

**Teacher Participation in Decision Making
of Secondary School Teachers from
Aided Schools in Hong Kong**

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by

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Abstract

Since the year 2000, all Hong Kong schools have implemented a school-based management policy. Such a policy is expected to provide teachers with opportunities to become involved in school decision making, which has been identified as one of the key characteristics of an effective school.

This research is based on an empirical study of teachers from Hong Kong aided secondary schools. It investigates the status quo of their current involvement in school decision making and the factors affecting their participation. It explores the relationship between teachers' perceptions of school managerial practices, their perceptions of their participation in decision making, and their perceptions of their job satisfaction, commitment and workload.

The research uses a survey method for data collection. The analysis is based on data from questionnaires, which were completed by 405 teachers from 22 aided secondary schools in June 2002. A correlational research design was used. The analysis was statistical, using both descriptive and inferential data analysis procedures. Three instruments based on Likert five-point scales were constructed to measure (1) the level of teacher participation in decision making within four decision domains: school level managerial, class level technical, school level technical and class level managerial decision domains; (2) four variables of managerial practices: bureaucratic control, collaboration, professional autonomy and shared vision; and (3) three variables in the affective domain: job satisfaction, job commitment and teachers' perceptions of their workload. Factor analysis and reliability analysis were used to confirm the construct validity and internal consistency of the instruments.

The findings throw light on the relationship of teachers' perceptions of the management practices of their schools and their perceptions of their participation in decision making. Teachers' involvement in decision making was significantly related to their perceptions of bureaucratic control, collaboration, professional autonomy and shared vision. It was possible to predict participation in different decision domains from teachers' perceptions of different management practices.

The research identifies the decision domains within which teachers were involved in decision making and finds that both overall and within each of these domains the status quo is one of decision deprivation in which teachers perceptions of their actual involvement in decision making is consistently and significantly lower than their desired participation.

The findings also suggest that higher job satisfaction and higher teaching commitment are correlated with greater participation by teachers in decision making in all four decision domains. On the other hand, although higher workload was correlated with high participation in the instructional decision domain, workload bore little relationship to the other decision domains.

This thesis is intended to make an original contribution to educational management. Its findings suggest practical steps that could be taken by school administrators to increase teachers' participation in decision making. The results confirm those of other studies that suggest that an increase in teachers' participation in school decision making will contribute to greater school effectiveness. The thesis also provides a theoretical model that can be used in other research.

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Chapter 1

Thesis Introduction

1.1 Introduction

This thesis examines teachers' participation in decision making within Hong Kong schools. It is based on an empirical study of teachers from aided secondary schools in Hong Kong. The study aims to investigate the characteristics of teacher participation in decision making and explores the relationship between teachers' perceptions of school managerial practices, their perception of their participation in decision making and their perception of their job satisfaction, commitment and workload.

In recent years, an international trend has emerged towards decentralisation, devolution and greater autonomy for schools within publicly funded systems of education with the goal of improving the quality of education (Beare, 1991; Beare & Boyd, 1993). Teacher participation in decision making is one of the major features of such trend. A basic assumption for this trend is that lasting school improvement would occur when teachers become more involved in professional decision making at the school site. Teachers are closest to students, they are more aware of the needs of their students and in a better position to anticipate the effects of decision implementation. In addition, teacher participation in decision making has been shown to be one of the key characteristics of effective schools. (Taylor et al, 1991)

Although there is general agreement that teacher involvement in decision making aids school improvement, it is difficult for those in control to empower those below them (David, 1989; Brown, 1990). One difficulty in Hong Kong secondary schools has been a tendency for the mindset to be rooted in the old paradigm particularly in the Chinese tradition and management style that emphasizes centralization in decision making. Under

school based management policy in Hong Kong, each individual school has its own distinctive managerial practice, which may encourage or hinder teacher involvement in decision making. Under the assumption that a school will improve through teacher participation in decision making, there is a need to identify the relationship of different managerial practices to teacher participation in decision making and to clarify the clear connection between them in the pursuit of school improvement.

The extent to which teachers are involved in decision making in schools and the nature of the decisions being made are important indicators of the degree to which schools have changed since the introduction of school based management in the previously centralized education system of Hong Kong. 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.

1.2 The Background of the Study

School Based Management (SBM) is one of the most important international educational reform movements. The reform of decentralisation is known as school based management in Canada and the USA (Bailey, 1991; Brown, 1990; Midgeley et al, 1993), local management of schools in Britain (Wallace, 1992) and the self-managing school (Caldwell et al, 1988; 1992) or devolution (Sharpe, 1993; 1994) in Australia. Even though the key features are very similar, there is a wide variation in devolution packages. In the United State of American, Canada and Great Britain, there was a gradual implementation of SBM. The SBM model, which modified the old bureaucratic type of

school management, came with increased autonomy, flexibility, shared decision making, transformational leadership and accountability.

SBM was developed earlier in Canada than in the USA. For example, Edmonton, Alberta, Canada began its pilot of SBM in 1970 and has continued with SBM since then. The key feature of the SBM model in Canada was the increasing involvement of parents, the community and business with decision making in the delivery of education, including deployment of resources and determining how the results were to be achieved (Alberta, 1994).

The USA model of SBM, school-centred restructuring, emerged in the 1980s. This reform envisaged the transfer of authority relating to budget and staffing to the school level. This was in reaction to an earlier process of consolidation towards larger administrative units that had shifted significant power and authority from local communities to the district superintendents and their staff. The reform was prompted by the report *A Nation At Risk* by the National Commission on Excellence in Education (NCEE, 1984), which outlined the negative effects on student achievement of the increased centralization and bureaucratisation of school administration. In the USA, the logic of school based management required each school to determine the type of school reform wanted (Raywid, 1990). Accordingly, each state of America adopted different strategies in reforming its school system. For example, some states focused on the creation of performance-oriented schools through the devolution of authority to the school level along with community participation in decision making. Others focused on a de-concentration of decision making and participation rather than attempting to transfer or delegate authority (Hansen, 1990). Maryland required all schools to have a SBM team. In Cincinnati, reorganization and downsizing shifted responsibilities to the local school

councils.

In the British SBM model, devolution meant more autonomy and flexibility in decision making at the school level, which was followed by increasing accountability to parents, employers, and the wider community (Gamage, 2000).

1.3 School Based Management in Hong Kong

The introduction of SBM in Hong Kong was not so gradual. In 1991, the Hong Kong Government introduced the School Management Initiative (SMI), which was a policy to induce management reform in Hong Kong aided schools (Education and Manpower Branch & Education Department, 1991). It aimed to set a framework for enhancing the quality of education in schools. The SMI was premised on the school based management model, which gave schools greater control in finance and administration. The policy was introduced to schools in March 1991, with little public consultation. Immediately after the announcement, schools were asked to decide whether they would join the pilot scheme. At that time, out of 325 aided schools in Hong Kong, only 21 schools took part in the SMI scheme.

One aspect of the policy of SMI was to provide teachers with more opportunities to become involved in making decisions on school matters. Within the structure of SBM schools, teachers were encouraged to participate in developing school goals and policies and formulating school plans and program plans. Teachers were given official representation in the school management committee or council; their representatives were to participate in policy making at the top level of the school (Education and Manpower Branch and Education Department, 1991). It was hoped that the reform would induce a structurally favourable environment for teachers to become involved in making

decisions on school matters.

In 1997, the SMI was renamed School Based Management (SBM) although it remained a voluntary project for schools, if they so chose, to opt into. By this time, 148 secondary, 199 primary and 18 special schools (only 30 percent of all schools) had chosen membership of SBM. In order to encourage a higher participation, the Education Department made further changes to the policy in September 2000, providing an extra grant and more flexibility. Although few of the non-aided schools have adopted the new policy, all the aided secondary schools in Hong Kong are now implementing school based management although not necessarily in the same way.

The policy of school based management in Hong Kong aims (1) to define more clearly the role of the school sponsoring body, the school manager and principal; (2) to provide for greater participation by teachers, parents and former students in school decision making and management; (3) to encourage more systemic planning and evaluation of school activity; and (4) to give schools more flexibility over the use of resources.

There are several aspects of the school based management model in Hong Kong, which are similar to the models implemented in other countries. First, the SBM model in Hong Kong includes an internal redistribution of the authority decentralized to the school level from the Education Department (Malen et al, 1990a). Second, the ability to influence staffing and budget decisions at the school level is shared with teachers, parents, other community members and, sometimes, students (Raywid, 1990). Third, there is a call for the establishment of a school advisory council for obtaining systematic input on school decisions from teachers, parents, and sometimes from other citizens and students

as well. Finally, the fund for aided schools is provided in the form of a block grant. Each school receives its budget in a lump sum for its own allocations (Brown, 1990).

1.4 Management Practices in HK schools

According to Murphy and Beck (1995), there are three main models of SBM: the administrative control model, the professional control model and the community control model. The administrative control model is one in which schools have administrative authority over the key decision areas of budget, personnel and curriculum in order to enhance the efficient expenditure of resources for directing students' services. The professional control model is one in which teachers are involved in school decision making. The community control model is one in which parents and community members are given key roles in school governance so that the values and preferences of parents and the community are reflected in school functioning. In this thesis the first two of these model are considered. Because parents and community members are external parties of the school's routine decision making system, and are not directly involved in daily decision making, the community control model is not considered in this study.

Some research suggests that school based management in Hong Kong is dominated by the administrative control model, which is a bureaucratic model; and that the schools are still operating in a traditional bureaucratic culture (Cheng et al, 2000). Chan et al, (1997) found that despite the recommendations of the government's SMI policy, very few school sponsoring bodies and principals in Hong Kong had decentralized their authority for resources, recruiting staff, and personnel management to teachers by 1997. The practice of bureaucratic control is one of the elements of an organisation climate that could be a barrier for implementing the form of SBM favoured by Hong Kong policy. Bureaucratic control implies a vertical line of command from the superior of the school,

through its hierarchical structure, to the subordinates with the purpose of fulfilling the rules and regulation of the organisation. Bureaucratic control is the system of vertical linkages that are used to coordinate activities between the top and the bottom of an organization (Daft 1992).

Recommendation 10 of the current SBM policy in Hong Kong states that, '*The School management framework should allow for participation in decision making, according to formal procedures, by all concerned parties including: all teaching staff, the principal, the School Management Committee, the parents and the students.*' This recommendation could be construed as supporting a form of collegial involvement for teachers. Collegiality is a feature of highly professional organizations and contrasts strongly with the practice of traditional bureaucratic control. The unique characteristic of collegiality is full democracy in the making of important decisions (Robbins, 1990). If recommendation 10 were fully implemented in Hong Kong schools, it is possible that they would be pushed towards the professional control model of SBM.

Collegiate management is the opposite of bureaucratic management. Bureaucracy emphasizes standard procedures and a hierarchical power structure inside a school organization; it gives rise to forms of management style which are unlikely to be associated with the practice of involving teachers in decision making. Collegiality, the practice of collegiate management, is a cultural linkage system, which links members of the organization horizontally, thus enabling members to participate in decision making. (Firestone and Wilson's model (1985) of bureaucratic and cultural linkages is discussed fully in chapter 2.)

One of the questions that this research will address is whether the implementation of

recommendation 10 has led to any change in the bureaucratic organisation of Hong Kong schools. According to Cheng et al (2000), the models of administrative control and professional control may coexist under the same SBM policy in Hong Kong aided schools, with the type of administrative control model dominates the practice of SBM, and even though the professional control SBM is important for better use of teachers' knowledge in decision making with the enhancement of their commitment (Clune et al, 1988; Wohlstetter et al 1992; Hess, 1994; Cheng, 1996). But the earlier study by Lim (1998) has concluded that SBM has brought about an improved management framework for schools with greater flexibility of decision making. Pang (1998) has also conducted a survey comparing the management culture of SMI schools and non SMI schools, the results showed that the cultural strength of the professionalism, autonomy, co-operation, clarity of goals and collegiality of SMI schools are stronger than the non SMI schools. Therefore, to certain extent, the SBI schools may move away from bureaucracy towards a more collegial form of management.

Although, involving all teachers in decision making is not a compulsory requirement of school based management policy in Hong Kong, it is recognised that education could be improved if teachers and parents are empowered to contribute to decisions that have a direct impact on the individual schools (White, 1988). Some researchers have suggested that better decisions could be achieved if control over decisions is placed as close as possible to the implementation of those decisions (Taylor et al, 1991; Henderson, 1990). The logic of this argument suggests a model of decision making in which power and authority are linked to areas of professional expertise and specialization in the organization. One way of conceptualising this issue is through Weick's model of loose-coupled systems (see chapter 2.) This model suggests that schools are loosely coupled organizations in which principals and other senior staff cannot have a direct

influence on teachers' work. Because of the nature of the organisation, teachers cannot look to senior staff to make decisions and must develop their own professional skills and autonomy to work most effectively. Research in Dutch schools by Sleegers et al (1995) suggested that there was a relationship between teachers' professional orientation and their involvement in school policy making. Dimmock et al (1998) also reported that teachers and principals feel professionally empowered in school based management and motivated to improve the management of school.

One feature of aided schools in Hong Kong is their variety. Different sponsoring bodies operate different aided schools in Hong Kong. The sponsoring bodies may be religious, charitable, commercial or industrial foundations. These sponsoring bodies have different aims and objectives to do with their individual missions. Some of these schools will have strong vision and mission to do with their foundation principles. It seems likely that the sponsoring bodies of the aided schools in Hong Kong will influence the form and the strength of the corporate ethos and educational philosophy of their schools. Within the framework of SBM, the authority to determine school policy is decentralized from the Education Department to the school sponsoring body and then to the school management committee and the principal. The schools have the autonomy to determine their own aims, which are outlined as part of the constitution of the school management committees and lodged with the education department. Where a school has a strong vision and mission it seems likely that its teachers will share it. Chiu's study (1996) reported that the level of empowerment of teachers for the principals with high vision in SMI schools is higher than the level of their counterparts in non-SMI schools. He concluded that a shared vision under SBM policy could empower teachers. If the vision is shared among the teachers, a higher involvement would be expected.

Clearly, the mission and vision of the school, its values and its management climate will influence the work of its teachers. A second aim of the current research is to explore the relationship between specific management practices and the degree and form taken by teachers' participation in decision making. As has been shown, the management climate of the school includes factors such as bureaucratic control, collegiality, professional autonomy and the mission orientation of the organization. These have been operationalized into four variables of management practice.

Bureaucratic control. The implementation of school based management policy is seen as a way to decentralize and debureaucratize school control. One of the assumptions of school based management as an education reform movement is that the highly centralized controls to which schools have been subject are detrimental to school improvement (Guthrie, 1986). School based management is a concept for restructuring the decision making processes of public schools. It is defined as a set of organizational arrangements in which the balance of authority to make operational decisions is located at school sites. This fractures the state educational bureaucracy although it does not necessarily limit bureaucracy within the school site. In the case of Hong Kong, the SBM policy is intended to provide more flexibility (and less bureaucracy) in school administration and financial management within the school site but its success depends on the willingness of the school authority to implement changes in the management framework of the school. The degree of bureaucratic control exercised by the school administrative authority will be an important determinant of the type of SBM model that can be implemented in the school.

Professional autonomy. There may be a tension between bureaucratic values and professional values within school organizations. The highly bureaucratized system may

be incompatible with the professional organization. Where the management climate favours professional autonomy, teachers are found in the decision making 'driver's seat' for the purpose of making better use of their knowledge in key school decision areas (Leithwood et al, 1996 in Cheng et al, 2000). In the professional model of SBM, teachers are expected to exercise their professional autonomy and judgement in school decision making. School improvement is seen to follow where teachers have considerable professional autonomy and teaching flexibility with regard to process, that is, how to use the resource inputs to provide educational programs and services.

Recommendation 11 of SBM policy in Hong Kong gives a school the authority to decide its own spending pattern in the light of central education policies and its own defined needs and values. Most Hong Kong aided secondary schools have set up a school financial committee consisting of committee chairpersons of various departments to determine the spending of the block grant. The block grant is further divided into administrative grants and subject grants. Teachers in the financial committee are empowered to determine the budgets of the administrative grants related to the managerial affairs of the whole school. Subject panel chairpersons together with their subject teachers formulate the budgets in respect to subject grants. Some researchers suggest that class teachers could make a useful input to the financial decision making about subject grants, because of their teaching expertise and that this would be seen by teachers to make good use of their professionalism (Wong, 1995). This suggests that teachers' perceptions of their involvement in decisions about school spending will correlate with the degree to which they perceive their professional autonomy and expertise to be recognised within the school.

Collegiality. The unique characteristic of collegiality is shared decision making and

full democracy in the making of all-important decisions (Brown, 1990). According to the recommendation 10 of the SBM document, the school management framework should encourage teachers' participation in decision making according to formal procedures. Two or more teacher representatives could become members of the school management committee and have voting power in decision making. They would be expected to bring their experience in curriculum development, classroom instruction, student activities and educational enrichment to SMCs; provide professional expertise for the improvement of student learning and associated school management; and be a solid link between the SMCs and the staff of the schools. Conley et al (1990) have argued that effective school based management requires more decentralised decision making, but also more participatory management with more teachers involved. They see collegiality as a form of participatory management that leads to more effective school based management. However, Chan's research (1997) suggested that teachers were involved in fewer decisions than they desired (decision-deprivation), which means that they may not have perceived their schools to be supportive of their collegial participation in school matters.

