The effect of shared decision-making
on the improvement in teachers' job development

CHENG Chi Keung

Hong Kong Institute of Education

Abstract

Background: Teacher Participation in decision-making is one of the recommendations of school-based management and one of the key characteristics of an effective school. Although teacher participation in decision making is claimed to be correlated with their affective outcome, few researchers have been attempted to verify the predictive effectiveness of participation in different decision domains under a multi-dimensional participatory model on their affective outcomes. This study intends to identify an empirical participatory model ought to help school administrators involve teachers in appropriate decisions for improving teachers' affective outcomes, which result in quality decision-making.

Aims: To examine theoretically the causal relationship between teacher participation in decision-making and their affective outcome for developing a participatory decision model, and identify the decision domains that would assist school administrators to effectively involve teachers in decision-making under the school-based management policy.

Sample: Questionnaires were sent to 20 secondary schools in Hong Kong. A total of 335 teacher-completed questionnaires were collected from all the target schools.

Methods: Theoretical model and questionnaires were constructed by synthesizing theories from literatures, principal axis factor analysis and reliability test were used to validate the constructed validity and reliability of the questionnaires. Structural equation modeling was applied to validate the participatory model and estimate the correlation among the variables.

Results: The results showed that a multi-dimensional decision was identified by the structural equation modeling, the relationship among the variables of the model were also explored. The three dimensional decision model includes instructional, curriculum and managerial domains; and the variables of the affective outcome include job satisfaction, job commitment and perception of workload. All the affective outcomes were related to the form and extent of teachers' participation in decision-making.

Conclusion: This study extends our knowledge of the relationships between decision-making involvement and affective outcomes. It does not support the theory that a school-based management governance structure automatically enhances teachers' participation in decision-making. School administrators should encourage teacher participation in curriculum and managerial decision domains, as the intent of the SBM policy is to increase job satisfaction and to enhance greater commitment to the school policies.

Keywords: Teacher Participation in Decision-making, School-based Management, Teacher Affective Outcome.

參與決策對改善教師工作發展的影响

鄭志強

香港教育學院

研究背景：教師參與決策是校本管理的其中一項建議，亦是高效能學校的其中一項特徵。雖然參與決策與教師的情感演變被確認為存在顯著的關係，但是較少文獻能夠確立一個多維度的決策範疇模型，以探討參與決策對教師情感演變兩組潛在變項的關係。本研究嘗試建立一個參與決策的理論模型，為學校管理者提供參照，讓教師藉參與決策而獲取正面的情感，藉此以提高決策的質素。

研究目標：本研究旨在發展一個參與決策的模型，探究教師參與決策與情感演變的關係；並透過識別教師可藉參與決策而改善情感變化的範疇，協助學校管理者有效地實施校本管理下參與式決策的建議。

研究樣本：在願意接受問卷調查的20所中學內，總共回收了335份有效的教師問卷。

研究方法：綜合文獻的理論而建立研究模型及問卷，以主軸因素抽取法及信度測試檢視問卷的建構效度和信度。運用結構方程模型驗證理論模型的有效性，及計算各變項之間的相關係數。

研究結果：研究結果顯示，結構方程模型確立了一個三維度的參與決策模型，展示了教師參與決策與其情感演變之間的關係。三維度的決策模型包括了教學、課程及管理範疇；而教師的情感演變內含三個變項，包括工作滿足感，工作投入感及對工作量的觀感。這三項情感變項分別與參與三個範疇的決策存在着顯著的關係。

研究結論：本研究增加了我們對教師參與決策與情感演變化的認識。本研究否定了教師參與決策能夠在校本管理的政策下自動衍生的理論。教師參與學校層面的課程及管理取向的決策範疇，有助提昇他們的工作滿足感及投入感。學校管理人員宜多鼓勵教師參與課程及管理決策的，因為增加教師的工作滿足感及促進他們對學校政策的投入感是推行校本管理措施的取向。

關鍵詞：教師參與決策，校本管理，教師情感演變

Introduction

Teacher participation in decision-making is one of the recommendations of school-based management policy. School-based management (SBM) is a proposal to decentralize and debureaucratize school control (Guthrie, 1986) and to promote teacher participation in decision-making within schools (Brown, 1990). An assumption of school-based management is that if decisions are made closer to the client, better decisions will be made and greater satisfaction and commitment will prevail (Conley, 1991). The extent to which teachers are involved in decision-making in schools, as well as the nature of the decisions being made, are important indicators of the degree to which schools have changed from the previous centralized Hong Kong education system since the introduction of school-based management. There are very few studies that focus on the degree to which school-based management has encouraged teacher decision-making in Hong Kong secondary schools. This study investigates the patterns of teachers' participation in decision-making under school-based management in Hong Kong. It identifies the decision domains in which teachers contribute most effectively and it takes into account teachers' perceptions of their job satisfaction, commitment and workload.

School based management was first introduced into Hong Kong schools in the 1990s under a scheme known as the School Management Initiative. The policy was extended in subsequent years, and at the time the current research was conducted all the aided secondary schools in Hong Kong were implementing a form of school-based management, although not necessarily in the same ways. A major feature of the policy was that teachers should become involved in decision-making. Unfortunately, the policy documents tend to be general in nature and interpretation and implementation are left to practitioners in the field. The policy on school-based management did not specify the kind of decision-making in which teachers should be involved, or whether all or only some teachers should be involved in different types of decisions. Besides, local research in Hong Kong showed unfavourable results in involving teachers in decision making, their involvement in decision making were deprived by the school principals (Yu, 2005). Identifying the decision domains in which teachers contribute most effectively could help school administrators to effectively implement school-based management.

