3.689	.110	7.45**
School location	.1960	.0380	-2.233	-.092	5.82*

***p<.001, ** p<.01, *p<.05

Table 10 Summary of multiple regression analysis for teachers' desired and actual participative decision-making predicting school effectiveness

Variable	R	R^2	B	β	F
Desired participative	.3690	.1360	.338	.318	113.39***
Actual participative	.3790	.1440	.115	.102	6.45*

***p<.001, *p<.05

IMPLICATIONS AND SUGGESTIONS

Based upon these findings and conclusions, this study proposed several implications and recommendations.

1. Comprehensive high school should offer seminars or discipline courses on participative decision-making to teachers is recommended.
2. Offering female teachers the opportunity to serve as school administrators is urged.
3. It is suggested that the comprehensive high school evaluation indicators should include school effectiveness.
4. Those teachers , whose teaching course are academic, Comprehensive high schools should encourage them to participate in decision-making.
5. Consider the actual participative decision-making of female teachers.
6. In every part of Taiwan, the comprehensive high schools should offer the opportunity to teachers to participate in decision-making, cause to some extent, every teacher has some way through which she/he can participate in decisions which directly affect her/him.
7. The data showed that the public school teachers participate more in decision-making than the private school teachers, the private school should provide the opportunity to teachers to participate in decision-making is also recommended.
8. The school administrator should consider teachers' opinions when deciding important school affairs.
9. The principal should offer teachers the opportunity to be a administrator by turns. When the teacher in a administrative position, his perception toward school is positive.
10. The principal of a special school should administer democratically.
11. Strengthening the relationship between community and comprehensive high school is urged.
12. Teachers should take their chance to participate in decision-making to identify school effectiveness.
13. No matter where the school location is, the teachers should actively participate in school activities or meetings to identify school effectiveness.
14. The small and medium size of school teachers, perceive the school effectiveness less the large size of school teachers. It is recommended that the small and medium size of school teachers should participate more in school affairs.
15. The characteristics of comprehensive high school effectiveness should be set up is recommended.
16. When teacher participate in decision-making more, their perception toward school is more positive.

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