Shared Vision. The extent to which all the teachers in a school share the school vision is often seen as a factor enhancing its effectiveness. Many schools produce an annual school plan to guide their activities during the year. Several advocates of school based management argue that the collaborative building of a school mission statement to reflect the shared vision of all the school members should be encouraged. Mission statements, which have been the result of collaboration, often describe SBM schools' core values (Wagner, 1993 in Enderlin et al, 1997). The statements of school missions and goals are seen as the prerequisite to a more desirable future with SBM (Wohlstetter et al, 1993). Recommendations 17 & 18 of the Hong Kong SBM document stated that each school should produce an annual school plan and profile with clear vision, mission and

aims to guide its activities during the year effectively. Chiu et al (1996) believed that clear vision for teachers was related to their increased involvement in decision making. Bondy et al (1994) found that shared vision was one of the factors that enhanced teacher involvement in decision making. Thus, a management climate that emphasises shared vision is likely to be one that encourages teachers' involvement in decision making. Shared vision is a management practice that encourages a vision of the future school that teachers and principal seek to create.

Chapter three gives details of how the four variables described above have been operationalized into four variables of management practice. These four variables have been used as a basis for determining teachers' perceptions of the management practices of their schools, and compared with their views about their participation in decision making.

1.5 Teachers Work Commitment, Job Satisfaction and Work Load

Murphy et al (1995) unpacked the logic of SBM operation: SBM would empower teachers, and teachers' empowerment is positively related to ownership, job satisfaction and commitment. But Dimmock (1995) argued that empowerment may not promote ownership, especially when those empowered feel they have little expertise, interest or time to commit to participation. If the implementation of SBM could empower teachers, it would lead to positive affective outcomes for them. If teachers' affective outcomes are positive, their teaching is improved and schools are more effective (see chapter 2). 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 area 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.

A key aspect of SBM systems that is 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 show that shared decision making will create greater commitment to the school (Blasé et al, 1995; Gamage, 1996a). It seems that increased participation in decision making within SBM is related to more positive affective outcomes for teachers except in relation to Walsh's level of comfort variable.

In this study, it was decided to look at teacher perceptions of their workload, their commitment to the school and their 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 et al (2000) reported that an increasing 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 et al, 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, 1995) but that a higher workload is created simultaneously. Thus, greater job satisfaction and work commitment may

compensate for the higher workload.

1.6 Summary of the Issues

Secondary schools in Hong Kong were for many years part of a highly bureaucratised, centralised education system. Beginning in 1991, attempts have been made to reform this system through the introduction of the less centralised system of school based management. The policy for school based management included recommendations for de-bureaucratising schools and involving teachers and parents in school management decisions. This study focuses on teachers rather than parents and others. *The first aim of the current research is to clarify the situation today with regard to teachers' involvement in decision making in Hong Kong aided secondary schools.*

Aided secondary schools in Hong Kong are run by a great variety of sponsoring bodies and historically this has led to the development of different management climates. Two models of school organisation have been used as a basis for exploring management climate. The two organization models: tight and loose-coupled systems and bureaucratic and cultural linkages are the theoretical frameworks used to represent the possible management climates of Hong Kong aided schools under school based management policy. *A second aim of the research is to explore the relationship between the management climate of the school represented by the four variables of bureaucratic control, professional autonomy, collegiality and shared vision, and the degree and form taken by teachers' participation in decision making.*

Does increased participation in decision making lead to increased commitment and job satisfaction or to a higher workload and possible dissatisfaction? If positive affective outcomes are seen to be linked to greater teacher participation in decision making and a

relationship between particular managerial practices and a high level of participation was indicated, it would be possible to fine-tune the managerial practices to induce a higher level of participation. *The third aim of the research is to explore the relationship between teachers' participation in decision making and their commitment, job satisfaction and greater workload.*

1.7 Summary

This chapter has discussed the purpose of this research and the focus of the investigation, which is to determine the relationship between teachers' participation in decision making, the managerial practices of the school and teachers' affective outcomes. The study will make an important contribution to existing theory and knowledge in these areas and will provide some practical recommendations for the practice and policy of school based management in Hong Kong's aided secondary schools.

Chapter 2

Literature Review

2.1 Introduction

The purpose of this chapter is to review the literature on a number of topics that provide the background to the study. The literature review covers: school based management; teachers' involvement in decision making; school management climates; and teachers' job satisfaction, commitment and work load. The aim of the literature review is to identify and explore those studies that provide the theoretical and empirical underpinning for the research and to the construction of the research instruments outlined in chapter 3.

2.2 School based management

The reform of decentralisation, which took place in the education systems of many western countries from the 1980s, shared many key features but also demonstrated a wide variation in devolution packages (see introduction). Different scholars have defined school based management in different ways:

Chapman (1990) defined school based management as

“a form of education administration in which the school becomes the primary unit for decision making. It differs from more traditional forms of educational administration in which a central bureaucracy dominated the decision making process.” (p xi)

Malen et al (1990a) conceptualised school based management as

“a formal alteration of governance structures, as a form of decentralization that identifies the individual school as the primary unit of improvement and relies on the

redistribution of decision making authority as the primary means through which improvements might be stimulated and sustained.” (Malen et al, 1990a, p1)

Murphy et al (1995) viewed school based management as

“Two central tenets – school level autonomy plus participatory decision making form the heart of this approach to educational reform.” (p.13)

Cheng (1996) defined school based management as

“the school management tasks are set according to the characteristics and needs of the school itself and therefore school members have a much greater autonomy and responsibility for the use of resource to solve problems and carry out effective education activity, for the long-term development of the school.” (p.46)

The literature suggests that school based management can help to decentralize and debureaucratize school control (Guthrie, 1986); increase shared decision making within schools (Brown, 1990); and increase the influence of teachers and parents in school decision making (Raywid, 1990). School based management could be defined as an education management policy in which the education authority delegates authority to the school’s principal and representatives of the teachers, the parents, and the community, to make decisions about the operation and development of the school (including budget, personnel, curriculum and instruction) and be accountable for the school’s performance. This definition includes the two key characteristics of (1) empowering schools for decision making and (2) empowering school members for participation in decision making. It also opens up the possibility that teachers can have a direct impact on school improvement by increasing their opportunities to make decisions that have a direct impact on the individual school.

One reason for the emergence of the school based management reform movement was the assumption that the highly centralized controls to which schools had been subject were hindering progress. The new school based management systems aimed to set a framework for enhancing the quality of education in schools. Essentially the argument was that highly bureaucratized systems were incompatible with the operation of a professional organization and therefore bureaucratic control had to be reduced and decision making brought closer to schools. Many of the new school based management reforms aimed to debureaucratise control and make the schools more responsive and flexible to the needs of their clientele.

Most school based management systems have aimed at an internal redistribution of the authority decentralized to the local school site from the state and/or the district office (Murphy, 1995). School based management schools are given flexibility and responsibility for managing their own affairs in return for rendering greater accountability for their performance to school management committees and the central education bureaucracy. Shared decision making among key stakeholders at the local level is one of the defining characteristics of school based management and is an important feature of the situation in Hong Kong.

In most countries, school management committees are composed of representatives from the school community, including teachers and parents, for example in UK (DfEE, 1997), New Zealand (Wylie, 1995), Victoria in Australia (Gamage, 1996b), Chicago (Ford, 1992), and Kentucky (Weston, 1991; Harvey, 1991; Kentucky Department of Education, 2000). In this way increased influence at the local school site was intended to be shared with teachers, parents, other community members and, sometimes, students.

Some school based management schemes called for the establishment of school advisory councils for obtaining systematic input on school decisions from teachers, parents, other citizens and students. The school management committees in Hong Kong schools are similar to these school advisory committees.

In 2000, the Education Department of Hong Kong published guidelines for the membership composition of School Management Committees (SMC). The committees were to consist of members nominated by the School Sponsoring Body (SSB). They were to include the principal as an ex-officio member, teachers, parents, alumni and independent members nominated by the SMC from amongst committed community members and relevant professionals (Education Department of Hong Kong, 2000). At the moment these are still guidelines and not requirements so there is considerable variation in the composition of different school management committees.

School based management was associated with the belief that better decisions would be made if control over decisions was placed as close to the implementation of those decisions as possible (Henderson, 1990) and that this would lead to greater satisfaction from the client (Conley, 1991). Teachers should be involved in decision making because they were closest to students; they were seen to be more aware of the needs of their students and in a better position to anticipate the effects of decision implementation (Taylor et al, 1991).

2.3 School Based Management In Hong Kong

A school based management policy was introduced in Hong Kong in 1991, extended in 1997 and changed again in 2000. The latest policy, which increases support for the process of decentralization in the aided schools in Hong Kong, started in 1991 (see

chapter 1). The policy of school based management in Hong Kong aims (1) to define more clearly the role of the school sponsoring body, the school manager and the principal; (2) to provide for greater participation by teachers, parents and former students in school decision making and management; (3) to encourage more systemic planning and evaluation of school activity; and (4) to give school more flexibility over the use of resource.

There are 18 recommendations in the current school based management policy in Hong Kong, which includes a number of components that require the schools to redefine the school constitution.

1. The Role of Education Department should change from detailed control to support and advice.
2. The Education Department should remain as a government department and its functions should not be replaced by a nongovernmental public body.
3. The Education Department should define the information needs of the schools education programme and develop appropriate management information systems.
4. The role of those responsible for delivering education in schools should be defined more clearly.
5. Every School Management Committee should be required to prepare a constitution setting out the aims and objectives of the school and the procedures and practices by which it will be managed.
6. The role and the legal/contractual position of the sponsor in respect of school management should be clarified.
7. The role and duties of the supervisor in relation to the School Management

committee and principal should be reviewed.

8. The role and responsibility of the principal should be set out in a Principal's Manual.
9. Formal staff reporting procedures should be required in all aided schools.
10. The school management framework should allow for participation in decision making, according to formal procedures, by all concerned parties including: all teaching staff, the principal, the School Management Committee, the parents and the students.
11. Funds for aided schools should be provided as far as possible in the form of a block grant. Each school should have authority to decide its own spending pattern in the light of central education policies and its own defined needs.
12. Schools should have discretion in saving up to 5% from vacancies for any staff or non-staff purpose.
13. Schools should have more flexibility to tap sources of non-government funding for standard items. In particular, they should be permitted to charge Tong Fai (fees) to all pupils, up to a reasonable amount.
14. The government should ensure that the sponsor's contribution continues to represent a reasonable proportion of the cost of setting up a school.
15. In the long term, serious consideration should be given to merging salary and non-salary grants so that managers could be fully responsible for managing their schools and a link between resources and performance could be introduced.
16. Define a pilot scheme and implementation schedule to test the school based management recommendation.
17. Each school should produce an annual school plan to guide its activities during the year.

18. Each school should prepare an annual school profile covering its activities in the previous year and detailing school performance in a number of key areas.

As was suggested in chapter 1, recommendation 10 is particularly pertinent to the topic of the current research.

‘The school management framework should allow for participation in decision making, according to formal procedures, by all concerned parties including: all teaching staff, the principal, the School Management Committee, the parents and the students.’

It suggests that in schools where school based management policy is being implemented, the participation of all teachers in decision making should be a priority. Despite this aim, evidence suggests that the degree of teacher involvement in school decision making varies between schools (Chan et al, 1997; Cheng, 2000) and that teachers have different views about the degree to which they want to be involved in decisions. For example, Cheng (1992) found that school personnel complained of time pressures, additional workload and constraints related to unrealistic expectations of introducing change across the board in very short time frames, and felt lack of support from the system level. Teachers complained about an increased workload, with especially heavy demands falling on middle managers. The middle managers such as subject panel chairpersons and committee chairpersons were required to write annual development plans and reports for their departments. Class teachers were also required to submit subject handbooks and program plans related to educational activities. These teachers complained about the paperwork such as writing annual development plans and reports. Despite the additional workload, many teachers still wanted to be involved in decision making. In a more recent study, Cheng et al (1997) found that there were significant

advances in teachers' participation in decision making in some schools, while in others, teachers' participation seemed illusory and involvement in decisions appeared to be confined to the senior levels of staff, especially the principal.

2.4 Teachers' participation in Decision Making

The greater involvement of teachers in decision making was an important aspect of the decentralisation policy of school based management and an alternative to the top-down bureaucratic system of schooling in many different contexts. In the earlier stages of the introduction of school based management in the USA and UK, teachers' participation in decision making was adopted to give more autonomy 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 teacher job satisfaction (Flannery, 1980). It was seen to encourage teachers to assume greater responsibility for what happened in a school (Keith et al, 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 et al, 1990; Goldman, 1992).

2.4.1 Bi-dimensional Models

Some researchers (Parsons, 1951; Mohrman et al, 1978; Schneider, 1984) have described teachers' participation in school decision making as bi-dimensional, consisting of a technical core of activities related to classroom instruction and a managerial core of activities that are school wide in focus. Within these two domains of technical and managerial decision making teachers may also describe their participation in absolute or relative terms (Alutto et al, 1972). Absolute participation means that teachers assess their actual participation. Relative participation is where teachers assess participation in terms of their desired participation. This issue may be viewed as critical in professional organizations, where members may expect a high level of autonomy and decision participation. On the basis of this distinction between absolute and relative (actual and desired) participation, Alutto et al (1973) developed a discrepancy measure, which led to the identification of three conditions:

Decision deprivation, involvement in fewer decisions than desired.

Decision equilibrium, involvement in as many decision as desired.

Decision saturation, involvement in more decisions than desired.

Mohrman et al (1978), expanding the work of Barnard (1938), Bridges (1967), Alutto et al (1972) and Conway (1976), investigated teacher involvement in decision making in relation to Parsons's (1951) "two organizational domains": technical and managerial. The technical domain consisted of decisions related to pedagogy. (e.g., selecting textbooks, resolving learning problems). The managerial domain consisted of decisions related to managerial support functions (e.g., planning budget, job design of minor staff). The activities in each of the domains were taken from the 12 items for measuring teachers' participation in decision making developed by Belasco et al (1972). Mohrman et al (1978) found (a) strong inter-relationships among items measuring

decision participation in each hypothesized domain and (b) differential relationships of the two domains to attitudinal work outcomes. The study examined patterns of actual and desired levels of participation and decision deprivation in each domain. A factor analysis of decision deprivation in 12 decisional areas supported the proposed technical-managerial distinction. The results indicated that both teachers' desire to participate and actual participation was greater in the technical domain than in the managerial domain. The findings suggested that managerial issues fell outside teachers' zone of acceptance, while technical issues fell inside teachers' zone of acceptance. Teachers wanted greater involvement in technical issues rather than managerial issues. This finding was supported in a later study by Duke et al (1980).

In a later piece of research, Schneider (1984) found that teachers reported lower levels of actual involvement and higher levels of desired involvement in managerial issues, particularly in those pertaining to determining the administrative and organization structure of the school, determining the procedures to be used for teacher evaluation, selecting departmental chairpersons or team leaders, evaluating subject departments or teams, hiring new faculty members, setting and revising school goals, and establishing school wide policies. In Schneider's study, the conditions of equilibrium and saturation were not found to exist and deprivation (desired involvement exceeding actual involvement) was reported across all decision issues. Furthermore, Schneider (1984) found that teachers reported higher levels of deprivation in managerial than in technical decision issues.

The two research studies are not comparable because they used different items (see below) no doubt reflecting the different emphasis of school based policy between 1978 and 1984.

Table 2.1 Decision Issues in Mohrman's and Schneider's Study

	Mohrman et al. (1978)	Schneider (1984)
Technical Domain	● Selecting specific instructional texts	● Selecting textbooks and other instructional materials
	● Resolving learning problems of individual students	● Developing procedure for reporting student progress to parents.
	● Determining appropriate instructional methods and techniques	● Determining grading procedures for evaluating the progress of the students
	● Establishing general instructional policies	● Specifying learning objective for each unit of instruction
	● Establish classroom disciplinary policies	
Managerial Domains	● Hiring new faculty members	● Establishing disciplinary policies in school
	● Planning school budgets	● Hiring new faculty members to teach in their subject departments or teams (units)
	● Determining specific faculty assignments	● Preparing the budget for their subject department or instructional team (unit).
	● Resolving faculty member grievances	● Setting and revising school goals
	● Planning new buildings and facilities	● Determining the procedure to be used for the evaluation of teachers
	● Resolving problem with community group	● Evaluating how well subject departments or teams are operating.
	● Determining faculty salaries	

Schuit et al (1990) used a similar bi-dimensional model to those described above but focused on school policy, differentiating educational policy (formulating school objectives, agreeing on teaching methods, student counselling and testing of learning results) and administrative policy (personnel policy, admission policy and timetable).

Conley (1991) reviewed various perspectives regarding teacher involvement within decision domains, and noted that technical and managerial decision domains were related but were conceptually distinct constructs, and each implied a different orientation of teacher involvement in decision making. For that reason, a number of later studies

adopted a multidimensional approach to measuring teachers' participation in decision making.