A key aspect of SBM systems related to teachers' more positive affective outcomes is their participation in decision-making. For example, Brown (1987) conducted a preliminary study of school-based management in which some budgetary decision-making authority was shifted from the central office to individual schools. He found that teachers' satisfaction with their job was higher under the reformed system. David (1989) and Bair (1992) found that teacher satisfaction improved under SBM, particularly when teachers had substantive rather than advisory roles in decision-making. Other studies showed that shared decision-making created greater commitment to the school (Blasé, Anderson, and Dungan, 1995, Gamage, 1996). It seems that increased participation in decision-making within SBM is related to more positive affective outcomes for teachers.

Murphy and Beck (1995) unpacked the logic of SBM operations: SBM empowers teachers, and teachers' empowerment is positively related to ownership, job satisfaction and commitment.

However, Dimmock (1995) argued that empowerment may not promote ownership, especially when those empowered feel they have little expertise, interest or time to commit to such participation. If the implementation of SBM empowers teachers, it ought to lead to positive affective outcomes for them. If teachers' affective outcomes are positive, their teaching should be improved, thus making schools more effective. Walsh (1990) conducted a study to compare the job satisfaction and comfort between SBM and non-SBM schools. He found that the level of general satisfaction was higher for teachers in SBM schools, but the level of comfort was greater for teachers in non-SBM Schools. Even when additional workloads were created by SBM policy, Walsh found that teacher satisfaction was higher in SBM schools. Goodin (1995) and Dondero (1993) had similar findings to Walsh's study.

The implementation of school-based management in Hong Kong schools clearly involved additional workload, due to increased meetings, staff development programs, administration and paperwork (Cheng and Chan, 2000). But literature also asserts that teachers' participation in decision-making increases their job satisfaction and work commitment (Murphy and Beck, 1995; Weiss, 1993; Blasé, Anderson, and Dungan, 1995). These two findings appear to be at odds with each other. It was decided to investigate this conundrum to see if exploring the causal relationship between the participation in difference decision domains and the subsequent affective outcome could illuminate the problem. The findings of the study could help school administrators to fine-tune the form and extent of teachers' participation in decision-making and to achieve better quality decision-making, as well as to eliminate the negative consequence of empowerment.

In this study, it was decided to look at teacher perceptions of their workload, commitment to the school and job satisfaction. Walsh's suggestion that the level of comfort was not enhanced with SBM suggests that teachers may have found their workload more arduous. This was also the case in Hong Kong SBM schools. Cheng and Chan (2000) reported that an increased workload of administration, meetings, staff development programs and paper work resulted from the implementation of SBM. Specifically, higher participation in decision-making will lead to a higher workload (Chan, Ching and Cheng, 1997). Despite a higher level of discomfort, teachers in Walsh's study had more job satisfaction under SBM. It seems that teachers' involvement in decision-making leads to more job satisfaction and work commitment (Murphy and Beck, 1995), but that a higher workload is created simultaneously. Greater job satisfaction and work commitment may compensate for the higher workload.

Teachers' participation in Decision Making

The greater involvement of teachers in decision-making was an important aspect of the decentralization policy of school-based management and an alternative to the top-down bureaucratic system of schooling in many different contexts. In the earliest stages of the introduction of school-based management in the USA and UK, teachers' participation in decision-making was adopted to give more influence to the schools and thereby increase administrative efficiency. In the 1980s and 1990s, the focus on teachers' participation in decision-making changed, being aimed at reforming educational practice by creating conditions in schools that facilitated improvement, innovation and continuous professional growth. Most of the restructuring literature favoured shared decision-making. Teachers'

involvement in school decision-making was seen to facilitate better decisions, because those closest to students know best how to improve their schools and are in the best position to make and carry-out decisions. It was seen as motivational to the participants and it released their energy, responsibility and initiative, resulting in greater commitment to the job and increased job satisfaction (Flannery, 1980). It was seen to encourage teachers to assume greater responsibility for what happened in a school (Keith and Girling, 1991), thus increasing teachers' ownership of change, giving teachers a voice in school policy and making better use of their professional expertise. Teachers' participation in decision-making was perceived as forging links between administrators and teachers (Sergiovanni, 1992). Teachers' participation in decision-making was viewed as 'a change initiative' focusing on an alternative strategy for school management (Conley and Bacharach, 1990; Goldman, 1992).

Study of Decision Models in Hong Kong

Chan, Ching, and Cheng (1997) proposed a six decision-domain model for conceptualized teacher participation in decision making in secondary schools in Hong Kong. The model drew upon previous research, including Mohrman, Cooke & Mohrman's (1978) categorization of a technical and a managerial decision domain and Arnold and Feldman's (1986) categorisation of three levels of decision participation: the individual level, the group level, and the organizational level. The individual level included issues closely relating to the individual teacher's performance within classrooms such as choice of teaching materials, teaching schedule and student assessment. The group level included issues relating to the functioning of groups, such as subject panels and co-curricular activity groups. The school level included issues at the whole school level, such as school goals, school budget, admission policy, personnel management and development planning. Although Chan's study proposed a multidimensional model, which could be covered by instructional, curricular and managerial domains, the constructed validity of the model was not examined by rigorous statistical modelling.

Lau (2004) applied Principal Component Analysis to study the underlying subscales of teacher participation in decision-making in Hong Kong secondary Schools from 20 decision issues adapted from Rice and Schneider (1994). The results of the analysis showed that a bi-dimensional model was empirically constructed, in which 5 items of teaching domain and 9 items for managerial domains were extracted. Although Lau's study involved a sample size of 5350 teachers, the multidimensional decision domains as proposed by Taylor and Bogotch (1992); Conley (1991); Smylie (1992); Perry and Brown, (1994) and Chan, Ching, and Cheng (1997) could not be identified.

In summarizing the literature, the decision domains have been identified to be multidimensional rather than uni-dimensional. Instructional and managerial domains have been empirically confirmed as the subscales of the multidimensional model. However, a curricular domain was not identified. In order to identify the factor structures of the multidimensional model, rigorous statistical tests should be applied to examine construct validity. In this study, a three-domain participation model, which consists of instructional, curricular and managerial decision domains, is theoretically hypothesized and

empirically tested for bridging the research gap in identifying the decision domains.