2.4.2 Multidimensional Models

After 1990, most studies adopted a multidimensional model for analysing the decision domains in which teachers' decision making occurred in place of the simple technical/managerial model. Taylor et al (1992) found that the technical core itself consisted of two dimensions: instruction and instructional material. They found a managerial dimension, and an associated technology dimension, that was related to teachers and students, but not to classroom activities. Conley (1991) used eight decision making domains: planning, policy, curriculum/instruction, pupil personnel, staff personnel, staff development, school/community and budget/management. He found that teachers were most willing to participate in curricular and instructional decisions and least willing to participate in general administrative decisions. However, Conley claimed that teachers' expectations and desires varied substantially amongst teachers and across decision domains. Teacher involvement was thought to promote commitment to decisions and to increase motivation to carry them out. Smylie (1992) examined teachers' willingness to participate in four areas of decision making: personnel, curriculum and instruction, staff development, and general administration. Taylor et al (1995) used principal component analysis to extract four factors: technology dimension, managerial dimension, instructional materials dimension and core technology dimension. Perry et al (1994) examined teachers' actual participation and their desired participation in the decision domains of mission, goals and objectives, curriculum, communication and assessment of student progress. Their study showed that actual participation in decision making was lower for most teachers than desired participation although actual participation differed by education issue and rank of teacher.

The research of Bacharach et al (1990) was particularly interesting because of the statistical techniques he used for data analysis. Bacharach et al (1990) translated the two domains proposed by Mohrman et al (1978) into operational (technical) and strategic (managerial). A second dimension was the level of the decision issues, which was divided into individual and organizational levels.

Figure 2.1 Bacharach's four decision domain

Strategic/ Organizational	Strategic/ Individual
Operational/ Organizational	Operational/ Individual

Bacharach's study was conducted by measuring the actual and desired level of participation for each item on a scale ranging from 1 to 4. The responses were scored using the item-specific difference score technique by subtracting current participation scores from desired participation scores to yield a deviation score. Using data from a national sample, a principal components analysis was employed to extract four factors that were rotated to the varimax criterion. The researchers found that their results were consistent with theoretical expectations. Cronbach's alpha reliability values for scores associated with these factors ranged from 0.83 to 0.66. They investigated the relationship between decision participation in each domain and four affective work outcomes: job

satisfaction, role ambiguity, role conflict, and organizational goal commitment. They found that using a factor analysis of decision deprivation scores in 19 decision areas could identify decision deprivation.

Table 2.2 Decision Issues in Bacharach’s study

	Organizational	Individual
Strategic	Strategic organizational 1. Designing facilities 2. Budget development 3. Spending priorities 4. Staff hiring	Strategic personal 5. Teacher’s Assignment to school 6. Teacher’s subject / grade assignment 7. Student’s assignment to class 8. Removal for special instruction
Operational	Operational organization 9. What to teach 10. How to teach 11. Texts/ workbooks used 12. Texts/ workbooks available 13. Staff development	Operational personal 14. Teacher’s performance evaluation 15. Student discipline codes 16. Standardized testing policy 17. Grading policies 18. Reporting student achievement 19. Student rights

Examples of decisions receiving high factor loading were ‘budget development and expenditure priorities in the strategic domain and student rights, reporting procedures, books used and books available for use in the operational domain (Bacharach et al, 1990, P.152). The participation dimensions were characterised as: a technical core; evaluation and development; resource allocation; and the distribution of human resource. Bacharach et al. found that participation in the operational domain showed a stronger pattern of relationship with outcomes than did participation in the strategic domain. The teachers appeared to desire more influence on operational decisions pertaining to direct student instruction than to strategic school administration. However, teachers reported being more decision-deprived in the organization domain than in the personal domain. Thus teachers appeared to feel most deprived in decisions involving students’ rights, reporting

procedures and grading policies that regulated the boundary between the classroom and organization.

Bacharach et al (1990) found that decision deprivation appeared lower for operational-personal and strategic-personal domains than for operational-organizational and strategic-organizational domains. The greater decision deprivation was in the area of the organizational-operational decision domain. Teachers sought greater influence over operational classroom decisions but not over strategic decisions that dealt with matters outside the realm of the classroom.

The research study that has been most influential on the present study, both because of its methodology and because it was conducted in aided schools in Hong Kong, is that of Chan et al (1997). Chan et al (1997) proposed a six decision-domain model. This 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. The following instrument was developed.

Table 2.3 Decision Issues in Chan's Study

	<i>Technical Domain</i>	<i>Managerial domain</i>
<i>Individual level</i>	<p>Issues in Individual Level Technical Domain</p> <ul style="list-style-type: none"> • Adoption of teaching materials • Selection of textbooks • Setting learning objectives • Tailoring the curriculum • Development of curricula • Determination of teaching schedules • Setting teaching schedule • Evaluation of teaching outcomes 	<p>Issues in Individual Level Technical Domain</p> <ul style="list-style-type: none"> • Purchasing of teaching equipment • Setting Homework policies • Selection of class to be taught • Selection of subject to be taught • Liaison with parents • Setting rules to award students • Setting penalty rules
<i>Group level</i>	<p>Issues in Group Level Managerial Domain</p> <ul style="list-style-type: none"> • Setting tasks for the group • Setting goals and objective • Planning group development • Professional development for group members • Setting working schedule for the group • Budgeting for the group • Evaluation of group performance 	<p>Issues in Group Level Managerial Domain</p> <ul style="list-style-type: none"> • Purchase of equipment for group • Determination of polices on students • Administration structure of the group • Assigning positions of group responsibilities • Coordination with other groups within the group • Allocation of resource within group • Liaison with bodies outside the school • Liaison with parents
<i>School level</i>	<p>Issues in School Level Technical Domain</p> <ul style="list-style-type: none"> • Setting school goals • Planning school development • Setting disciplinary policies • Policies on teachers' professional development • Curriculum decision for the whole school • Evaluating students; learning outcome • Appraising teachers 	<p>Issues in School Level Managerial Domain</p> <ul style="list-style-type: none"> • Purchase of equipment • Setting school administration structure • Determining school fees • Recruiting staff • Setting policies on enrolment of new students • Allocation of resource • Liaison with bodies outside the school • Decision on staff promotion

Chan's study (1997) was based on the response from 84 teachers over 45 decision issues. The results of Chan's study showed that the actual involvement of teachers in decision making was less than they desired. He used the concept of decision-deprivation to describe the situation in which teachers' participation in decision making was lower in practice than that desired. Teachers' participation in decisions in the individual level

managerial domain was much more deprived than that for the technical domains. Participation in decision making at all three levels of individual, group and school decision making was in the state of deprivation. The highest level of teachers' involvement was in the individual technical domain.

The model developed by Chan et al (1997) has been outlined in detail because part of it has been used in the present study. The concept of group level decision issue was excluded in this study, while class and school level decision issues are postulated. The reason why Chan's model (1997) has been adapted is that the decision issues related to the functioning of groups appear to relate to the school level or the class level depending on their effect on the decision issues. For example, although a group or team of teachers determine issues concerning subject panels and co-curricular activity, the outcomes of these decisions affects all the students and staff at the school wide level. A four levels decision model including the decision issues in Chan's group level was adopted as the instrument in this study for measuring teacher participation in decision making.

The literature raises a number of interesting questions about teachers' involvement in decision making that will be addressed in the present study. The most important issue concerns why teachers appear to be less involved in decision making than they would like to be. This appears to be a feature of research undertaken in a number of different countries including Hong Kong, where (as is reported above) Chan (1997) found that teachers' involvement patterns for decision making were in a deprivation state (desired involvement exceeding actual involvement) for both managerial and technical issues at individual, group and school levels. The present study is concerned to examine whether this situation has changed in the five years since Chan's study (1997), during which there have been major changes to the management of schools in Hong Kong.

Much of the research literature has suggested that teachers' main focus is on the classroom and on the technical issues of teaching rather than on the school and on wider managerial issues. The research has found that teachers are most willing to participate in curricular and instructional decisions. They are least willing to participate in the general administrative decision domain. For example, Slegers (1991), who looked at teachers' participation in policy making, found that teachers were involved in educational policy making to a low extent but that they were hardly involved in administrative policymaking. Bacharach et al (1990), whose research was conducted in USA, had a similar finding in that teachers appeared to desire more influence on operational (technical) decisions pertaining to direct student instruction than on strategic (managerial) school administration. However, in Bacharach's study, teachers also reported being more decision-deprived in the organization domain than in the personal domain, where they felt they should have more influence on decisions that regulated the boundary between the classroom and organization, for example decisions involving students' rights, reporting procedures and grading policies. The present study is concerned to examine whether this situation is different in Hong Kong, given the recent introduction of school based management and the emphasis on involving teachers in school decision making.

2.5 Management Climate

It seems likely that the degree to which school decision making is centralised will vary both between and within different school systems. In chapter 1 it was suggested that educational institutions in Hong Kong were influenced historically by the Chinese tradition that emphasized centralization in decision making. This tradition was strongly bureaucratic. On the other hand, the introduction of school based management aimed to decentralise decision making and reduce bureaucracy. Given these two opposing

influences, it seems likely that some aided secondary schools will be top-down bureaucracies in which teachers have little influence over school operations, while others will be highly decentralised organizations in which teachers have workplace autonomy and discretion (Ingersoll, 1994). However, even in bureaucratic school systems, some of the features of the classical model of bureaucracy are modified because of their incompatibility with the aim of educating children. For example, Bidwell (1965, p. 977) suggested, “school systems seem to differ from the classical bureaucratic structures and tend to exhibit a looseness of articulation among the subunits”. Weick (1976) has created a metaphor to describe decentralised school settings as “loosely coupled systems”, while Cohen et al (1989) have described the most extreme forms of decentralised schools as “organised anarchies”.

In this section, two organisation models: tight and loose-coupled systems and bureaucratic and cultural linkages are reviewed because they provide a systematic and theoretical framework for considering the main managerial practices which influence teachers’ participation in decision making.

2.5.1 Tight and Loose Coupling

The theory of ‘coupling’ provides a way of conceptualising school systems in terms of the interrelatedness of behaviour patterns among the personnel. ‘Coupling’ has been used to describe the relationships between schools and the central district authority (Fennell, 1994), but also to describe the interactions or interpersonal mechanisms between principals and teachers within schools (Ingersoll, 1994; Logan et al, 1993). Loose coupling refers to the weak, infrequent and minimal ties between various elements in a strongly disconnected system (Weick, 1976), that is the push which maximises individual autonomy and discretion within an organization. For example schools that are

'loosely coupled systems' are ones in which principals have few structures through which they can directly influence teachers' work. In these systems, teachers operate in an autonomous manner and are seen as the 'experts' in the fields where they make the decisions. (Weick, 1982; Ainley et al, 1986). Schools that are tightly coupled systems, have strong cultural features that bind their members to the organisation's goals and values. In the literature loose coupling and tight coupling often appear together and are used in a relative sense. A number of researchers (Willower, 1982; Herriot et al, 1984; Miskel, et al 1983; Firestone et al, 1985) have indicated that school may be better understood as a mixture of loose and tight coupling, referring to different relationships in different situations. Peters et al (1982) identified simultaneous loose-tight coupling as one of the features of America's best-run corporations. Based on an analysis of the school effectiveness literature, Sergiovanni (1984) found that excellent schools were both tightly coupled and loosely coupled.

The metaphor of loose coupling has gained considerable attention within the study of organizations since the 1970s. The coupling metaphor has been extended to understanding schools as organizations from a variety of perspectives. Definitions of coupling also vary considerably. Logan et al (1993, p. 19) referred to coupling as "a pattern of organizational and interpersonal mechanisms that serve to link together management characteristics and selected elements of the school social environment". In its most popular sense, loose coupling in schools often refers to the discretionary power and autonomy of teachers in their work; and tight coupling refers to the relatively strict rules and regulations endorsed by schools to control teachers. Different researchers may have different interpretations on loose coupling features of schools. The loose coupling metaphor nowadays is more complex than simply the notion of "schools as loosely coupled systems" as originally coined by Weick (1976).

In this study, the view is taken that loose coupling describes teachers' autonomy to employ discretion in performing work in the light of their own educational judgement. Teachers' professional competence is recognised by the school and there is a relationship of interdependence between teachers and the school. Through the mechanism of loose coupling, teachers are 'disconnected' from the authority structure of the school to exercise their own discretion; however, they may be simultaneously more coupled to the organizational goals through their professional commitment and performance. Loose coupling in schools is taken to be an indicator of teachers' professional autonomy.

Peters et al (1982) saw tight coupling as the pull which drew people towards business companies' core values. In schools, tight coupling alerts teachers to the aims, mission, philosophy and core values of the school; creates coherence of effort; and reinforces the appropriate behaviour of members towards achievement and success. These factors suggest that tight coupling encourages shared vision; and shared vision has been identified as one of the success factors associated with school based management (Chorewycz, 1994).

2.5.2 Bureaucratic and Cultural Linkages

The idea of 'linkages' is sometimes used synonymously with that of 'coupling' (Wilson et al, 1983). Firestone et al (1985, p.8) defined linkages as "those mechanisms in schools that serve to co-ordinate the activity of people who work there". Firestone et al (1985) identified two distinct types of organisational linkage in schools: bureaucratic linkage, which described the hierarchical and organizational structures built to facilitate and enhance the achievement of school goals; and cultural linkage, which described the strategies in managing a school that facilitated the development of a school culture. They

suggested that effective schools are strong in both bureaucratic and cultural linkages. Both types of linkage contribute to the school's culture and lead to the development of the school climate. They will evolve organically in each school. The outcomes will be a school culture and climate that supports and nourishes academic success. Both the cultural and bureaucratic linkages influence the quality of teachers' and students' school life, independently and interactively. Bureaucratic linkage in its very nature is not equivalent to the concept of tight coupling and cultural linkage is quite a different concept from loose coupling.

Daft (1992) defined the linkage as the extent of communication and coordination among vertical and horizontal organizational elements. Vertical linkage referred to the coordinated activities between the top and bottom of an organization by using a chain of command, the use of rules and planning. The chain of command and the use of rules and planning in a school organization is a form of bureaucratic control. Horizontal linkage referred to the amount of communication and coordination horizontally across organizational departments. Daft (1992) provided some examples of horizontal linkage, which included exchange of paperwork, direct contact between staff, creating liaison roles and task forces.

Bureaucratic linkages are the hierarchical and organizational structures built to facilitate and enhance the achievement of school goals. They refer to the formal, prescribed and enduring frameworks, including the roles, rules, regulations, procedures and authority relations, that rigidly control the behaviour of organizational members (Firestone et al, 1985). The bureaucratic linkage comes as a result of schedules, rules, procedures, hierarchy, authority, superior-subordinate relationships, power and the use of

rewards and sanctions. This is similar to Max Weber's delineation of the characteristics of bureaucracy (Robbins, 1990). Bureaucratic linkage operates in schools, through formalization and reliance on rules and procedures to direct the behaviour of teachers and pupils. It is a measure of standardization. A highly formalized school operates with standardized guidelines and regulations. Written rules, procedures, instructions and communications control both teachers and pupils.

Cultural linkage refers to the strategies in managing a school that facilitate the development of a school culture. It is the mechanism which works directly on people's consciousness to influence how they think about what they do (Firestone et al, 1985), that is, the mechanism with which people get meanings from their work. Purkey et al (1985) suggested that the strategies to build cultural linkages may include: assigning all staff members clear responsibilities and high expectations; encouraging collaborative planning and participative decision making; fostering collegiality through shared staff development experiences and peer teaching and learning.

This is clearly different to 'loose coupling' which referred to the weak, infrequent and minimal tie between various elements in a strongly disconnected system (Weick, 1976), that is, the push which maximises individual autonomy and discretion within an organization.

2.5.3 Management Practices Affecting Teachers' Participation In Decision making

2.5.3.1 Shared vision

Recommendations 17 & 18 of Hong Kong SBM policy, advised schools to produce annual school plans and profiles with clear vision, mission and aims statements. Cheng (1993) considered that shared vision was an element of organizational culture related to

school effectiveness. Bondy et al (1994) found that shared vision was one of the factors for enhancing teacher involvement in decision making. She suggested that one of the preconditions for the successful implementation of school based management was that schools should develop a clear and shared educational vision. According to Hanson (1998), shared vision was one of the critical success factors for implementing SBM; he found that shared vision about change and reform was the single most important force in determining the fate of a decentralization initiative. Chiu et al (1996) remarked that shared vision for teachers was related to their perception of their involvement in decision making. Chiu's study (1996) claimed that principals of SMI schools with high vision had a higher score on empowerment of teachers than their counterparts in non-SMI schools. Chiu's study (1996) reported that principals with vision generally attached importance to empowering teachers by allowing more flexibility and giving more discretion to teachers, distributing more power and responsibility throughout the school, and establishing organization structures that encouraged collaborative work among teachers. If the vision is shared among the teachers, they were willing to put in more effort to make the school successful. These results suggest that if the principals' visions are strong and shared, the teachers will be empowered. Therefore, it seems that if teachers perceive their management climate as one of shared vision, they will be likely to participate in decision making.

2.5.3.2. Professional autonomy

Etzioni (1975) has suggested that teachers be regarded as semi-professionals, on the assumption that they were more amenable than other professionals to bureaucratisation. The Task Force on Teaching as a Profession (1986) characterized a professional as having the following attributes: "expertise; judgment; a high degree of autonomy as a result of expertise and judgment; and, collegiality, rather than supervisor control" (quoted in

Gratch, 2000, p.47). Hoyle (1975, 1980) distinguished teachers with a “restricted professionalism” and teachers with an “extended professionalism”. Teachers with a less extended professional orientation, saw the classroom as their main domain of activity. In Smylie’s study (1992), the norm of professional privacy was a predictor of high participation in the decision domain concerning curriculum and instruction.