Affective Aspects

Participation in decision-making is an organizational practice that is found in participatory management systems. It is an alternative to the administrative practices associated with the bureaucratic model. Human relation theorists have argued that participatory management leads to the satisfaction of employees' higher order needs (e.g., self-esteem needs and self-actualisation needs). Supporters of this affective model argue that satisfied workers are more motivated and hence will be more productive (French, Israel, and As, 1960). Critics have said that much participatory management is 'involvement for the sake of involvement' and that 'as long as subordinates feel they are participating and are being consulted, their ego needs will be satisfied and they will be more cooperative' (Ritchie, 1974, p. 348).

Job Satisfaction

Likert (1967) found that shared decision-making led to increased job satisfaction and commitment. Several researchers have indicated that teachers' participation in decision-making is positively linked to job satisfaction (Alutto and Belasco, 1973; Conway, 1984; Bacharach et al., 1990). Alutto and Belasco (1973) investigated the relationship between decision involvement and job satisfaction, and found that denial of involvement in decision issues of importance resulted in lower levels of satisfaction. Imber and Duke (1984) tried to build a framework for research into teachers' participation in decision-making in school decisions; and found that participation increased teachers' levels of satisfaction

in teaching and enthusiasm for the school system, and created a positive attitude towards participation. Schneider (1984) found a significant relationship existed between levels of teacher involvement and job satisfaction.

Still other studies have explored the effects of organizational influence on job satisfaction. Kreis and Brockoff (1986) examined the relationship between teachers' perceived autonomy within the work setting and their sense of job satisfaction. These researchers made a distinction between classroom autonomy and autonomy outside the classroom. They found that teachers' perceived autonomy within the classroom was positively related to satisfaction in the work setting. Reyes (1989) further examined the relationship among organizational commitment and autonomy in decision-making and job satisfaction between public school teachers and mid level school administrators. He found that teachers and administrators experienced similar levels of job satisfaction, commitment, and autonomy in decision-making. As the teachers in his study experienced higher levels of autonomy in decision-making, Reyes (1989) questioned whether or not the efforts to empower teachers with increased decision-making responsibility was necessary.

In the field of education, participation by professionals is positively correlated with job satisfaction (Alutto and Belasco, 1972; Conway, 1984; Schneider 1984; Reyes, 1989; Bacharach, et al., 1990; Murphy and Beck 1995) and job commitment (Reyes, 1989; Weiss, 1993; Murphy and Beck, 1995; Blasé, Anderson, and Dungan, 1995). Participation has been examined as a key determinant of individual and organizational school outcomes, such as teachers'

job satisfaction (Schneider, 1984). In general, these studies have indicated that teacher job satisfaction is related to and affected by participation in the decision-making process. Hence, a positive predictive effect of teachers' involvement in decision-making on job satisfaction is postulated in this study.

Job Commitment

Wiener and Vardi (1980) stated that job commitment was a more stable state of the person than job satisfaction, which was concerned with immediate and temporary situational fluctuations. Mowday, Steers and Porter (1979, 1982) defined teachers' commitment as a strong belief in and acceptance of school goals and values; a willingness to exert considerable effort on behalf of the profession; and a strong desire to maintain membership in the profession. Hung and Lui (1999) believed that if teachers were involved in the setting of school goals and the decision-making process, they tend to be committed members of staff.

Weiss C. H. (1993) and Blasé, Anderson and Dungan (1995) also found that the involvement of teachers in decision-making created job commitment. Teachers' commitment was improved by involving them in decision-making (Mowday, Steers, and Porter, 1982). Gamage (2000) revealed that with 10 years of experience in implementing local management of schools, school leaders, as well as, teachers are happier with participatory decision-making. Teacher governors admitted that it leads to ownership and a higher degree of commitment to the implementation process. Involvement in decision-making also creates ownership, commitment and a sense of empowerment, as collaboration leads to new roles and relationships.

Murphy and Beck (1995) found that teachers' participation in decision-making was positively correlated with their commitment and satisfaction. On the matter of other outcomes, Brown (1990) and David (1989) provided research evidence that school-based management improved the satisfaction level of teachers. Brown's conclusions were tentative since increase in satisfaction were varied across groups and individuals, and factors other than school based management may have influenced levels of satisfaction. According to the findings of Murphy, David and Brown, teachers' participation in decision-making could improve their job satisfaction and commitment, which were positive indicators for effective management. Hence, a positive predictive effect of teachers' involvement in decision-making to job commitment is postulated in this study.

Perception of Workload

Decision sharing at the school site is time-consuming. Workload may be one of the major costs of participatory decision-making. In certain circumstances, in the event of specific problems, group decisions are superior, but it is a time consuming process. Clune and White (1989), David (1989), and Raywid (1990) found that when the extra time and energy demanded by planning and decision-making are balanced by real authority, teachers report satisfaction, even exuberance.

Malen, Rodney and Jennifer (1990) acknowledged that 'systematic investigations document that teachers and principals alike are frustrated by the increased demands on their time and energy, by the need to assume responsibilities outside their experience and/or expertise, and by role ambiguities and peer tensions' (p. 312). A

survey of participating schools' principals gave rise to the following recommendations: preplanning; staff follow-up training and support; and teacher compensation commensurate with an increased workload (Conway, 1984).

According to Duke, Shower and Imber (1980) 'Reviews of efforts to involve site participants, notably teachers, in school-wide decision-making indicate that these efforts can detract from the instructional program by diverting attention, draining energy, and/or reducing actual teaching time, particularly when these demands come in addition to, not in lieu of, the responsibilities principals and teachers typically assume' (p. 320). Chapman and Boyd (1986) reported that teachers were "especially frustrated" when the increased workload was the result of school based management tasks which were mostly "clerical and general organization work" and speculated that trading teaching preparation time for site-based management work might "diminish the quality of education offered to students" (pp. 44-45). Hill and Bonan (1991) observed that as a result of school-based management, teachers might experience a "major increase workload without any real additional influence over decisions" (p. 21). Hence, a positive predictive effect of teachers' involvement in decision-making on workload is postulated in this study.