Jongmans et al (1998) in research in The Netherlands found that teachers’ involvement in school policy making and their professional orientation appeared to be related. Teachers with an extended professional orientation are more involved in school policy making than their colleagues with a restricted professional orientation (Sleegers et al, 1992; Knoers, 1994).

On the basis of long periods of professional training, teachers expect a large measure of discretion in professional practice within teaching and learning and their fields of expertise. It is argued that it is by exercising their well-trained professional judgements that they can best serve the interests of the employing organization. Professional autonomy assumes that teachers will have the opportunity to participate, actively, in the process of decision making, implementation and evaluation. As a result of teachers’ participation, the structure gets modified, the perception of professional role changes, ensuring that teachers take more chance to participate. Teachers’ participation in decision making and their professional orientation are related (Sleegers et al, 1995).

In the professional model of school based management, teachers are expected to exercise their professional autonomy and judgement in school decision making. School improvement is seen to follow where teachers have considerable professional autonomy and teaching flexibility with regard to process, that is, how to use the resource inputs to

provide educational programs and services. The level of teachers' involvement in school decision making is likely to correlate with the view taken by the school authority about the professional autonomy of teachers.

2.5.3.3. Bureaucratic Control

A bureaucratic model is used to refer to the generic characteristics of formal organizations. Bureaucracy is seen as an inevitable consequence of increasing the size and complexity of organizations, with written rules and regulations, and formal hierarchical structures. Most formal organizations seek maximum efficiency and bureaucracy is seen as a rational approach to management. The bureaucratic model emphasizes the formal authority of administrators to delegate responsibilities to subordinates, formulate rules to govern subordinate behavior and decision making. The bureaucratic approach demands teachers' compliance with administration decisions. Rules and regulations govern bureaucratic decisions and behaviour. Personal initiative is not encouraged. Bureaucracy emphasizes impersonal relationships between staff and clients. This is designed to minimize the impact of individuality on decision making.

Concern has been expressed about Hong Kong schools that are too bureaucratic and lack acceptable management structures and processes, where principals are insufficiently accountable for their actions and where they take on dictatorial powers in their schools (Education and Manpower Branch, Education Department of Hong Kong, 1991). These schools are seen to be ineffective and the government wishes to see a change in the principals' management practices, from authoritarian to more collaborative, participative management. It is not uncommon in many schools to find principals who are reluctant to share their decision making authority (Harrison, 1998; Cheng, et al 2000). Malen et al (1988) reported that principals are inclined to protect their managerial prerogatives and

hold resource advantages that enable them to use low cost routine strategies to control committee interactions.

Some researchers (Scott, 1981; Corwin et al, 1988; Hoy et al, 2001) have claimed that there exists in schools a basic conflict between professional values and bureaucratic expectations. Scott (1981) argued that there is a conflict between the teaching profession and the school organization arising from the incompatibility between professional expertise and autonomy and bureaucratic discipline and control. Corwin et al (1988) referred to it as the dilemma of control and autonomy in school management. Teachers usually resent interference and directives from the administration and call for shared governance in schools (Hoy et al, 2001). Bureaucratic control of school organization may be a barrier to implementing teachers' participation in decision making. Johnson et al (1996) have suggested the creation of democratic rules and procedures for enhanced teachers' participation in decision making to counteract bureaucratic control of school organization. One of the aims of the current study is to consider the relationship of bureaucracy to teachers' participation in decision making.

2.5.3.4. Collegiality

Purkey et al (1985) suggest that the strategies to build cultural linkages may include: assigning all staff members clear responsibilities and high expectations; encouraging collaborative planning and participative decision making; fostering collegiality through shared staff development experiences and peer teaching and learning. Purkey and Smith concluded a 13-factor model for achieving effective schools. They argued that collaborative planning and collegial relationships are the crucial factors that will evolve organically in the school, define the school's culture and lead to the development of the school climate. It is postulated in this study that collegiality is the managerial practices

for cultural linkage in schools.

Collegiality could be defined as teachers conferring and collaborating with other teachers (Smyth, 1991). The unique characteristic of collegiality is full democracy in the making of all-important decisions. This is in contrast to the task force or committee structure of representative decision making. The assumptions of collegially are that organizations determine policy and make decisions through a process of discussion leading to consensus rather than by conflict. Power is shared among some or all members of the organization who are thought to have a mutual understanding about the objectives of the institution (Bush, 1995). "Collegiality assumes that organizations determine policy and make decisions through a process of discussion leading to consensus. Power is shared among some or all members of the organization who are thought to have a mutual understanding about the objectives of the institution" (Bush, 1995, p.52).

Smylie (1992) explored the organizational and psychological antecedents to teachers' willingness to participate in personnel, curriculum and instruction, staff development, and general administration duties. He found that teachers' willingness to participate was influenced primarily by their relationship with their principal. Teachers were more willing to participate if the principal was open, collaborative and supportive. They were much less willing to participate if their relationship with the principal was closed, exclusionary, or controlling. The more that teachers perceived their relationship with their principal to be open, collaborative, facilitative, and supportive of their judgment and discretion, the more likely they were to express willingness to participate in decision making. Smylie found that the more strongly that teachers opposed peer judgement, which was a feature of collegial culture, the less likely they were to express willingness to participate in decisions. Conversely, if teachers accepted peer judgement as

legitimate, their involvement in decision making will likely be promoted.

Teachers wish to participate more fully in the management of their schools (Davies, 1983). The quality of decision making is likely to be better where teaching staff participate in the process. Heads do not have a monopoly of wisdom or vision but the involvement of other staff increases the quotient of experience and expertise brought to bear on problems. Teachers' participation is important because they have the responsibility for implementing changes in policy. Collegial management is seen as one of the keys to enhancing school development (Hargreaves, 1994). A collaborative approach to decision making creates a more harmonious climate that increases mutual respect between teachers and teacher, teachers and administrators.

Liontos (1994) suggested that clarifying procedures, roles, and expectations for teachers, gave everyone a chance to get involved and would create a climate for collegiality. Principals could support and encourage teachers' participation through creating opportunities for community participation and increasing interaction and dialogue between teachers and administrators.

Taylor et al (1997) categorize four types of teachers: (1) empowered - those who wanted to participate and did, (2) disenfranchised – those who wanted to participate but did not, (3) involved – those who did not want to participate but did, and (4) disengaged – those who did not want to participate and did not. They examined the differences and similarities amongst these four types of teachers on demographic and attitudinal indicators. They found that 'empowered' and 'disenfranchised' teachers were differentiated by collegiality; 'empowered' teachers perceived a higher level of collegiality than 'disenfranchised' teachers. 'Disengaged' teachers had a negative

perception of collegiality. According to Taylor's finding (1997), the variable of collegiality was an important factor.

Mutchler et al (1990) argued that in order to increase teachers' participation in decision making, authoritative management styles need to be transformed into collaborative management styles. Bondy et al (1994) have proposed some factors that affect teachers' participation in decision making, including shared governance and process, shared vision and collegiality. She also suggested preconditions for the implementation of school based management: developing a clear and shared educational vision; developing effective decision making and governance processes; and building well functioning teams.

A climate of teacher involvement may be facilitated through a leader establishing a tightly coupled collaborative decision making process, but the development of a culture demands that staff commitment to the process and to one another be deeply rooted in the life and work of the school and the consciousness of individuals (Nias et al, 1989).

The unique characteristic of collegiality is shared decision making and full democracy in the making of all-important decisions (Brown, 1990). Conley et al (1990) have argued that school based management will require not only more decentralised decision making to the school management, but decentralisation and participatory management at the school management level. Collegiality as a form of participatory management, should facilitate the implementation of school based management.

2.6 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. The human relation theorists have argued that participatory management leads to the satisfaction of employees' higher order needs (e.g., 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 et al, 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).

2.6.1 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 et al, 1973; Bacharach et al, 1990; Conway, 1984). Alutto et al (1973) investigated the relationship of decision involvement to job satisfaction and found that denial of involvement in decision issues of importance resulted in lower levels of satisfaction. Imber et al (1984) tried to build a framework for research into teachers' participation in decision making in school decisions; they 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 et al (1986) studied 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 to job satisfaction (Alutto et al, 1972; Conway, 1984; Schneider 1984; Bacharach et al., 1990; Reyes 1989; Murphy et al, 1995; Imber et al, 1990) and job commitment (Reyes 1989; Murphy et al, 1995; Weiss 1993; Blasé et al, 1995). Participation has been examined as a key determinant of such individual and organizational school outcomes 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 correlation between job satisfaction and teachers' involvement in decision making is postulated in this study.

2.6.2 Job Commitment

Weiner et al (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 et al (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 et al (1999) believed that if teachers were involved in the setting of school goals and the decision making process, they would tend to be committed members of staff.

Weiss et al (1993) and Blasé et al (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 et al, 1979; 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 admit that it leads to ownership and a higher degree of commitment to the implementation process. Involvement in decision making will also create ownership, commitment and a sense of empowerment, as collaboration leads to new roles and relationships.

Murphy et al (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 some research evidence that school based management improved the satisfaction level of teachers. Brown's conclusions were tentative since increases in satisfaction were variable across groups and individuals, and factors other than school based management may have influenced levels of satisfaction. According to the finding of Murphy, David and Brown, teachers' participation in decision making could improve their job satisfaction and commitment, which were some positive indicators for effective management. Hence, a positive correlation between job commitment and teacher involvement in decision making is postulated in this study.

2.6.3 Workload

Decision sharing at the school site is time-consuming. Addition of workload may be one of the major costs of participatory decision making. In certain circumstances, in the event of certain problems group decisions are superior, but it is a time consuming process. Clune et al (1988) and David (1989) have found that when the extra time and energy demanded by planning and decision making are balanced by real authority, teachers report satisfaction, even exuberance. David (1989) stresses the importance of giving schools lots of opportunities to learn and time to learn, if SBM is to work.

Malen et al (1990b) 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 et al (1981) "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 in workload without any real additional influence over decisions” (p. 21).

In synthesizing the above literatures, it seem that teachers’ participation in decision making is positively related to job satisfaction, commitment and workload; increased job satisfaction and work commitment are seem to compensate for higher workload. As higher workload may result in job dissatisfaction, it is important to investigate the overall affective outcomes for the teachers. 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 effectively.

2.7 Conclusion

School based management is a decentralization policy intended to enhance school improvement. The implementation of the school based management policy should provide opportunities for teachers to participate in decision making.

The level of participation in decision making is presumably affected by the managerial practice of the school. Bi-dimensional and multidimensional approaches for measuring teachers’ participation in decision making have been identified. Two organisation models: tight and loose-coupled systems and bureaucratic and cultural linkages provide systematic and theoretical frameworks for determining the managerial practices which are to be conceptualised into the element of school management climate. Four variables of management practices were developed from the two organization models that are likely to correlate (positively or negatively) with teachers’ involvement in

school decision making. If the relationship between particular managerial practices and the level of participation were proved to be significant, it would be possible to fine-tune the managerial practices to induce a higher level of participation.

Teachers' participation in decision making may also lead to positive affective outcomes such as job satisfaction and greater commitment to their work, which could improve their effectiveness. Job satisfaction and commitment, which are factors proven to be the characteristic of the process of school improvement could also be achieved. On the other hand the increased workload associated with greater participation in management could have a deleterious effect.

In the next chapter, the framework of the research design and construction of instruments of this study will be described and explained. The scale for measure teachers' participation in decision making, the four variables of management practices and the three variables of affective outcomes will be also developed.

Chapter 3

Research Methodology

3.1 Introduction

This chapter describes and explains the procedures used in conducting this study. It begins with an explanation of the research design, which includes key research questions and hypotheses, the discussion of the framework of the design and the research ethical issues. Next, the construction of the scales for measuring the variables and questionnaire of this study is described. The description includes information concerning the organization of the instrument and how validity and reliability were determined. Then the sampling methods and procedures of data analysis of the study are described and explained. The data analysis procedures are discussed on the basis of different types of statistical tests to be performed on the data. Finally, the pilot test for improving the validity and reliability the instrument is presented.

3.2 The Research Design

The following research questions and hypotheses were formulated in according to the research aims in chapter one:

Research questions:

1. What is the status quo of teachers' involvement in decision making in Hong Kong aided secondary schools?
2. What is the relationship between the management climate of the schools represented by the four variables of bureaucratic control, professional autonomy, collegiality and shared vision, and the degree and form taken by teachers' participation in decision making?
3. What is the relationship between teachers' participation in decision making and their commitment, job satisfaction and workload?

Research hypotheses:

- H₀₁ : Bureaucratic control will be negatively related to the level of actual participation in decision making,
- H₀₂ : Collegiality will be positively related to the level of actual participation in decision making
- H₀₃ : Professional autonomy will be positively related to the level of actual participation in decision making.
- Ho4 : Shared vision will be positively related to the level of actual participation in decision making.

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. The sample was drawn from 20 aided secondary schools (5% of total schools). From these 20 schools, random samples of 400 teachers were selected. Cluster sampling methodology was adopted for collection data from the population. Cluster sample is a variation of the simple random sample that is particularly appropriate when the population is infinite and the list of the members of the population does not exist (Best et al, 1993). This successive random sampling of schools and teachers would involve a relatively efficient and inexpensive method of selecting a sample of individuals. The small size of the sample suggests that caution needs to be taken about generalising the findings beyond the schools that took part in the research. However, the results from the study can be compared with the findings from other research and should suggest important areas for further exploration in later research studies.

A correlational research design was used in this study to determine the relationship between the dependent variables and the independent variables. The dependent variables were teachers' perceptions of the level their participation in decision making at the classroom level and at the school level in both technical and managerial domains. The independent variables were teachers' perceptions of the four specific school managerial practices: bureaucratic control, professional autonomy, collegiality and shared vision, which represent the management climate of the schools; teachers' perceptions of their workload, job satisfaction and commitment to teaching, which represent the affective variables; and a number of demographic variables such as gender, age, education etc.

The main survey instrument was developed by the researcher in order to generate data that could be used for further statistical analysis. A highly structured questionnaire was employed to facilitate clear, unambiguous responses that eliminated interviewer bias. This method was thought to be efficient, less time consuming, and less expensive than other methods and permitted the collection of data from a large sample. The questionnaire was constructed so as to appeal to the respondents and was not too lengthy, too complex or too difficult to complete. It was designed to be completely self-explanatory because it was to be a self-completion instrument with no aid available from the researcher.

Apart from questions asking for simple demographic information, the questionnaire was based on a number of scales that were constructed for measuring the main variables (see later). In order to develop valid items for these scales, the researcher conducted a content analysis of the research and theory in the literature. The practices were then operationalized into statements for the use in the questionnaire.

The data was directly collected from target subjects through the questionnaire. Before the research instrument was finalised, a pilot test was conducted to test its validity and reliability. Factor analysis and reliability analysis were used to confirm the construct validity and internal consistency of the instruments. Once collected and codified, the data was computer processed using Statistical Package for Social Science (SPSS). The statistic techniques used to analyse the study data involved both descriptive and inferential data analysis procedures.

Ethical guidelines have been closely followed throughout the research. Each participant was given a one-page outline of the purpose of the survey with assurances that their responses would be kept confidential. They were also given a prepaid envelope in which to place the anonymously completed survey for return to the researcher. The demographic data requested was reduced to a minimum and the respondents were not required to fill up their name. All data is stored in a safe, secure place to ensure that the individual responses are not recognized. All findings are presented anonymously in the research report and do not make reference to any individual school. Information obtained will be destroyed as soon as the research is finished.

3.3 The Construction of Questionnaire

The questionnaire consists of four sections. Section 1 collected the background information of the respondents. Section 2 was used to measure the level of teacher participation in decision making in 31 decision issues within 4 decision domains. Section 3 was a set of items designed to measure the four variables of managerial practices: bureaucratic control, collegiality, professional autonomy and shared vision. Section 4 was a set of items designed to measure the three variables of affective domain: job

satisfaction, commitment and teacher perception of their workload. Likert five point scales were employed in both section 2, 3 and 4 for measuring the variables.

Likert scales are commonly used in attitudinal research. The assumption of the Likert scale is that the difference between answering 'agree strongly, and 'agree' is of the same size as between answering 'agree' and 'neither agree nor disagree' (Likert 1932, quoted in Gay, 1992). The research questions actually stipulate some notion of distance in the theorizing and often assume the equal spacing of the interval scale. Thus, the data were treated as an interval scale. All items in section 3 and 4 were measured using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3.3.1 Questionnaire Section 1.

Section 1 of the questionnaire collected the background information of the respondents. Teachers were asked to provide demographic information as part of the self-report questionnaire. i.e. gender, teaching experience, education level, and administrative duties. The categories of each variable are as follows:

1. Gender:

Male

Female

2. Years of teaching experience: _____

3. Have you received teacher training? :

Yes

No

4. The highest academic awards:

1. Doctoral Degree

2. Master Degree

3. Postgraduate Certificate/Diploma,

4. Bachelor Degree

5. College Diploma

5. Rank:

1. Principal Graduated Master (PGM)

2. Senior Graduated Master (SGM)

3. Graduated Master (GM)

4. Principal Assistance Master (PAM)

5. Senior Assistance Master (SAM)

6. Assistance Master (AM)

7. Certificate Master (CM).

6. Administrative duties held:

1. Vice-Principal

2. Committee Head

3. Committee member

4. Subject Panel Chairperson

5. Class teacher

7. Are you member of School Executive Committee? :

1. Yes

2. No.

These sets of demographic data provide information on the subject for explaining and predicting the characteristic of the subject in participation in decision making. The difference among the means scores on participation in each decision domains of each of the category of demographic variables was being examined. The demographic variables collected from section 1 were treated as independent variables for predicting the level of

teacher participation.

3.3.2 Questionnaire Section 2

Section 2 of the questionnaire (as shown in table 3.1) contained 31 decision issues and was designed as a scale for measuring the teachers' perceptions of their participation in decision making in four decision domains.

The statements representing these decision domains were adapted from Mohrman's bi-dimensional model (1978) of technical and managerial domains and the classroom and school levels of Chan's tri-dimensional model (1997). As discussed in chapter 2, section 2.2, the group level used in Chan's study (1997) was not used in constructing the scale to measure teachers' participation in decision making in the current study.

The technical domain of Mohrman's model (1978) included issues relating to teaching, evaluation, student guidance, etc; and the managerial domain included issues relating to the managerial support functions of the school such as personnel maintenance, and student transportation, etc. The class level of Chan's model (1997) included issues relating to the work of individual teachers in classrooms, such as curriculum and instruction, standards, choice of teaching materials, teaching schedule and student assessment; the school level included issues such as setting school goals, school budget, admission policy, personnel management, development planning etc.

A discrepancy measure approach was also introduced to each decision issue. The discrepancy measure on teacher participation in decision making assumed a continuum of

involvement and led to the formation of three conditions:

1. decision deprivation, participation in fewer decisions than desired;
2. decision equilibrium, participation in as many decision as desired;
3. decision saturation, participation in more decision than desired.

Teacher was asked to answer the following two substantive questions regarding 31 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?

The involvement pattern of participative decision making was based on Alutto et al (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 than desired ($AP-DP < 0$); decision equilibrium represents actual participation equal to desired ($AP-DP = 0$) and decision saturation represents actual participation greater than desired ($AP-DP > 0$). The decision conditions reflect the status of teacher participation in the respective decision issues or domains.

Table 3.1 Section 1 of the Questionnaire

Question No.	What is your actual extent of participation in making this decision?					Decision Issues	To what degree do you desire to participate in this decision?				
	Low				High		Low				High
						Class level -Technical Domain					
1.	1	2	3	4	5	Adoption of teaching materials	1	2	3	4	5
2.	1	2	3	4	5	Selection of textbooks	1	2	3	4	5
3.	1	2	3	4	5	Setting learning objectives	1	2	3	4	5
4.	1	2	3	4	5	Tailoring the curriculum	1	2	3	4	5
5.	1	2	3	4	5	Development of curricula	1	2	3	4	5
6.	1	2	3	4	5	Select teaching methodology	1	2	3	4	5
7.	1	2	3	4	5	Evaluation of teaching outcomes	1	2	3	4	5
						Class level -Managerial domain					
8.	1	2	3	4	5	Purchase of teaching equipment	1	2	3	4	5
9.	1	2	3	4	5	Setting homework policies	1	2	3	4	5
10.	1	2	3	4	5	Selection of class to be taught	1	2	3	4	5
11.	1	2	3	4	5	Selection of subject to be taught	1	2	3	4	5
12.	1	2	3	4	5	Setting rules to award students	1	2	3	4	5
13.	1	2	3	4	5	Setting rules penalty rules	1	2	3	4	5
						School level - Technical domain					
14.	1	2	3	4	5	Setting department goals	1	2	3	4	5
15.	1	2	3	4	5	Setting department working schedule	1	2	3	4	5
16.	1	2	3	4	5	Setting school goals	1	2	3	4	5
17.	1	2	3	4	5	Planning school development	1	2	3	4	5
18.	1	2	3	4	5	Setting disciplinary policies	1	2	3	4	5
19.	1	2	3	4	5	Policies on teachers' professional development	1	2	3	4	5
20.	1	2	3	4	5	Curriculum decision for the whole school	1	2	3	4	5
21.	1	2	3	4	5	Appraising teachers	1	2	3	4	5
						School Level -Managerial domain					
22.	1	2	3	4	5	Setting department budgeting	1	2	3	4	5
23.	1	2	3	4	5	Evaluate department performance	1	2	3	4	5
24.	1	2	3	4	5	Allocation of department duties to others	1	2	3	4	5
25.	1	2	3	4	5	Setting appraisal criteria	1	2	3	4	5
26.	1	2	3	4	5	Recruiting teaching staff	1	2	3	4	5
27.	1	2	3	4	5	Recruiting supporting staff	1	2	3	4	5
28.	1	2	3	4	5	Cooperate with external bodies	1	2	3	4	5
29.	1	2	3	4	5	Allocation of financial resource	1	2	3	4	5
30.	1	2	3	4	5	Allocation of human resource	1	2	3	4	5
31.	1	2	3	4	5	Setting school administration structure	1	2	3	4	5

3.3.3 Section 3 of the Questionnaire

Section 3 was a set of items designed to measure the four variables of managerial practices: bureaucratic control, collegiality, professional autonomy and shared vision (as shown in table 3.2). The four management practices were treated as independent variables and to be measured by the scales developed in section 3.

3.3.3.1 Measuring Bureaucratic Control

Bureaucratic control referred to the formal and prescribed enduring framework, including the roles, rules, regulations, procedures and authority relations, that rigidly controls the behaviour of organizational members as advocated by Firestone et al (1985). Bureaucratic control has been defined as the extent to which rules, procedures, instructions and communications are written. On the basis of this definition, bureaucratic control could be measured by determining if the organization has a policies and procedures manual, assessing the number and specificity of its regulations, reviewing job descriptions to determine the extent of elaborateness and detail, and looking at other similar official documents of the organization. It could also be measured by the attitudes of employees as to the degree to which job procedures were spelled out and rules were enforced (Robbins, 1990).

The following questionnaire items were developed from Robbins (1990) and Fidler (1997).

1. Teachers must always get their orders from higher up.
2. A well-established system of super ordination and subordination should be developed.
3. A good teacher should be one who conforms to accepted standards in the school.
4. The same procedure for like situations should be followed at all times.

5. Little action should be taken until decisions are approved by the school.
6. Quality education is a management problem that should be solved by tight controls.
7. Teachers should be regularly checked to prevent them from wrongdoing.
8. Rules stating when teachers should arrive and depart should be strictly enforced.
9. Teachers should be obedient, respectful, and loyal to the principal.
10. Principal should frequently monitor the classroom teaching

3.3.3.2 Measuring Collegiality

Collegiality is a loosely structured organic appendage designed to coexist side by side with a bureaucracy on a relatively permanent basis. The unique characteristic of collegiality is full democracy in the making of all-important decisions. This is in contrast to the task force or committee structure of representative decision making. The assumptions of collegially are that organizations determine policy and make decisions through a process of discussion leading to consensus. Power is shared among some or all member of the organization who are thought to have a mutual understanding about the objectives of the institution. "Collegiality assumes that organizations determine policy and make decisions through a process of discussion leading to consensus. Power is shared among some or all members of the organization who are thought to have a mutual understanding about the objectives of the institution" (Bush, 1995, p.52).

The following questionnaire items were developed from Bush (1995).

1. Teachers should have participation in decision making.
2. Staff members should talk, observe, critique, and plan together.
3. Teachers and administrators should provide constructive feedback to each other regularly.
4. Active teacher participation at staff meetings should be encouraged.

5. All teachers should be involved in deliberating on school goals at the beginning of the year.
6. Teachers should not be in treated with regard to rank and should be treated equally.

3.3.3.3 Measuring Professional Autonomy

Professional autonomy in an organization refers to the degree to which the teachers use a professional organization as a major reference. It is strongly correlated with teachers' values about teaching and learning, self-regulation, dedication to the field of education and autonomy. Teachers have an expertise in teaching and learning, they have specialized knowledge and skills that are acquired through systematic teacher education and training. As a profession, teachers have their right to decide teaching and learning methodologies to be performed and to be free from restriction in the classroom. To acquire discretion in the classroom, teachers have relinquished some of their claims to exercise control over fundamentals of their works. They are subordinates but also members of professional unions. Collective bargaining power has been gained at the expense of personal autonomy. School administrators could achieve an optimal balance between control and autonomy. They give teachers a strong degree of autonomy in some the instructional spheres, but constrain them in purely administrative matters. Teacher autonomy is never absolute, but always subject to negotiation.

The following questionnaire items were developed form Jongmans, Biemans and Beijaard (1998).

1. Teachers should be a highly trained and dedicated group of professionals.
2. Teachers should be allowed to work within their own professional abilities.
3. Teachers should subscribe to and diligently read the standard professional journals.

4. Teachers should be encouraged to develop themselves professionally.
5. Teacher are free to exercise teaching methodology to tackled student individual difference according to their professional judgment
6. Teacher should be responsible for the quality of teaching.
7. Administrators should encourage teachers to evaluate their own performance and set goals for their own growth.
8. With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.
9. Teachers should have freedom to engage in a variety of practices they think important.
10. Teachers should be empowered in teaching and learning.
11. Teachers should be allowed to exercise autonomy in their classroom pedagogy.

3.3.3.4 Measuring Shared Vision

Shared vision can be defined as an image of a desirable future shared by all the members of an organization (Greenfield et al, 1992). Shared vision could be the discipline of building a sense of commitment in a group, by developing shared images of the future they seek to create and the principles and guiding practices by which they hope to get there. Shared vision could be measured by teachers' perceptions of the degree of clarity and agreement of the school vision, and the degree to which the working direction of the departments are following the school vision.

The following questionnaire items were developed from Greenfield et al (1992).

1. Both teachers and administrators should have an agreement on the school goals, purposes and mission.
2. At the beginning of school year, the school's general goals should be explained to the

new teachers.

3. The aims and goals of each department should follow the school vision.
4. All the work should be coordinated for attaining the school vision
5. A work plan that gives an overview of the school goals should be written down.

Table 3.2 Section 3 of the Questionnaire

	<i>Strongly Disagree</i>					<i>Strongly agree</i>					
Bureaucratic Control											
1.	Teachers must always get their orders from higher up.	1	2	3	4	5					
2.	A well-established system of super ordination and subordination should be developed	1	2	3	4	5					
3.	A good teacher should be one who conforms to accepted standards in the school.	1	2	3	4	5					
4.	The same procedure for like situations should be followed at all times.	1	2	3	4	5					
5.	Little action should be taken until decisions are approved by the school.	1	2	3	4	5					
6.	Quality education is a management problem that should be solved by tight controls.	1	2	3	4	5					
7.	Teachers should be regularly checked to prevent them from wrongdoing.	1	2	3	4	5					
8.	Rules stating when teachers should arrive and depart should be strictly enforced.	1	2	3	4	5					
9.	Teachers should be obedient, respectful, and loyal to the principal.	1	2	3	4	5					
10.	Principal should frequently monitor the classroom teaching	1	2	3	4	5					
Collegiality											
11.	Teachers should have participation in decision making.	1	2	3	4	5					
12.	Staff members should talk, observe, critique, and plan together.	1	2	3	4	5					
13.	Teachers and administrators should provide constructive feedback to each other regularly.	1	2	3	4	5					
14.	Active teacher participation at staff meetings should be encouraged.	1	2	3	4	5					
15.	All teachers should be involved in deliberating on school goals at the beginning of the year.	1	2	3	4	5					
16.	Teachers should not be in treated with regard to rank and should be treated equally.	1	2	3	4	5					
Professional Autonomy											
17.	Teachers should be a highly trained and dedicated group of professionals.	1	2	3	4	5					
18.	Teachers should be allowed to work within their own professional abilities.	1	2	3	4	5					
19.	Teachers should subscribe to and diligently read the standard professional journals.	1	2	3	4	5					
20.	Teachers should be encouraged to develop themselves professionally.	1	2	3	4	5					
21.	Teacher are free to exercise teaching methodology to tackle student individual difference according to their professional judgment	1	2	3	4	5					
22.	Teacher should be responsible for the quality of teaching.	1	2	3	4	5					
23.	Administrators should encourage teachers to evaluate their own performance and set goals for their own growth.	1	2	3	4	5					
24.	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.	1	2	3	4	5					
25.	Teachers should have freedom to engage in a variety of practices they think important.	1	2	3	4	5					
26.	Teachers should be empowered in teaching and learning.	1	2	3	4	5					
27.	Teachers should be allowed to exercise autonomy in their classroom pedagogy.	1	2	3	4	5					
Shared Vision											
28.	Both teachers and administrators should have an agreement on the school goals, purposes and mission.	1	2	3	4	5					
29.	At the beginning of school year, the school's general goals should be explained to the new teachers.	1	2	3	4	5					
30.	The aims and goals of each department should follow the school vision.	1	2	3	4	5					
31.	All the work should be coordinated for attaining the school vision.	1	2	3	4	5					
32.	A work plan that gives an overview of the school goals should be written down.	1	2	3	4	5					

3.3.4 Section 4 of the Questionnaire

Section 4 of the questionnaire (as shown in table 3.3) collects the data for measuring teacher perception on their affective outcomes including job satisfaction, commitment and workload.

3.3.4.1 Measuring Teacher Job Satisfaction

Evans (1998, p.12) has defined job satisfaction as “A state of mind encompassing all those feelings determined by the extent to which the individual perceives her/his job-related needs to be met.” Holdaway (1978) constructed a more extensive measure to assess the job satisfaction of teachers on particular facets of their work. The seven factors involved in their instruments were recognition and status, students, resource, teaching assignment involvement with administrators, workload together with salary and benefits. Another approach attempts to explain the level of job satisfaction by relating combinations of variables to indicators of job satisfaction (Glisson et al, 1988).

The following questionnaire items were adapted from Hoy et al (2001), Miskel et al (1979) and Maehr (1990).

1. I am proud to tell others that I am part of this school.
2. I would recommend this school to someone like myself as a good place to work.
3. I talk up this school to my friends as a great school to work for.
4. Deciding to work for this school was a definite mistake on my part.
5. For me this is the best of all possible schools to work.
6. I have a sense of pride and belonging to the school.
7. This school really inspires me to give good job performance.

3.3.4.2 Measuring Teacher Commitment

If the teachers are committed to the school they express a high degree of commitment and care about the fate of their school. They will put extra effort to help students, and are willing to do extra work in order to help the school to be successful. They may find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.

The above items were adapted from Mowday et al (1979; 1982).

1. I am willing to do extra work in order to help this school to be successful.
2. I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.
3. I express a high degree of commitment to the school.
4. I really care about the fate of this school.
5. I will help students to solve their problems, even after school time.

3.3.4.3 Measuring Teacher Perception on Their Workload.

In constructing the scale for measuring teacher perception on their workload, teaching and non teaching duties and the additional workload caused by the school based management policy are included. An additional workload is often added to teachers work after the implementation of school based management policy. For example, schools are required to submit annual plans and reports on each teaching subject, department and the overall school development plan as well. It takes time to conduct meetings for formulating the plans and evaluating the teaching progress and the effectiveness of the plans. This implies that routine administrative work and paper work are involved.

The following items were developed from Cheng (1992).

1. Department and school meetings which occupy much of my working time
2. Too much administrative routine work disrupts my teaching.
3. There are too many non-teaching duties.
4. There is too much paper work.
5. I need to work on holiday to clear the accumulate works.
6. I need to work overtime after school hours.
7. I need to bring the students' assignments back home for marking.
8. It takes me time to help student to solve their academic problems.

Table 3.3 Section 3 of the Questionnaire

		Strongly Disagree					Strongly Agree				
Job Satisfaction											
1.	I am proud to tell others that I am part of this school.	1	2	3	4	5					
2.	I would recommend this school to someone like myself as a good place to work.	1	2	3	4	5					
3.	I talk up this school to my friends as a great school to work for.	1	2	3	4	5					
4.	Deciding to work for this school was a definite mistake on my part.	1	2	3	4	5					
5.	For me this is the best of all possible schools to work.	1	2	3	4	5					
6.	I have a sense of pride and belonging to the school.	1	2	3	4	5					
7.	This school really inspires me to give good job performance.	1	2	3	4	5					
Job Commitment											
8.	I am willing to do extra work in order to help this school to be successful.	1	2	3	4	5					
9.	I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.	1	2	3	4	5					
10.	I express a high degree of commitment to the school.	1	2	3	4	5					
11.	I really care about the fate of this school.	1	2	3	4	5					
12.	I will help students to solve their problems, even after school time.	1	2	3	4	5					
Teacher perception on their workload											
13.	Department and school meetings which occupy much of my working time	1	2	3	4	5					
14.	Too much administrative routine work disrupts my teaching.	1	2	3	4	5					
15.	There are too many non-teaching duties.	1	2	3	4	5					
16.	There is too much paper work.	1	2	3	4	5					
17.	I need to work on holiday to clear the accumulate works.	1	2	3	4	5					
18.	I need to work overtime after school hours.	1	2	3	4	5					
19.	I need to bring the students' assignments back home for marking	1	2	3	4	5					
20.	It takes me time to help student to solve their academic problems.	1	2	3	4	5					

3.4 Sampling Methodology

A number of sampling methodologies can be used to select a sample for a survey, For example simple random sampling, stratified sampling, proportional stratified sample, stage sampling and cluster sampling. The factors for consideration included the nature of the target population, the levels of accuracy desired, the availability of sampling frames, personnel, processing facilities, funds and the time available to complete the survey (Best et al, 1993; Gay, 1992).