In synthesizing the above literature, it seems that teachers' participation in decision-making is positively related to job satisfaction, commitment and workload. As a higher workload may result in job dissatisfaction, it is important to investigate the overall affective outcomes for teachers. Does increased job satisfaction and work commitment

compensate for a higher workload? If more were known about the relationship of these factors, school managers would be in a better position to ensure that teachers were able to work more effectively.

Theoretical Framework

The theoretical model of this study contains three exogenous variables and three endogenous variables (see Figure 1). Teacher participation in decision making is conceptualized by the level of their participation in the instructional, curricular and managerial decision domains. The three decision domains represents the overall dimensions of participation in decision-making in an aided secondary school organization and considered to be exogenous variables in this study. These variables are borrowed from Mohrman, Cooke and Mohrman (1978) who categorized decisions in school as technical or managerial domains, but actually the technical domain could be further split into the instructional domain and curricular domain. Teacher affective outcome is conceptualized by the variables of job satisfaction, commitment and workload. The three affective variables, job satisfaction, commitment and workload, are treated as endogenous variables. Predictive relationships among the exogenous variables and endogenous variables were to be verified.
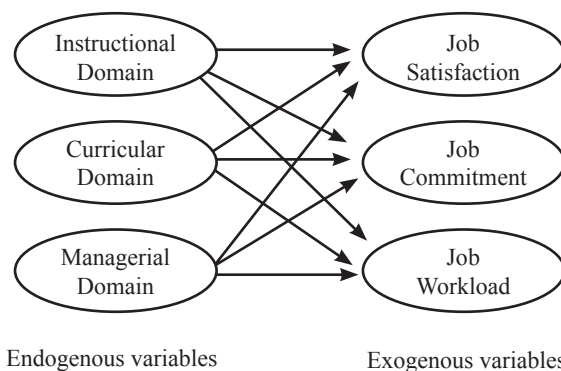

Endogenous variables   Exogenous variables

Figure 1 Theoretical Model of the Study

Research Methods

A self-response questionnaire survey was designed to collect data from secondary school teachers in Hong Kong. The data was directly collected from target subjects through the questionnaire. Confirmatory factor analysis was done separately for the two sets of latent variables by principal factor axis analysis to confirm the constructed validity of the instruments (see table 1). The study interests in a theoretical solution uncontaminated by unique and error variability, which is designed with a framework on the basis of underlying constructs that is expected to produce sources on the observed variables. Principal axis factor (PAF) analysis, which aims to reveal the underlying factors which produce the correlation or correlation among a set of indictors with the assumption of an implicit underlying factor model, was applied to section 1 and 2. Then, the reliability of teacher responses to individual items on the six scales of the two instruments was examined on the basis of item-total corrections and coefficient alphas by using the SPSS program. Finally, Structural Equation Modeling (SEM) was applied to examine the factor structures and the paths among the variables by using Lisrel 8.3 (Joreskog and Sorbom, 1999). SEM is a collection of statistical techniques that allows a set of relationships between one or more independent variables and one or more dependent variables to be examined.

The measurement of involvement pattern of participative decision-making was based on Alutto and Belasco (1973) decision condition, which is a discrepancy measure of involvement and led to the formation decision deprivation, saturation and equilibrium. The discrepancy was measured by the difference between the level of teachers' actual participation (AP) and desired participation (DP) in each of the decision issues. Decision Deprivation represented actual participation less then desired (AP-DP<0); decision equilibrium represents actual participation equal to desired (AP-DP=0) and decision saturation represents actual participation greater then desired (AP-DP>0). The decision conditions reflect the status of the level of teacher participation in the respective decision issues or domains.

Instruments

Two sets of instruments were developed to investigate teachers' perceptions of the issues that form the purpose of the study. Section 1 of the questionnaire (as shown in table 1) contained 9 decision issues and was designed as a scale for measuring the teachers' perceptions of their level of participation in decision-making in three decision domains. Teachers were asked to answer the following two substantive questions regarding 9 decision domains:

1. What is your actual extent of participation in making this decision?
2. To what degree do you desire to participate in this decision?

Section 2 was a set of items designed to measure the three variables of affective outcome: Job Satisfaction, Commitment, and Workload (as shown in table 1). The research questions actually stipulated some notion of distance in the theorizing and often assumed the equal spacing of the interval scale. Thus, the data were treated as an interval scale. All items in section 1 and 2 were measured using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The level of teacher participation in decision-making could be represented by the scale mean of the three decision domains. The higher the

scale mean of a decision domain, the higher would be the level of participation in that domain.

Samples

The subjects in the study were teachers from aided secondary schools in Hong Kong. There are 473 secondary schools in Hong Kong, of which 90% of are aided Schools, 5% are government schools and the other 5% are direct subsidy schools. Cluster sampling methodology was adopted for collection data from the population. The sample was drawn geographically from 20 aided secondary schools (5% of total schools). From these 20 schools, random samples of 400 teachers were selected, of which 335 responded to the questionnaire.

The Results

Principal axis factor (PAF) analysis was applied to the scores of actual participation in section 1 and scores of affective factors in section 2. This results in a solution of three-factor structure in both sections. The results of the PAF analysis provided a reasonable match with the factor structure of a 3 domain multidimensional decision model and 3 factor structures of teacher affective outcome. The results presented in Table 1 clearly suggest a three-factor structure of both exogenous and endogenous variables that are both empirically feasible and theoretically acceptable. The reliability coefficients of the scales ranged from 0.71 to 0.89, which were judged adequate for this study.