In simple random sampling, each member of the population under study has an equal chance of being selected. The method involves selecting at random from a list of the population the required number of subjects for the sample. But the major problem associated with this sampling method is that a complete list of the population (full list of teachers) is needed and this is not always readily available. Under random sampling method a larger sample tends to be more accurate and the smaller the sample the larger the error. In order to reduce error; use as large a sample as possible.

Stratified sampling involves dividing the population into homogeneous groups, each group containing subjects with similar characteristic. A stratified sample is sometimes selected because it is desired to estimate the characteristics of each group separately in addition to those of the population at large. If the size of the sample from each homogeneous group is in the same proportion to the total sample size, it is called as proportional stratified sample. Proportional stratified sample is nearly always better and should be preferred to a simple random sample of the same size.

Stage sampling involved selection of the sample in stages and taking samples from samples. This would be to select a number of schools at random, and from within each of

these schools select a number of teachers at a random. Stage sampling has a practical advantage over simple or stratified sampling. For stage sampling it is only necessary to have a list of the schools rather than a list of all schoolteachers. If all the elements of each group drawn at the first stage are selected in the second stage and so on, it is called cluster sampling. Cluster sampling is applied when the population is large and widely dispersed; gathering a simple random sample poses administrative problems. It would be impractical randomly to select teachers and spend an inordinate amount of time travelling about in order to collect the data in Hong Kong. By cluster sampling, we can randomly select a specific number of schools and collect the data from all the teachers in those selected school.

The population of this study was the aided school schoolteachers in Hong Kong; the population size was estimated to be around 20000 teachers in the 400 schools. It is not possible to obtain or compile a list of all members (secondary school teachers) of the population and it is very unlikely that the researcher could obtain administrative approval to randomly select the sample; thus in such cases, it is not possible to use simple random sampling. Besides, because the schools vary in the number of teachers per school, estimation of the samples in the same proportion that they exist in the population was difficult. Thus implementing stratified sampling, which select equal size samples from each of a number of subgroups, was seen to be problematic.

The schools were selected by cluster sampling. It was more convenient when the population was very large or spread out over a wide geographical area in Hong Kong. It involved less time and less expense and was generally more convenient. There were smaller difference among the group means and the group variances and the better was the cluster sample in relation to a stratified sample.

The correct sample sizes depend on the purpose of the study and the nature of the population under scrutiny. The factors to be considered are the relations that we wish to explore within subgroups of their eventual sample; the variables set to control in the analyses and the type of statistical tests we wish to make. Factor analysis and multiple regressions were employed in this study to categorize the data and exploring their relations respectively. The minimum of sample size for conducting factor analysis is to have at least five times as many observations as there are variables to be analysed, and the more acceptable range would be ten-to-one ratio. (Hair et al, 1995) In determining a significance level for the interpretation of factor loading, the sample size of 350 is necessary for a value of ± 0.3 factor loading to be considered significant. Significance is based on 0.05 significance level (α), a power level of 80%, and standard errors assumed to be twice those of convention correlation coefficients. For exploring the relationship among variables, Gay (1992, p.137) suggested that a sample size of 30 is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis in their data. For validated the statistical tests and reduced the sample error, the sample size of this study was set at 400.

There were around 50 teachers per each sample school, and out of which 20 teachers were selected randomly to represent the population. When a cluster is a school, the number of clusters needed equalled the desired sample size, 400, divided by 20 teachers, thus the number of schools need is 20. The 20 sampling schools were drawn in proportion to the total number of schools in the districts, in according to the list of schools from Education Department. Ten schools were drawn from New Territories, five schools were drawn from Kowloon Peninsular, and the other five were drawn from Hong Kong Island.

3.5 Data Analysis

The data analysis of this study was concerned primarily with 1. the extent to which teachers' participation in decision making in the four decision domains; 2. the prediction of the level of teacher participation in decision making from the variables of the four management practices and the variables of teacher demography; and 3. the relationship among the level of teacher participation and the variables of job satisfaction, commitment and work load. Factors analysis and reliability analysis were used to confirm the construct validity and internal consistency of the self-developed instrument. Both descriptive and inferential statistic techniques were used to analysis the data for achieving the above study concern.

Factor analysis was performed to examine the structure of the instruments and to tap the underlying constructs of the variables of management practices, the level of participation in each of the decision domains, and the variables of the teachers' affective outcomes. Principal component analysis was used to select the items in data reduction. An eigenvalue greater than one was used to determine the appropriate number of factors for the factor solutions together with the scree plot examination.

Reliability has been generally defined as the degree to which assessment results are free from errors of measurement. Reliability was examined with quantitative procedures to determine the amount of consistency or inconsistency that was inherent within this instrument. Cronbach's Alpha-reliability measure for internal consistency was used to test the reliability of the derived scales.

Descriptive statistics analysis included frequency, percentage, means and standard deviations. The first step of data analysis is to describe the background of the respondents.

Frequency analyses are used to portray the demographic variables: gender, age, educational level, rank, administrative duties held and member of the executive committee members or not in the survey.

The second step is to summarize all the mean scores for each of the measuring scales includes the four variables of the organizational factors and the three variables of teacher affective outcomes. Then, the mean scores of each of the decision issue for actual participation and the desire to participate will be listed and subtracted out for obtaining the mean scores of the discrepancy measures for each decision issue. The mean score of the technical domains and managerial domains will also be calculated by using descriptive statistics.

T-test was used in this study to determine whether the mean of perception of participation and the mean of desire to participate are significantly different at 0.05 probability level. The statistical technique use to test the hypothesis that several group means are equal is called Analysis of Variance (ANOVA). This technique examines the variability of the observations within each group as well as the variability between group means. Base on these two estimates of variability, conclusions about the group means can be drawn. ANOVA analyses the relation between a dependent variable y and a independent categorical variable x that has two or more categories (Hamilton 1996, p.272). When x has just two categories, ANOVA reaches exactly the same conclusion as a t test. One way Analysis of variance (ANOVA) was used to determine whether there was a significant difference among the mean scores of teacher participation for the difference categories of the variable of teacher demographic. One way Analysis of variance (ANOVA) was used to determine whether there was a significant difference among the mean scores of teacher participation for the difference categories of the

variable of teacher demographic.

For multiple comparisons across all three groups, the Scheffe Post Hoc multiple comparisons is used. The Scheffe post hoc test is conservative for pairwise comparisons of means and requires larger differences between means for significance than the other multiple comparison tests and is least likely to find significant differences between groups (Norusis 1993, p.278).

Multiple regression is used for analysing data in order to explore the relationships among multiple continuously distributed independent variables and a single dependent variable. The advantage of multiple regressions is that it is able to examine relationships in which the independent variables are correlated with each other and with the dependent variable. The researcher was interested to know the relationship between the management practices and secondary school teachers' participation in decision making. Starting from this question, the multiple regression analyses are performed to test the relationships of actual level of participation in decision making with the four variables of management practices.

The regression analysis is conducted to control for the relationship between teacher attitudes and teacher perceptions of involvement. By controlling for teachers' affective attitudes, the independent effects of the managerial practice variables on teacher participation in decision making can be more clearly explored. By this means, the extent that managerial practices influence the perception of teacher participation in decision making can also be more clearly seen. The variables will be entered into the regression equation in three steps: demographic variables are entered in step 1, teacher affective attitudes and outcomes are entered in step 2 and managerial practices variables are

entered in step 3. The $P \leq .05$ level of significance was used as the criterion for rejection of the null hypotheses.

3.6 Pilot Study

A pilot study was conducted for testing and improving the reliability, content validity and construct validity of the instrument. The pilot test involved a series of interviews with experienced teachers and principals in the field of education administration. The improvement of content validity was attempted by discussion with some experienced teachers and principals through conducting interviews. They all were familiar with the variables in this study and were in a position to make valid judgments about the items. They were asked to comment upon the validity of the items for measuring the level of teacher participation, the four variables of management practices and the three variables of affective outcome. Furthermore, they were asked to give the decision domains that they had participated in within school.

The teachers were asked to complete the questionnaire and give feedback on the presentation and their interpretation. The research conducted a series of pilot studies in order to determine if revisions of the test instrument had internal consistency and test – retest reliability. The content validity of the instrument was achieved by detailed analysis of content, objectives, test items themselves, and opinions of experts in the field.

Typing mistakes and difficulties in wording communication had been reduced by the pilot test. The results of the pilot test identified that misunderstandings and ambiguities existed on the second and third decision questions toward the 31 decision domain, and rephrasing of the wording on desired and interest was carried out. The difficulties with directions for completing the questionnaire were uncovered and improved. It avoided

results that would provide little or no information.

The pilot studies were conducted in six schools. In stage 1, principal component analysis was used to screen the value statements and item selection, by which the factor analysis was applied to test each of the scales respectively. If the number of factors with eigen value greater than 1 were more than 1, then the item with the lowest factor loading on the first factor was deleted. This process was repeated until a single factor was extracted out.

Appendix II shows the results of screen the value statement of each of the scales for measuring the organization factor and affective outcome. Table 3.4 is the summary of the result of stage 1 of pilot study.

Table 3.4 The Result of The Stage 1 of The Pilot study.

Scale	Total no. of items	Items Deleted	Items Remained
Bureaucratic Control	10	4	6
Professional Autonomy	11	4	7
Collegiality	6	0	6
Shared Vision	5	0	5
Job Satisfaction	7	0	7
Job Commitment	5	0	5
Perception of workload	8	4	4

3.7 Construct Validity of The Instrument

The researcher realized that more information was needed regarding the construct validity of the survey instrument. After the stage 1 revision of the survey instrument was completed, a further factor analysis was implemented. Factor analysis may be the most powerful method of determining construct validation. Principal-component factor analysis was utilized in order to determine if the survey instrument had construct validity. It was used to examine the structure of the theoretical model of organization coupling and linkage, teacher perception on their affective outcome and the dimension of participation to empirically assess the extent to which it is theoretically justified. This statistical procedure was employed to examine the results of logically clustering the major factors thought to be related to the 4 dimensions of decisions issues, the 4 variables of organization factors, and the 3 variables of teacher affective outcome.

3.7.1 Decisions Issues

A principal component factor analysis was applied to 31 items of decision issues. An eigenvalue greater than one was used to determine the appropriate number of factors for the factor analysis solution. This results a solution of four factors. The procedure employed to identify and label the factors that emerged was based on examining the derivation of the highest loading items on each factor (factor loading of 0.5 and higher across and within factors).

The results of the factor analysis provided a reasonable match with the scale structure of the two dimensional four factors participation model. The results presented in the Table 3.5 clearly suggest a four-factor structure that is both empirically feasible and theoretically acceptable.

Table 3.5 Factor Loadings For The Items of Decision Issues

Dimension	Item	Factor 1	Factor 2	Factor 3	Factor 4	
School Level Managerial Domain	A22	Setting department budgeting	.829			
	A29	Allocation of financial resource	.821			
	A25	Setting appraisal criteria	.820			
	A30	Allocation of human resource	.816			
	A23	Evaluate department performance	.798			
	A24	Appraising teachers	.759			
	A31	Setting school administration structure	.636			
	A27	Recruiting supporting staff	.531			
	A26	Recruiting teaching staff	.520			
Class Level Technical Domain	A3	Setting learning objectives		.873		
	A1	Adoption of teaching materials		.856		
	A5	Development of curricula		.746		
	A2	Selection of textbooks		.742		
	A4	Tailoring the curriculum		.724		
	A6	Select teaching methodology		.685		
	A9	Setting homework policies		.612		
	A8	Purchase of teaching equipment		.589		
	A7	Evaluation of teaching outcomes		.542		
School Level Technical Domain	A17	Planning school development			-.840	
	A16	Setting school goals			-.830	
	A15	Setting department working schedule			-.830	
	A18	Setting disciplinary policies			-.825	
	A14	Setting department goals			-.804	
Class Level Managerial Domain	A11	Selection of subject to be taught				-.7114
	A10	Selection of class to be taught				-.748
	A12	Setting rules to award students				-.747
	A13	Setting rules penalty rules				-.561
Eigenvalue			10.770	4.1218	1.423	1.231
% of Variance Explained			41.422	16.221	5.471	4.736

3.7.2 School Managerial Practices

A principal component factor analysis was applied to 32 items of school managerial practices. An eigenvalue greater than one was used to determine the appropriate number of factors for the factor analysis solution. This results a solution of four factors. The process employed to identify and label the factors that emerged was based on examining the derivation of the highest loading items on each factor (factor loading of 0.5 and higher across and within factors).

The results of the factor analysis provided a reasonable match with the scale structure of the four organization factors. The results presented in Tables 3.6 clearly suggest a four-factor structure that is both empirically feasible and theoretically acceptable.

Table 3.6 Factor Loading For The Items of Organization Factors

Dimension	Item		Factor 1	Factor 2	Factor 3	Factor 4
Collegiality	C101	Teachers should have participation in decision making.	.861			
	C201	Teachers and administrators should provide constructive feedback to each other regularly.	.841			
	C203	All teachers should be involved in deliberating on school goals at the beginning of the year.	.810			
	C102	Staff members should talk, observe, critique, and plan together.	.707.			
	C202	Active teacher participation at staff meetings should be encouraged.	.651			
	C206	Teachers should not be in treated with regard to rank and should be treated equally.	.510			
Bureaucratic control	B102	A well-established system of super ordination and subordination should be developed		.807		
	B103	A good teacher should be one who conforms to accepted standards in the school.		.777		
	B204	Teachers should be obedient, respectful, and loyal to the principal.		.655		
	B205	Principal should frequently monitor the classroom teaching		.546		
Shared Vision	T103	At the beginning of school year, the school's general goals should be explained to the new teachers.			-.853	
	T101	Both teachers and administrators should have an agreement on the school goals, purposes and mission.			-.770	
	T104	The aims and goals of each department should follow the school vision.			-.765	
	T106	A work plan that gives an overview of the school goals should be written down.			-.699	
	T105	All the work should be coordinated for attaining the school vision			-.649	
Professional Autonomy	L207	Teachers should be allowed to exercise autonomy in their classroom pedagogy.				.828
	L206	Teachers should be empowered in teaching and learning.				.799
	L205	Teachers should have freedom to engage in a variety of practices they think important.				.682
	L204	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.				.658
	L105	Teacher are free to excise teaching methodology to tackled student individual difference according to their professional judgment				.596
	L102	Teachers should be allowed to work within their own professional abilities.				.502
Eigenvalue			6.517	2.805	1.721	1.270
% of Variance Explained			34.30	14.70	9.057	6.686

3.7.3 Affective Variables

A principal component factor analysis was applied to 17 items of affective variables. An eigenvalue greater than one was used to determine the appropriate number of factor for the factor analysis solution. This results a solution of four factors. The process employed to identify and label the factors that emerged was based on examining the derivation of the highest loading items on each factor (factor loading of 0.5 and higher across and within factors).

The results of the factor analysis provided a reasonable match with the scale structure of the job satisfaction, commitment and perception on their workload. The results presented in Table 3.7 clearly suggest a three-factor structure that is both empirically feasible and theoretically acceptable.

Table 3.7 Factor Loading For The Items of Teacher Perception on Their Affective Outcome

Dimension	Item		Factor 1	Factor 2	Factor 3
Job Satisfaction	Q59F205	For me this is the best of all possible schools to work.	.880		
	Q60F206	I have a sense of pride and belonging to the school.	.865		
	Q56F202	I would recommend this school to someone like myself as a good place to work.	.808		
	Q55F201	I am proud to tell others that I am part of this school.	.807		
	Q58F204R	Deciding to work for this school was a definite mistake on my part.(*)	.698		
	Q57F203	I talk up this school to my friends as a great school to work for.	.683		
Workload	Q67F602	Department and school meeting which occupy much of my working time		.859	
	Q66F604	There are too many non-teaching duties.		.816	
	Q68F603	Too much administrative routine work that disrupt my teaching.		.807	
	Q70F605	There is too much paper work		.669	
Job Commitment	Q65JOBCO	I commit to my teaching			-.875
	Q63F105	I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.			-.866
	Q64F106	I express a high degree of commitment to the school.			-.779
Eigenvalue			5.020	2.379	1.526
% of Variance Explained			38.613	18.300	11.742

3.8 The Reliability of the Instrument

Reliability has been generally defined as the degree to which assessment results are free from errors of measurement. In the development of the instrument, a systematic process was used to develop the items. Reliability was examined with quantitative procedures to determine the amount of consistency or inconsistency that was inherent within the instrument. Cronbach's coefficient alpha technique yields the average of all the possible split-half correlations that can be computed from continuous data and is considered to be one of the most rigorous procedures used to estimate an instrument's

internal consistency reliability. In the pilot samples, the reliability coefficients of the scales ranged from 0.6999 to 0.9174(as shown in table 3.8), which was judged adequate for this study.

Table 3.8 The Reliability coefficients (Alphas) of each of the Scale

	Scale	No. of Items	Reliability coefficients (Alphas)
1	Bureaucratic control	4	.6999
2	Professional Autonomy	5	.8389
3	Collegiality	5	.8906
4	Shared Vision	5	.8420
5	Participation in Class Level – Technical Domain	9	.9133
6	Participation in Class Level Managerial Domain	4	.8420
7	Participation in School Level – Technical Domain	5	.9490
8	Participation in School Level Managerial Domain	8	.9174
9	Job Satisfaction	6	.8984
10	Job Commitment	4	.8163
11	Perception of Workload	3	.8040

3.9 Chapter Summary

This chapter has presented information describing research methods and procedures utilized in the study. Areas covered included descriptions of the population, sampling procedures, construction of questionnaire, methods of data analysis and statistical procedures employed. Research ethical issues and the limitation of the research on this study have been discussed. A pilot test has been conducted to improve and confirm the validity and reliability of the questionnaire. The questionnaire has been revised for collecting the data form the teachers in the sampling schools. The data analysis and the finding of the survey were summarized and presented in Chapter 4.

Chapter 4

Operationalising the Variables

4.1 Introduction

This chapter provides a description of the sample of teachers who participated in this research and outlines their demographic characteristics. The raw data of the samples are shown in Appendix II. Using the statistics for Hong Kong secondary schools compiled by the Education Department for the academic year of 2001-2002 as a comparison, it was ascertained that the research sample was similar demographically to the population of teachers in the aided secondary schools in Hong Kong, thus strengthening confidence that the findings from the study can be generalized to teachers in Hong Kong with a high degree of confidence.

Because it was considered important to establish the validity and reliability of the research instrument before conducting the statistical analysis, the chapter explains the procedures used to confirm its construct validity and internal consistency. Factor analysis was used to show that the Likert scales used in the questionnaire provide an accurate and meaningful measure of the issues under investigation.

Finally, the chapter seeks to show how the extracted factors were operationalized for further analysis. This was done by calculating the means and standard deviations for items in the questionnaire and using these as the basis for constructing the main variables of managerial practice, teachers' participation in decision making and teachers' affective outcomes. Additionally a further variable, Decision Condition was constructed to measure the discrepancy between teachers' actual participation in decision making and their desired participation.

4.2 Description of the Sample

A total of 660 questionnaires were mailed to 22 aided secondary schools. The number of completed and returned questionnaires was 405, which resulted in a 61.4% return rate. Most of the teachers completed the questionnaire although some data were missing for particular items. The demographic profile of the respondents was based on five characteristics: (1) gender, (2) years of teaching experience, (3) level of education, (4) teacher education (5) rank, (6) major administrative duty in school, and (7) Membership of the executive committee. The tables below summarise the demographic data.

4.2.1 Gender

403 teachers gave information about their gender (data was missing for 2 teachers). Slightly more than half the teachers were male. 229 (56.5%) respondents were female, and 174 (43%) were female.

Table 4.1 Frequency of Gender

	Categorical Variables	Frequency	Percent
Gender	Male	229	56.5%
	Female	174	43.0%
	Missing Data for Gender	2	0.5%

4.2.2 Years of Teacher Experience

Teachers' teaching experience ranged from 1 to 38 years. The mean of years of teaching experience for all respondents was 10.95 years (SD = 6.87) with a median of 10 years. The mean of years of teaching experience for male teacher was 12.08 years, and for female teacher was 9.49 years. The results were as shown in Table 4.2.

Table 4.2 Descriptive Analysis of Years of Teacher Experience

Descriptive Analysis					
No. of years Teaching experience	Mean	SD	Median	Minimum	Maximum
	10.95	6.97	10.0	1	38
Male	12.08	7.42	11.0	1	38
Female	9.49	5.76	9.0	1	30

4.2.3 Level of Education

401 teachers gave information about their qualification (data was missing for 4 teachers). 248 (61.25) of all respondents had bachelor’s degrees and 71 (17.5%) had master’s degrees. Only 57 (14.1%) of the teachers did not have a degree and all these had college diplomas. Out of these 57 teachers, 30 of them were male and 27 of them were female. Around half of the diploma holders (49.1%) had teaching experience within 1-10 years. One-third of them had 10 years to 20 years of teaching experience.

Table 4.3 Frequency of Level of Education

Level of Education	Categorical Variables	Frequency	Percent (%)	Cumulative Percent(%)	Frequency of male	Percent of male (%)	Frequency of female	Percent of female (%)	1-10 years teaching experience	Percent1-10 years (%)	11-20 years teaching experience	Percent11-20 years (%)	21 years or above teaching experience	Percent 21 years or above (%)
Bachelor's Degree or above	Doctorate Degree	2	0.5%		1	50%	1	50%	1	50%	1	50%	0	0%
	Master's Degree	71	17.5%		52	73.2%	19	26.7%	36	50.7%	23	32.4%	8	11.3%
	Postgraduate Diploma	23	5.7%		13	56.5%	10	43.8%	18	78.3%	1	4.3%	2	8.7%
	Bachelor's Degree	248	61.2%	84.9	132	53.2%	115	46.4%	129	52%	98	40%	11	4.4%
Non degree Holder	College Diploma	57	14.1%	14.1	30	52.6%	27	47.4%	28	49.1%	19	33.3%	8	14.1%
Total respondents		401	100%	100	228	56.9%	172	42.9%	212	52.9%	142	35.4%	29	7.2%
Missing Data for Level of Education		4 (1.0%)			5 (1.2%)			22 (5.4%)						

4.2.4 Teacher Training

392 teachers gave information about their teacher training (data was missing for 13 teachers). 368 (90.9%) respondents indicated that they had received teacher training, and 24 respondents indicated not.

Table 4.4 Frequency of Teacher Training

	Categorical Variables	Frequency	Percent
Teacher Training	With teacher training	368	90.9%
	Without teacher training	24	5.9%
	Total	392	100%
Missing Data for Teacher Training		13	3.2%

4.2.5 Rank

Teacher rank in the aided schools of Hong Kong is categorized as graduate rank and non-graduate rank. The minimum entry qualification for the graduate rank is a bachelor degree. The minimum entry qualification for non-graduate rank is a college diploma. The number of graduate posts of an aided secondary school is limited to 70% of total numbers of posts. Most of the teachers employed in non-graduate rank had upgraded their qualification to bachelor degree level. But they were not recommended for promotion to the graduate rank. A teacher who was employed in non-graduate rank could be a bachelor degree holder. The level of education did not really reflect the rank of a teacher, therefore rank was included in the demographical variables. 286 (71%) respondents were graduate rank and 114 (28.1%) were non-graduate rank. Graduate master and certificate master are the basic employment ranks in each of the categories and the others are promotion ranks. The largest number of respondents in each category was in the basic employment ranks, thus 215 teachers were graduate masters (53.1%) and 85 teachers were certificate masters (21%).

Table 4.5 Frequency of Rank

	Categorical Variables	Frequency	Percent
Non-graduate Rank	Certificated Master	85	21.0%
	Assistance Master	19	4.7%
	Senior Assistance Master	7	1.7%
	Principal Assistance Master	3	0.7%
	Total	114	28.1%
Graduate Rank	Graduated Master	215	53.1%
	Senior Graduated Master	62	15.3%
	Principal Graduated Master	9	2.2%
	Total	286	70.6%
Missing Data for Rank		5	1.2%

4.2.6 Major Administrative Duty in School

The teachers were asked to indicate their major administrative duties from the categorization of Vice Principal, Head of Functional Committee, Head of Department, Member of Functional Committee and Class teacher. 155 teachers (38.3) reported their major administrative duty was Functional Committee member. 101 teachers reported their major administrative duties were Subject Department Heads and Class teachers respectively.

Table 4.6 Frequency Summary of Administrative Duties

	Categorical Variables	Frequency	Percent
Duties	Vice Principal	11	2.7%
	Head of Functional Committee	32	7.9%
	Head of Department	101	24.9%
	Member of Functional Committee	155	38.3%
	Class Teacher	101	24.9%
	Total	400	98.8%
Missing Data for Duties		5	1.2%

4.2.7 Executive Committee Membership

Teachers were also asked to indicate whether they were the members of the Executive committee. 306 teachers indicate they were not the members of the executive committee, and 71 teachers indicated that they were. The members of Executive committee included the principal, vice principals and some department heads. The function of the executive committee is to decide policies and procedures in whole school level. Members of Executive committee would be more expected to take part in decision making than non-members.

Table 4.7 Frequency Summary Executive Committee Membership.

	Categorical Variables	Frequency	Percent
Executive committee member	Executive committee member	71	17.5%
	Non Executive committee member	306	75.6%
	Total	377	93.1%
Missing Data		28	6.9%

4.2.8 Demographical Characteristic of the Sample

In order to establish that the sample of teachers used in the research was representative of teachers in aided secondary schools in Hong Kong, a comparison was made between the sample and the official statistics. The demographical characteristics of the sample were compared with the population about which the research will generalize. 174 (43%) male teachers and 229 (56.5%) female teachers responded to the questionnaire. Their average teaching experience was 10.95 years with a median of 10 years and range from 1 year to 38 years. Regarding their education level, 84.9% of the teachers reported their level of education as bachelor degree or above, and only 14.1% of the teachers (n=57) indicated that they were non-degree holders, their level of completed education being below bachelor degree. Most of the teachers (n = 368, 90.9%) indicated that they had already received teacher training (90.9 %). 70.6% of the teachers indicated that they were in the graduated rank, and other 28.1% indicated that they were in the non-graduate rank. A demographic profile of the sample is compared with the population in table 4.8.

According to the statistic report 2001-2002 for Hong Kong secondary school teachers from the Education Department (Education Department of Hong Kong, 2002), there are 24466 serving secondary school teachers in the academic year 2001-2002, out of them 21411 (87.51%) were degree holders (bachelors degree or above) and 3055 (12.49%)

were non-degree holders. There were 86.6% teachers with teacher training. The ratio of graduate rank to non-graduate rank was 70% : 30% in secondary schools.

Table 4.8 Percentage of the Demographic Characteristic of Sample and Population

	Samples Characteristic	Populations Characteristic
Degree Holder	84.9%	87.51%
Non-degree Holder	14.1%	12.49%
Trained Teacher	90.9	86.6%
Non Trained Teacher	5.9%	13.4%
Graduated Rank	70.6%	70%
Non Graduated Rank	28.1%	30%

The comparison indicated that the research sample is similar demographically to the population of teachers in the aided school in Hong Kong. The data in the study can be generalized to teachers in Hong Kong with a high degree of confidence.

4.3 The Validity and Reliability of the Instruments

In this section the procedures used to confirm the construct validity and internal consistency of the research instrument are explained. These procedures are important to show that the scales used in the questionnaire provided a meaningful measure of the issues under investigation. It was considered important to establish the validity and reliability of the instrument before conducting statistical analysis.

Factor analysis was used to examine the structure of the instrument to empirically assess the extent to which it was theoretically justified. This statistical procedure was employed to examine the results of logically clustering the major factors thought to be related to the 4 variables of managerial practices, the 4 decision domains and the 3

variables of affective outcomes described in chapter two. This procedure is to verify the extent to which the factorial components of the model structurally exist. Principal component analysis was applied to the items of the managerial practices scales, the decision participation scales and the affective outcome scales. An eigenvalue greater than one was used to determine the appropriate number of factors for the factor analysis solution. Items were extracted with factor loadings greater than 0.5 across and within factors. The numbers of factor solutions extracted from a Direct Oblimin rotation afforded the most meaningful interpretation theoretically. The process employed to identify and to label the factors that emerged was based on examining the derivation of the highest loading items on each of the factors. The reliability of each of the extracted factor was determined using Cronbach's Alpha. Reliability coefficients for each of the subscales were determined to indicate the internal consistency of scales and whether the scale scores were a meaningful measure.

4.3.1 Validating Scales To Measure School Managerial Practice.

As a preliminary to analysing the data on school managerial practices, factor analysis was used to examine the results of logically clustering the major factors. The results of the factor analysis (Table 4.9) provided a reasonable match with the scale structure of the four management practices. The results clearly suggested a four-factor structure that was both empirically feasible and theoretically acceptable. In the order of their extraction, the four factors that emerged were (1) collegiality, (2) shared vision, (3) professional autonomy and (4) bureaucratic control. The percentages of variance of these four factors were 37.936%, 9.728%, 7.589%, and 6.971% respectively. The high degree of variance accounted for by the first factor (37.936 percent) indicated the importance of the variable of collegiality within the organization coupling and linkage model.

Table 4.9 Factor Loading for the items of Management Practices

Dimension	Item		Factor 1	Factor 2	Factor 3	Factor 4
Collegiality	C203	All teachers should be involved in deliberating on school goals at the beginning of the year.	0.797			
	C101	Teachers should have participation in decision making.	0.776			
	C102	Staff members should talk, observe, critique, and plan together.	0.769			
	C201	Teachers and administrators should provide constructive feedback to each other regularly.	0.739			
	C202	Active teacher participation at staff meetings should be encouraged.	0.647			
	C206	Teachers should not be in regard to rank and treat equally.	0.449			
Shared Vision	T106	A work plan that gives an overview of the school goals should be written down.		0.821		
	T105	All the work should be coordinated for attaining the school vision		0.790		
	T104	The aims and goals of each department should follow the school vision.		0.783		
	T101	Both teachers and administrators should have an agreement on the school goals, purposes and mission.		0.690		
Professional Autonomy	L207	Teachers should be allowed to exercise autonomy in their classroom pedagogy.			0.875	
	L206	Teachers should be empowered in teaching and learning.			0.854	
	L205	Teachers should have freedom to engage in a variety of practices they think important.			0.760	
	L204	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.			0.699	
	L105	Teacher are free to excise teaching methodology to tackled student individual difference according to their professional judgment			0.635	
	L102	Teachers should be allowed to work within their own professional abilities.			0.538	
Bureaucratic control	B102	A well-established system of super ordination and subordination should be developed				0.735
	B103	A good teacher should be one who conforms to accepted standards in the school.				0.730
	B204	Teachers should be obedient, respectful, and loyal to the principal.				0.515
	B205	Principal should frequently monitor the classroom teaching				0.418
Eigenvalue			7.587	1.946	1.518	1.394
% of Variance Explained			37.936 %	9.728%	7.589%	6.971%

The reliability of each of the scales for measuring the variables of managerial practices was determined by using Cronbach's Alpha coefficients. The results of the reliability analysis are displayed in Table 4.10. The reliability coefficients ranged from

0.59 to 0.82, indicating an acceptable degree of internal consistency of scales, and that they were a meaningful measure.

Table 4.10 The Reliability Coefficients (Alphas) of Each of the Scale

	Scale	No. of Items	Reliability coefficients (Alphas)
1	Bureaucratic control	4	0.59
2	Professional Autonomy	6	0.87
3	Collegiality	6	0.89
4	Shared Vision	4	0.82

4.3.2 Validating Scales to Measure Teachers participation in Decision making

Teachers' participation in decision making was examined at the classroom level and at the school level in both technical and managerial domains. The results of the factor analysis on the perception of actual participation provided a reasonable match with the scale structure of the four dimensional participation models. The results presented in the Table 4.11 clearly suggested a four-factor structure that is both empirically feasible and theoretically acceptable. The four decision domains extracted were (1) School Level Managerial domains, (2) Class level technical, (3) School Level Technical, and (4) Class level managerial. These four decision domains explained 64.9% of the overall variance (38.05%, 15.62%, 6.627% and 4.54% respectively). Table 4.11 shows the variances loading on each of the four factors. It may be seen that the analysis produces a clean factor structure with items loading on the appropriate factors. With only a few items being deleted because of low or uncorrected loading. The measures of the decision domain constructs showed excellence validity. Additionally, internal reliability tests showed strong Cronbach alphas ranging from 0.78 to 0.94 (see Table 4.12).

Table 4.11 Factor Loadings for the Items of Decision Issues

Dimension	Item		Factor 1	Factor 2	Factor 3	Factor 4
School Level Managerial Domain	A30	Allocation of human resource	0.913			
	A29	Allocation of financial resource	0.852			
	A31	Setting school administration structure	0.805			
	A27	Recruiting supporting staff	0.774			
	A22	Setting department budgeting	0.746			
	A23	Evaluate department performance	0.715			
	A26	Recruiting teaching staff	0.703			
	A25	Setting appraisal criteria	0.696			
	A24	Appraising teachers	0.605			
Class Level Technical Domain	A3	Setting learning objectives		0.871		
	A1	Adoption of teaching materials		0.821		
	A5	Development of curricula		0.812		
	A2	Selection of textbooks		0.771		
	A6	Select teaching methodology		0.766		
	A4	Tailoring the curriculum		0.723		
	A7	Evaluation of teaching outcomes		0.668		
	A9	Setting homework policies		0.643		
	A8	Purchase of teaching equipment		0.563		
School Level Technical Domain	A15	Setting department working schedule			-0.904	
	A14	Setting department goals			-0.888	
	A18	Setting disciplinary policies			-0.851	
	A16	Setting school goals			-0.841	
	A17	Planning school development			-0.823	
Class Level Managerial Domain	A11	Selection of subject to be taught				0.818
	A10	Selection of class to be taught				0.764
	A12	Setting rules to award students				0.680
	A13	Setting rules penalty rules				0.575
Eigenvalue			10.654	4.374	1.855	1.270
% of Variance Explained			38.05%	15.62%	6.63%	4.54%

The reliability of the scales for measuring the level of teachers' participation in each decision domain was determined by using Cronbach's Alpha coefficients (see Table 4.12.) The reliability coefficients ranged from 0.78 to 0.94, indicating an acceptable degree of internal consistency of scales, and that the scales scores are a meaningful measure.