Table 1 Results of the Confirmatory Factor Analysis and Reliability Test for Each Scales

Scale	Items	Factor 1	Factor 2	Factor 3
	Section 1 of the questionnaire			
Management Domain	Human resource management	0.991		
	Financial management	0.823		
	Strategic management and organizational design	0.768		
Instructional Domain	Setting class learning objectives		0.941	
	Selection of instructional materials		0.747	
	Instructional designs		0.662	
Curricular Domain	School based curricular development			-0.862
	Subjects and modules offered to each class			-0.804
	Setting academic regulations			-0.288
	Eigen value	3.150	1.795	0.740
	% of Variance Explained	35.005	19.943	8.224
	Scale Reliability Cronbach's Alphas Coefficient	0.89	0.82	0.71
	Total Score for actual participation in each decision domain	4.59	11.59	7.27
	Total Score for desire to participate in each decision domain	8.73	12.52	11.71
	Discrepancy measure between score for actual and desire in each domain	4.16	0.93	4.45
	Section 2 of the questionnaire			
Dimension	Item	Factor 1	Factor 2	Factor 3
Job Satisfaction	I am proud to tell others that I am part of this school.	0.881		
	I have a sense of pride and belonging to the school.	0.871		
	I would recommend this school to someone like myself as a good place to work.	0.869		
Workload	Too much administrative routine work that disrupt my teaching.		0.828	
	Department and school meeting, which occupy much of my working time.		0.822	
	I need to work overtime after school hours.		0.800	
Commitment	I express a high degree of commitment to the school.			-0.848
	I commit to my teaching.			-0.831
	I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.			-0.824
	Eigen value	2.933	1.635	0.992
	% of Variance Explained	32.592	18.163	11.019
	Scale Reliability Cronbach's Alphas Coefficient	0.892	0.732	0.80

The total score of actual participation in the managerial domain is 4.59, desire to participate 8.73 and for decision condition 4.16. The total score of actual participation in the instructional domain is 11.59, desire to participate 12.52 and for decision condition 0.93. The total score of actual participation in the curricular domain is 7.27, desire to participate 11.71 and for decision condition 4.45. The above scores represent the levels of teacher participation in the respective decision domains and are presented in figure 2. The highest level of actual participation in the 3 decision domains is found in the Instructional domain (11.59). The lowest score of actual participation is found in the school level managerial domain (4.59). The highest score of desired participation (12.52) is found in the instructional domain. This suggested that teachers strongly desired to participate in the instructional domain. The lowest score of desired participation (8.73) was found in the managerial domain. The greatest discrepancy between actual and desired participation was found in the managerial domain (3.20).

Figure 2 Score of actual participation and desire to participate in the three decision domains
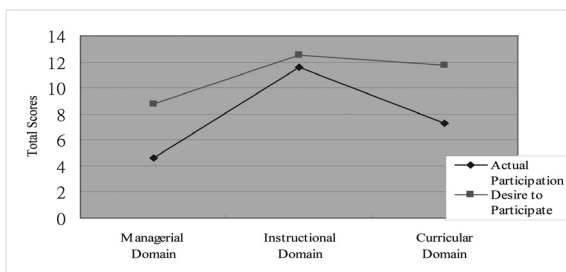
Structural Equation Modeling

The structural and measurement coefficients from the completely standardized solution under maximum likelihood were presented in Figure 3. The following paths were significant: 1) Instructional domain and workload ($\gamma= 2.15$) ; 2) Curricular domain and job commitment ($\gamma= 3.07$) ; 3) curricular domain and job satisfaction ($\gamma= 2.8$); and 4) Managerial domain and job satisfaction($\gamma= 3.21$). However, the paths between participation in the following domains and affective aspects were not significant, 1) Instructional domain and job satisfaction; 2) Instructional domain and workload: 3) curricular domain and workload; 4) Managerial domain and job commitment; and 5) Managerial and workload.
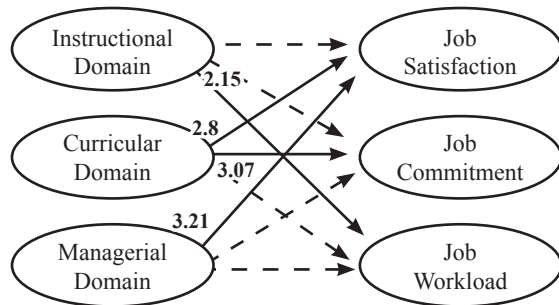

Fig. 3 Result of the model $\chi2 = 140.39$, df=120, p-value=0.09840, RMSEA=0.023

The results of the LISREL with 335 participants showed that the chi square value was significant for the overall model, $\chi2$ (140.39 , N=120) =140.39, P< 0.09840. As an absolute fit index, the chi square assesses the discrepancy between the sample covariance matrix and the implied covariance matrix on the basis of the hypothesized model. A non-significant chi-square suggests that the model may be a reasonable representation of the data. Relative-fit index and residual based indexes are two types of additional fit indexes used widely to complement chi-square. Relative-fit indexes include comparative fit index (CFI), non-normed fit index (NNFI), and incremental fit index (IFI). Those indexes measure

the relative improvement in fit by comparing a hypothesized model with a base-line model. The base-line model is an independence model in which all variables are expected to be uncorrelated. Those indexes ranged from zero to one, with larger values indicating a better fit. They should be at least larger than 0.9 for reasonable goodness of fit. In present study, CFI = 0.99, NNFI = 0.99, and IFI = 0.99. All those indexes suggest a reasonable fit between the data and the hypothesized model.

Other than relative-fit indexes, residual-based indexes can also be used. Standardized root means square (SRMS) measures the average values across all standardized residuals between the elements of the observed and implied covariance matrices. A root mean square error of approximation (RMSEA) assesses absence of fit because of model misspecification and provides a measure of discrepancy per degree of freedom (Browne & Cudeck, 1993). SRMR ranges from zero to one, and RMSEA ranges from zero to unlimited value, with smaller value indicates better model fit. A value of 0.08 or less for SRMR and a value of 0.06 or less for RMSEA indicate adequate fit (Hu & Bentler, 1999). In this study, SRMR = 0.042, whereas RMSEA = 0.023 (90% CI.0.0; 0.037). Given that this is a very stringent model in which the correlations among all measurement errors were not set free, those fit statistics indexes show that the model fit the data fairly well.

Discussion on Findings

Although Hong Kong School-based management policy encourages school administrators to enable teachers' participation in decision-making within formal procedures, teachers in the sample perceived themselves to be in a state of decision-deprivation in all the decision domains of this study. The overall pattern of teachers' participation in decision-making was a condition of decision-deprivation. This was true for instructional, curricular and managerial decision domains. This result is similar to the research findings of Chan, Ching, and Cheng (1997); Bacharach et al., (1990); and Taylor and Bogotch, (1992). These researchers agreed that teachers reported feeling deprived of the opportunity to participate in decision-making. If the education authority and school principals in Hong Kong are committed to implementing school based management policy, they need to know why teachers perceive themselves as participating less in decision making than they would like to do.

Another finding was that teachers had greater desire to be involved in instructional decisions than in curricular domain and managerial decisions. This result was similar to the findings from Conley's (1991) and Smylie's (1992) studies, which reported that teachers tend to express more desire for participation in decisions that relate to classroom instruction than for participation in school level administrative and management decisions. Teachers were less active in decisions in the managerial domain than the instruction or curricular domain. The study by Jongmans, Biemans and Beijaard (1998) confirms this finding; it reported that teachers were unlikely to be involved in educational policy making and were rarely involved at all in administrative policymaking.

On the other hand, decision deprivation was greater in the managerial and curricular domains than in the instructional domain. This showed that teachers felt that they were insufficiently involved

in school based curriculum decision and managerial decisions that involved human resource, finance and strategic management. The findings suggest that teachers in aided secondary schools in Hong Kong were more often called upon to use their professional knowledge to set class learning objectives and select or design instructional materials, which were in the instructional domain than to make other decisions. This was an area in which they had a strong desire to participate in decision-making and in which their actual participation was greater than in other areas, thus producing the lowest level of decision-deprivation.

Three affective aspects of teachers' work experience were considered: their perceptions of their job satisfaction, job commitment and workload. Participation in decision domains of curriculum and management was found to be the predictors of job satisfaction. Participation in decision domains of curriculum was also found to be the only predictor of job commitment. Participation in the instructional domain was found to be the only predictor of workload. Teachers' perceptions of their job satisfaction, commitment and workload were associated with their perceptions of their involvement in decision-making. Results showed that involvement in managerial and curricular decisions was associated with job satisfaction, and involvement in curricular decisions was associated with commitment. Involvement in instructional decisions was not associated with job satisfaction and commitment. This suggests that teachers' satisfaction could be increased by their greater involvement in managerial and curricular decisions. Thus, if the managerial decision domain and school based curriculum design were open to more teachers, more job satisfaction and commitment ought to be induced.

Participation in decision-making in the managerial and curricular decision domains was not correlated to teachers' workload. This result was different to that found in other studies (Malen, Rodney and Jennifer 1990; Duke, Shower, and Imber, 1981). These other studies found that teachers' participation in managerial decision domains can detract from instructional programs by diverting teachers' attention, draining their energy, and/or reducing their actual teaching time, particularly when these demands come in addition to, not in lieu of, the responsibilities that principals and teachers typically assume. However, participation in the instructional domain was found to be the only predictor of workload. These findings suggest that teachers did not want more decision-making responsibility than they already had, and that they associated it with a higher workload. This is not surprising, as more decision-making about instructional matters in the classroom must involve a heavier workload. If the classroom is an isolated workplace, teachers may feel that increased decision-making in this domain goes unrecognised. This might encourage them to highlight the instruction decision-making area of the classroom as leading to a heavier workload than other decision-making domains, which are more public. It might also reflect the finding that increased decision-making for teachers comes directly from government sources rather than from school administrative ones. If teachers identified high workload in the other areas, may be they would reduce their opportunities to engage in more decision-making in those areas.

There is some evidence that teachers are being asked to make instructional decisions that have not been customary for them to make. Involvement in these new areas of decision-making makes the

decisions more public; teachers must come together to discuss classroom teaching and learning decision issues, whereas previously they would have been left to their private judgments. This might be seen as both threatening and time consuming, leading to a perception of higher workload.

Chan, Ching, and Cheng (1997) reported that higher participation in decision-making led to teachers to perceiving a higher workload. In the current study, teachers' perceptions of workload were not associated with their involvement in managerial and curricular decision-making. Teachers' perception of workload was only associated with involvement in instructional decisions. Teachers are required to make many instructional decisions in their daily work. Where these decisions need to be made collaboratively, rather than independently, teachers may resent their loss of autonomy and complain of the increased workload brought about by increased meetings with other teachers. Involvement in instructional decision-making may bring about increased workload and not increase job satisfaction and commitment. The workloads created from the involvement in the other decision domains may have been compensated by the increase of job satisfaction and commitment. Thus, teachers did not perceive a heavier workload when they were involved in these domains. It seems that increased participation in decision-making within SBM is related to more positive affective outcomes for teachers, except in relation to instructional decisions.

Increasing teachers' participation in decision-making could be an effective management strategy that could satisfy teachers' self-esteem and self-actualisation needs. When these needs are satisfied,

the result may be job satisfaction and increased commitment. Supporters of this theory argue that satisfied workers are more motivated and hence are more productive (French, Israel and As, 1960). Administrators may assume that enhancing teacher involvement increases job satisfaction and commitment. As teachers in the sample perceived themselves to be in a state of decision-deprivation under the school-based management policy, these findings suggest the importance of legitimate, authentic teacher involvement in decision-making. When teachers do not perceive their decision involvement to be influential, their involvement will decline, as will their overall job satisfaction and commitment. If the education authority and school principals in Hong Kong are committed to implementing school-based management policy, they need to know why teachers perceive themselves as participating less in decision-making than they would like.

Conclusion

In conclusion, this study extends our knowledge of the relationships between decision-making involvement and affective outcomes. It also reveals the issues of current and future concern for administrators and researchers interested in understanding the dynamics and complexities of deciding whom to involve in decision-making in schools. This study does not support the theory that school-based management governance structures automatically enhance teachers' participation in decision-making. Teachers as professionals desire to participate in decision-making in the organizations in which they are employed. It should be in the interest of the administrators to encourage participation, as the intent is to increase job satisfaction and to

enhance greater commitment to school policies, thus, fostering adaptation to change. More opportunities for teacher participation in planning and policy formulation will facilitate and commit the teachers to their effective implementation and evaluation. Such involvement increases consensus on goals and priorities and breaks the narrow perception that teachers may have when they are isolated in their classrooms. School administrators should engage teachers in all the decision domains, but especially the decision area of pedagogy. Teachers prefer to concentrate on teacher-related concerns for instance curricular and instructional issues, and it is through this preference that teachers may be committed to participating in a decision-making process.

It is evident from the findings and conclusion of the study that additional research is needed. Firstly, to have a better understanding of how to diminish the discrepancy between teachers' perceptions of actual and desired participation in decision-making, more in-depth qualitative research is needed to explore the process of reconciling decision deprivation by manipulating management practices in the Hong Kong aided secondary school setting. This study was restricted to aided secondary schools. Future studies should also focus on a comparison between school management climates in primary schools on teacher participation in decision making. This would enrich the knowledge base on the varieties of management practices that may support increased teacher participation in decision-making.

References

Alutto, J. A., & Belasco, J. A. (1972). A typology for Participation in Organization Decision Making, *Administrative Science Quarterly*, vol. 17, no. 1, pp. 117-125.

Alutto, J. A., & Belasco, J. A. (1973). Patterns of Teacher Participation in School System Decision Making, *Educational Administration Quarterly*, vol. 9 no. 1, pp. 27- 41.

Arnold, H. J., & Feldman, D. C. (1986). *Organizational Behavior*. New York, McGraw-Hill.

Bacharach, S. B., Bamberger, P., Conley, S. C., & Bauer, S. (1990). The dimensionality of decision participation in education organization: The value of a multi-domain evaluative approach. *Educational Administrative Quarterly*, vol. 26, no.2, pp.126-127.

Bair, L. H. (1992). What Research has to say about School-Based Management. *Catalyst for Change*, Vol. 21, no. 2, pp. 17-19.

Blasé, J., Anderson, G., & Dungan, S. (1995). *Democratic principals in action: Eight pioneers*, California, Thousand Oaks, Corwin.

Brown, D. J. (1987). *A preliminary inquiry into School-based management*, Ottawa, Ontario, Social Sciences and Humanities Research Council of Canada.

Brown, D. J. (1990). *Decentralization and school-based management.* London, The Falmer.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structure equation models* (pp.136-162). Newsbury Park, C.A:Sage.

Chan, M. T., Ching, Y. C., & Cheng, Y. C. (1997). 'Teacher participation in decision making: the case of Hong Kong SMI schools'. *Education Journal*, vol. No.46, no.3, pp.205-232.

Chapman, J., & Boyd, W. L. (1986). Decentralization, devolution, and the school principal: Australian lessons on state wide educational reform. *Educational Administration Quarterly,* vol. 22, no. 4, pp. 28-58.

Cheng, Y. C., & Chan, M. T. (2000). Implementation of School base management. A Multi-perspective analysis of the case of Hong Kong. *International Review of Education.* vol. 46 no.3, pp. 205-323.

Clune, W. H., & White, P. A. (1989). *School-based management: Instructional Variation, Implementation, and issues for further research.* New Brunswick, Center for Policy Research in Education, Eagleteton Institute of Politic, Rutgers University.

Conley, S. C., & Bacharach, S. B. (1990). From School-Site Management to Participatory School-Site Management, *Phi Delta Kappan,* vol. 71, no.7, pp. 539-544.

Conley, S. C. (1991). Review of research on teacher participation in school decision making, *Review of Research in Education*, vol. 17, pp. 225-266.

Conway, J. A. (1984). The Myth, Mystery, and Mastery of Participative Decision-Making in Education. *Educational Administration Quarterly,* vol. 20, no.3, pp.11-40.

David, J. L. (1989). Synthesis of research on school-based management. *Educational. Leadership,* vol. 46. no. 8, pp. 45-53.

Dimmock, C. (1995). Reconceptualising restructuring for school effectiveness and school improvement. *International Journal of Educational Reform*, vol. 4, no. 3, pp. 285-300.

Dondero, G. M. (1993), *School Based management, Teachers Decision Participation Levels, School Effectiveness and Job Satisfaction.* Unpublished Ed.D Thesis, Fordham University.

Duke, D. L., Shower, B. K., & Imber, M. (1980). Teachers and Shared Decision Making: The Cost and Benefits of Involvement. *Educational Administration Quarterly* vol. 16, no.1, pp. 93-106.

Duke, D. L., Shower, B. K., & Imber, M. (1981). 'Studying Shared Decision Making in School' in Bacharach, S. B., '*Organizational Behaviour in Schools and School District*', New York, Praeger, pp. 314-320.

Flannery, D. (1980). *Teacher decision involvement and job satisfaction in Wisconsin high schools*. Unpublished PhD dissertation, University of Wisconsin, Madison.

French, J. R. P., Israel, J., & As, D. (1960). An experiment in a Norwegian factory: Interpersonal dimensions in decision-making. *Human Relation*, vol.13, pp. 3-19.

Gamage, D. T. (1996). *School–Based Management: Theory, Research and Practice*. Colombo, Karunaratne and Sons.

Gamage, D. T. (2000). *International Developments and Current Trends in School-Based Management.* A paper presented at the Department of Education Administration and Policy, The Chinese University Hong Kong.

Goodin, T. A. (1995). *School Based Management and Teacher Satisfaction: An Exploratory Study.* Unpublished Ed.D. Indianan University.

Goldman, J. P. (1992). When participatory management attracts no buyers. *School Administrator,* vol. 49, no.1, p.15.

Guthrie, J. W. (1986). School-based management: The next needed educational reform. *Phi Delta Kappan*, vol. 68, pp. 305-309.

Hill, P. T., & Bonan, J. (1991). *Decentralization and Accountability in Public Education*. California, RAND.

Hu, L., & Bentler, P. M. (1999). Cutoff Criteria for fit indexes in covariance structure analysis: conntional criteria versus new alternative: *Structure Equation Modelling 6*(1), 1-55.

Hung, A., & Lui, J. (1999). Effects of stay-back on teachers' professional commitment. *The International Journal of Educational Management*, vol. 13, no.5, pp. 226-240.

Imber, M., & Duke, D. L. (1984). Teacher Participation in School Decision Making: a Framework for research. *The Journal of Educational Administration,* vol. XXII, no. 1, pp. 26-34.

Jongmans, K., Biemans, H., & Beijaard, D. (1998). 'Teachers' Professional Orientation and their Involvements in School Policy Making: Results of a Dutch Study', *Educational Management & Administration,* vol. 26, no.3, pp. 293-304.

Jöreskog K. G., & Sörbom D. **(**1999**)**. *LISREL 8.3: User's reference guide*. Chicago: Scientific Software.

Keith, S., & Girling, R. (1991). *Education management and participation: New directions in educational administration*, New York, Allyn and Bacon.

Kreis, K., & Brockoff, D. Y., (1986). Autonomy: A Component of Teacher Job Satisfaction. *Education*, vol. 107, no. 1,
pp. 110-115.

Lau, M. F. (2004). Teachers' participation in decision in Hong Kong secondary School. *New Horizons in Education*, *No 49*, *May 2004,* pp.17-41.

Likert, R. (1967). *The Human Organization: Its Management and Value.* New York, McGraw Hill.

Malen, B., Rodney T. O., & Jennifer, K. (1990). What Do We Know about School-Based Management? A Case Study of the Literature--A Call for Research (Quoted in Clune, W. H. and Witte J. F. (1990). The Practice of Choice, Decentralization and School Restructuring *Choice and control in America Education, Vol. 2,* London, The Falmer Press, pp. 289-342).

Mohrman, A. M. Jr., Cooke, R. A., & Mohrman, S. A. (1978). Participation in Decision Making: A Multidimensional Perspective. *Education Administration Quarterly*, vol. 14, no. 1, pp. 13 -19.

Mowday, R. T., Steers, R. M. & Porter, L. W. (1979). The Measurement of Organizational commitment. *Journal of Vocational Behaviour*, vol. 14, pp. 224-247.

Mowday, R. T., Steers, R. M. & Porter, L. W. (1982). *Employee Organization Linkages.* New York, Academic Press.

Murphy, J., & Beck, L. (1995). *School-Based Management as School Reform: Taking Stock.* CA, Corwin Press, Thousand Oaks.

Parsons, T. (1951). *The Social System*. New York, NY, The Free Press of Glencoe.

Perry, C. M., & Brown, D. W. (1994). Teachers response to the shared decision-making opportunity. *Education,* vol. 114, no. 4, pp.605-609.

Raywid, M. (1990). Rethinking school governance, (Quoted in Elmore, R. and Associates. *Restructuring schools: The next generation of educational reforms.* San Francisco, Jossey Bass, pp. 152-206).

Reyes, P. (1989). The Relationship of Autonomy in Decision-making to Commitment to Schools and Job satisfaction: A comparison between public School Teachers and Mid-Level Administrator. *Journal and Development in Education*, vol. 22, no. 2, pp. 62-29.

Rice, E. M., & Schneider, G. T. (1994). A decade of teacher empowerment: an empirical analysis of teacher involvement in decision-making 1980-1991. *Journal of Educational Administration,* vol. 32, no. 1, pp. 43-58.

Ritchie, J. B. (1974). Supervision, in Strauss, G., Miles, G. R., Snow, C. C. and Tannenbaum, A. (1974). *Organization Behavior: Research and Issues*. Madison, Wis., Industrial Relationship Research Association.

Schneider, G. T. (1984). 'Teacher involvement in decision-making: Zones of acceptance, decisions conditions, and job satisfaction. *Journal of Research and Development in Education*, vol. 18, no. 1, pp. 25-32.

Sergiovanni, T. J. (1992). *Moral Leadership*. San Francisco, Jossey Bass Publishers.

Smylie, M. A. (1992). Teacher participation in school decision-making: Assessing willingness to participate. *Educational Evaluation and Policy Analysis*, vol. 14, no.1, pp. 53-67.

Taylor, D. L., & Bogotch, I. E. (1992). *Teacher decisional participation: Rhetoric or reality?* Paper presented at the Annual Meeting of the Southwest Educational Research Association, Houston, TX.

Walsh, J. J. (1990). *A comparison of job satisfaction between teachers assigned to schools that practice school based management and those assigned to non school based management school.* Unpublished PhD Thesis, University of Southern Mississippi.

Weiss, C. H. (1993). Shared decision about what? A comparison of school with and without teaches Participation. *Teachers College Record*, vol. 95, no. 1, pp. 69-92.

Wiener, Y., & Vardi, Y. (1980). Relation between Job Organization and Career Commitment and work outcomes: An Integrative Approach. *Organizational Behaviour and Human Performance*, vol. 26, pp.81-96.

Yu, H. (2005). Implementation of school-based management in Hong Kong: Recent development and future challenges. *Journal of Educational Change*, 6(3), 253-275.

Author:

Dr. Cheng Chi Keung, Assistant Professor,
School Partnership and Field Experience Office, The Hong Kong Institute of Education
e-mail: eckcheng@ied.edu.hk