Table 4.12 The Reliability coefficients (Alphas) of each of the Scale

	Scale	No. of Items	Reliability coefficients (Alphas)
1	Participation in Class Level – Technical Domain	9	0.91
2	Participation in Class Level Managerial Domain	4	0.78
3	Participation in School Level – Technical Domain	5	0.94
4	Participation in School Level Managerial Domain	9	0.92

4.3.3 Validating the Scales to Measure Teachers Perception of Their Affective Outcomes

The results of the factor analysis provided a reasonable match with the scale structure of the teachers' perceptions of their affective outcomes. The results presented in the Table 4.13 clearly suggested a three-factor structure that was both empirically feasible and theoretically acceptable. The factors extracted were job satisfaction, commitment and perception of workload. These four factors explained 68.01% of the overall variance (36.72%, 19.50%, and 11.86% respectively).

Table 4.13 Factor loading for the items of Teacher perception on their Affective outcome

Dimension	Item		Factor 1	Factor 2	Factor 3
Job Satisfaction	Q55F201	I am proud to tell others that I am part of this school.	0.881		
	Q60F206	I have a sense of pride and belonging to the school.	0.871		
	Q59F205	For me this is the best of all possible schools to work.	0.869		
	Q56F202	I would recommend this school to someone like myself as a good place to work.	0.869		
	Q57F203	I talk up this school to my friends as a great school to work for.	0.827		
	Q58F204R	Deciding to work for this school was a definite mistake on my part.(*)	0.719		
Workload	Q68F603	Too much administrative routine work that disrupt my teaching.		0.828	
	Q67F602	Department and school meeting, which occupy much of my working time.		0.822	
	Q66F604	There are too many non-teaching duties.		0.796	
	Q70F605	There is too much paper work.		0.715	
Job Commitment	Q64F106	I express a high degree of commitment to the school.			-0.848
	Q65JOB CO	I commit to my teaching.			-0.831
	Q63F105	I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.			-0.824
Eigenvalue			5.141	2.729	1.661
% of Variance Explained			36.719	19.496	11.863

Reliability coefficients for each of the scales of affective outcome were determined by using Cronbach's Alpha coefficients. The results of the reliability analysis were displayed in Table 4.14. The reliability coefficients ranged from 0.80 to 0.92, indicating an acceptable degree of internal consistency of scales, and that the scales scores are a meaningful measure.

Table 4.14 The Reliability Coefficients (Alphas) of Each of the Scale

	Scale	No. of Items	Reliability coefficients (Alphas)
1	Job Satisfaction	6	0.92
2	Job Commitment	3	0.83
3	Perception of Workload	4	0.80

This section has explained the procedures that confirmed the validity and reliability of the Likert scales used in the questionnaire for measuring school managerial practice, the level of teacher participation in decision making and the affective variables. The next section describes how the extracted factors were operationalized for further analysis.

4.4 Operationalising The Variables

4.4.1 The Variables of Management Practices

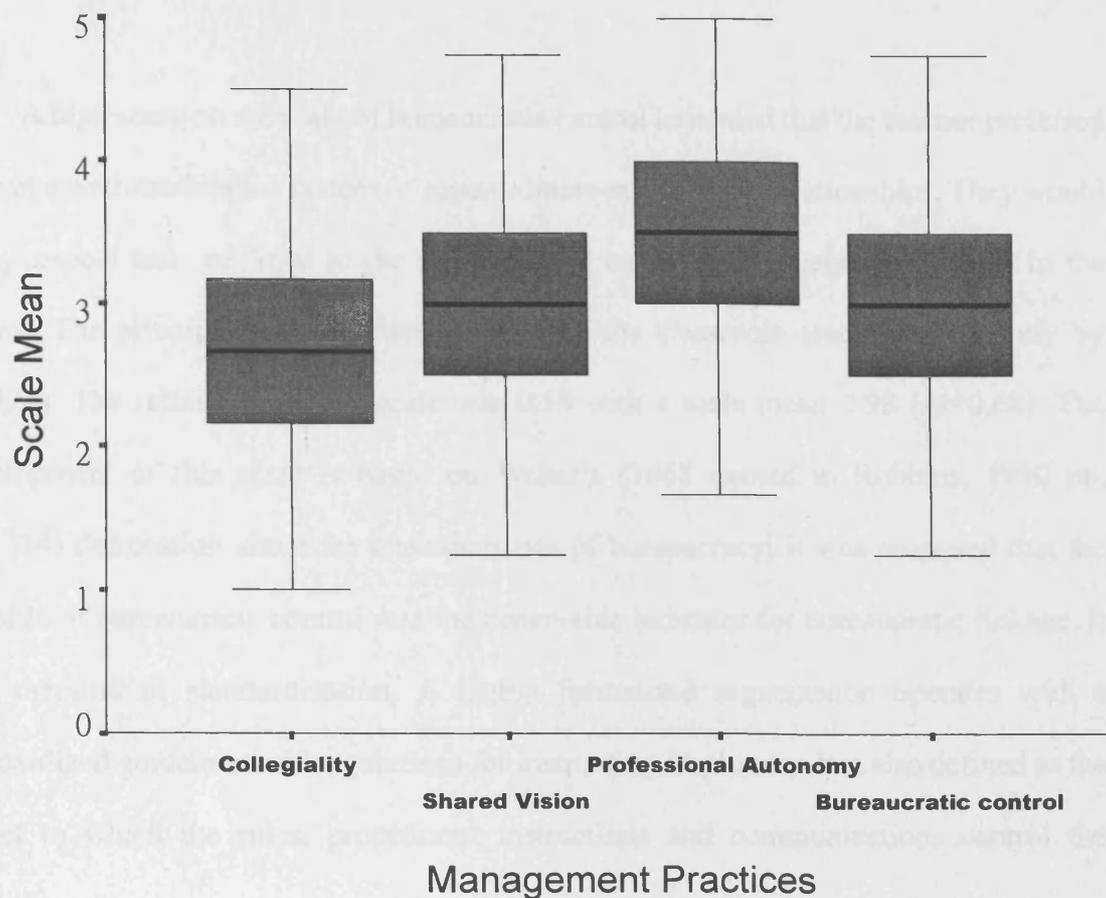
The mean scores for collegiality, shared vision, professional autonomy and bureaucratic control were constructed by equally weighting the mean of each item respectively. The mean score for the variable collegiality was 2.72 (sd=0.85), shared vision 3.07 (sd=0.71), professional autonomy 3.45 (sd=0.68), and bureaucratic control 2.98 (sd=0.68). The highest score was professional autonomy (3.45), and the lowest score

was collegiality (2.27). Table 4.15 presents the mean scores and standard deviations for each item of management practice.

Table 4.15 Mean and Standard Deviation for the Variables of Management Practices

Dimension	Item		Mean	SD
Collegiality	C203	All teachers should be involved in deliberating on school goals at the beginning of the year.	2.56	1.02
	C101	Teachers should have participation in decision making.	2.52	0.94
	C102	Staff members should talk, observe, critique, and plan together.	2.51	1.05
	C201	Teachers and administrators should provide constructive feedback to each other regularly.	2.91	0.95
	C202	Active teacher participation at staff meetings should be encouraged.	3.12	0.99
	C206	Teachers should not be in regard to rank and treat equally.	2.65	1.13
Mean and Standard Deviation for Collegiality			2.72	0.85
Shared Vision	T106	A work plan that gives an overview of the school goals should be written down.	3.28	0.95
	T105	All the work should be coordinated for attaining the school vision	2.88	0.87
	T104	The aims and goals of each department should follow the school vision.	3.06	0.8
	T101	Both teachers and administrators should have an agreement on the school goals, purposes and mission.	3.05	0.87
Mean and Standard Deviation for Shared Vision			3.07	0.71
Professional Autonomy	L207	Teachers should be allowed to exercise autonomy in their classroom pedagogy.	3.84	0.83
	L206	Teachers should be empowered in teaching and learning.	3.51	0.88
	L205	Teachers should have freedom to engage in a variety of practices they think important.	3.26	0.92
	L204	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.	3.35	0.88
	L105	Teacher are free to excise teaching methodology to tackled student individual difference according to their professional judgment	3.44	0.91
	L102	Teachers should be allowed to work within their own professional abilities.	2.51	1.05
Mean and Standard Deviation for Professional Autonomy			3.45	0.68
Bureaucratic control	B105	A well-established system of super ordination and subordination should be developed	3.26	0.98
	B202	A good teacher should be one who conforms to accepted standards in the school.	2.56	0.90
	B104	Teachers should be obedient, respectful, and loyal to the principal.	3.40	0.81
	B103	Principal should frequently monitor the classroom teaching	2.97	0.99
Mean and Standard Deviation for Bureaucratic control			2.98	0.66

Figure 4.1 Box Plot of Management Practices



The following are the descriptions of the content and meaning of the scales. The descriptions for each of the scales are taken from all the items extracted for that scale.

4.4.1.1 Bureaucratic Control

The variable of bureaucratic control is characterized by the following statements.

1. A well-established system of super ordination and subordination should be developed.
2. A good teacher should be one who conforms to accepted standards in the school.
3. Teachers should be obedient, respectful, and loyal to the principal.

4. Principal should frequently monitor the classroom teaching.

A high score on the scale of bureaucratic control indicated that the teacher preferred to have a well-established system of superordinate-subordinate relationships. They would obey, respect and be loyal to the principal and conform to accepted standards in the school. The principal was expected to monitor the classroom teaching frequently by teachers. The reliability of this scale was 0.59 with a scale mean 2.98 (sd=0.68). The development of this scale is based on Weber's (1968 quoted in Robbins, 1990 pp. 309-314) delineation about the characteristics of bureaucracy; it was proposed that the variable of bureaucratic control was the observable indicator for bureaucratic linkage. It is a measure of standardization. A highly formalized organization operates with a standardized guidelines and regulations for instructing employees. It is also defined as the extent to which the rules, procedures, instructions and communications control the teachers.

4.4.1.2 Collegiality

The variable of collegiality is characterized by the following statements.

1. All teachers should be involved in deliberating on school goals at the beginning of the year.
2. Teachers should have participation in decision making.
3. Staff members should talk, observe, critique, and plan together.
4. Teachers and administrators should provide constructive feedback to each other regularly.
5. Active teacher participation at staff meetings should be encouraged.
6. Teachers should not be treated with regard to rank but treated equally.

A high score of collegiality indicates that the teachers in the school preferred to have a strong collegial relationship and that there was a high spirit of cooperation among teachers, administrators, and principals. Teachers should not be treated in regard to rank but treated equally. Staff members should talk, observe, critique, and plan together. Teachers and administrators should provide constructive feedback to each other regularly. All teachers should be involved in deliberating on school goals at the beginning of the year. Active teacher participation at staff meetings should be encouraged. Teachers should participate in decision making. The reliability of this scale is 0.89 with a scale mean of 2.72 (sd=0.85). The development of this scale was based on Purkey and Smith's (1985) concept of cultural linkages, which emphasised fostering collegiality through shared staff development experiences and peer teaching and learning and encouraging collaborative planning and participative decision making.

4.4.1.3 Professional Autonomy

The variable of professional autonomy is characterized by the following statements.

1. Teachers should be allowed to exercise autonomy in their classroom pedagogy.
2. Teachers should be empowered in teaching and learning.
3. Teachers should have freedom to engage in a variety of practices they think important.
4. Within narrow limits, individual teachers should be allowed to exercise self-direction and self-control.
5. Teachers are free to apply original teaching methodology to tackle individual differences amongst students according to their professional judgment.
6. Teachers should be allowed to work within their own professional abilities.

A high score on the scale of professional autonomy indicated that teachers in the school preferred their school to be a highly professional institution, which valued the expertise of teachers. The teachers in the schools preferred to have a lot of discretion, and to be empowered in teaching and learning. They should be allowed to exercise autonomy in their classroom pedagogy. Teachers should be free to exercise original teaching methods to tackle students' individual differences according to their professional judgment. Teachers should be allowed to work within their own professional abilities. Teachers should have freedom to engage in a variety of practices they think important. Within limits, individual teachers should be allowed to exercise self-direction and self-control. The reliability of this scale was 0.87 with a scale mean of 3.45 (sd=0.68) The development of this scale was based on the concept of loose coupling, which was defined as a pattern of organizational and interpersonal mechanisms that serve to link together management characteristics and selected elements of the school social environment (Weick 1976). In its most popular sense, loose coupling in schools often refers to the discretionary power and professional autonomy of teachers in their work.

4.4.1.4 Shared Vision

The variable of shared vision is characterized by the following statements.

1. A work plan that gives an overview of the school vision should be written down.
2. All the work should be coordinated for attaining the school vision
3. The aims and goals of each department should follow the school vision.
4. Both teachers and administrators should have an agreement on the school goals, purposes and mission.

A high degree of shared vision indicates that the teachers in the school preferred

their school to have clear goals, visions and philosophy, all of which should be widely shared among the staff. A work plan, which gave an overview of the school goals should be written down. All the work should be coordinated for attaining the school vision. The aims and goals of each department should follow the school vision. Both teachers and administrators should have an agreement on the school goals, purposes and mission. The reliability of this scale was 0.82 with a scale mean of 3.07. (sd = 0.71) The development of this scale was based on Peters and Waterman's concept of tight coupling, which refers to the pull which firmly moves people towards organizations' visions, missions, philosophy and core values.

4.4.2 The Variables of Participation in Decision making.

The variables of teachers' participation in decision making were borrowed from Mohrman et al (1978) who categorized decisions in school as technical or managerial domains. The technical domain included decisions relating to classroom instruction and to the professional tasks of the school. The managerial domain included decisions regarding the managerial functions of the school. Mohrman also distinguished decisions made at the school wide level and decisions made at classroom level. This resulted in four decision domains including school level managerial, school level technical, class level managerial and class level technical decision domain.

When completing the questionnaire, teachers were asked to rate the items in these decision domains both in terms of their actual participation in making the decision and in terms of the degree to which they desired to participate in decision making. The discrepancy between desired and actual participation in decision making has been labelled the decision condition.

4.4.2.1 Decision Condition

Decision condition is a measure of discrepancy between the level of teachers' actual participation (AP) and desired participation (DP) in each of the decision areas. There are three possible states of decision condition; they are decision deprivation, equilibrium and saturation. Decision deprivation represents actual participation less than desired ($AP-DP < 0$); decision equilibrium represents actual participation equal to desired ($AP-DP = 0$) and decision saturation represents actual participation greater than desired ($AP-DP > 0$). In fact the last of these conditions is hypothetical as it did not occur in this survey. The mean scores and standard deviations for actual and desired participation and for decision condition for each item in the four decision domains are presented in Table 4.16.

The mean scores show that teachers perceived their actual participation in decision making as much lower than their desired participation for all items in the questionnaire. Decision deprivation occurred in all the four decision domains and in the overall decision dimension discussed below. This significant difference between the mean scores for actual and desired participation is shown graphically in Figure 2.

Table 4.16 Means and Standard Deviations by item on teacher participation in decision domains

Dimension	Item		Actual Participation		Desired Participation		Decision Condition (DP-AP)	
			Means	SD	Mean	SD	Mean	SD
School level Managerial Domain	A30	Allocation of human resource	1.5	0.78	2.99	1.08	1.50	1.15
	A29	Allocation of financial resource	1.55	0.81	2.87	1.08	1.33	1.12
	A31	Setting school administration structure	1.54	0.87	2.86	1.11	1.33	1.19
	A27	Recruiting supporting staff	1.51	0.90	2.27	1.20	1.22	1.17
	A22	Setting department budgeting	1.94	0.95	3.28	1.02	1.35	1.23
	A23	Evaluate department performance	1.97	0.99	3.34	0.98	1.38	1.16
	A26	Recruit teaching staff	1.57	0.96	2.80	1.16	1.25	1.15
	A25	Setting appraisal criteria	1.92	1.00	3.36	1.04	1.46	1.25
	A24	Appraising teachers	2.15	1.09	3.35	1.02	1.21	1.18
School level Managerial Domain			1.78	0.73	3.06	0.86	1.30	0.90
Class Level Technical Domain	A3	Setting learning objectives	3.86	0.99	4.19	0.78	0.33	0.69
	A1	Adoption of teaching materials	3.79	1.08	4.11	0.83	0.33	0.79
	A5	Development of curricula	3.93	0.91	4.20	0.76	0.27	0.74
	A2	Selection of textbooks	3.82	1.08	4.14	0.83	0.32	0.80
	A6	Select teaching methodology	4.18	0.86	4.37	0.72	0.20	0.64
	A4	Tailoring the curriculum	3.49	1.09	4.09	0.79	0.61	0.96
	A7	Evaluation of teaching outcomes	3.53	0.96	4.03	0.79	0.52	0.82
	A9	Setting homework policies	3.59	1.09	4.07	0.84	0.49	0.92
A8	Purchase of teaching equipment	3.29	1.20	3.89	0.95	0.63	0.97	
Class Level Technical Domain			3.72	0.78	4.12	0.64	0.41	0.54
School Level Technical Domain	A15	Setting department working schedule	2.99	1.22	3.66	0.96	0.68	0.97
	A14	Setting department goals	3.04	1.18	3.72	0.90	0.69	0.98
	A18	Setting disciplinary policies	2.61	1.22	3.49	1.04	0.90	1.08
	A16	Setting school goals	2.6	1.32	3.35	1.16	0.76	1.02
	A17	Planning school development	2.66	1.26	3.52	1.03	0.86	1.09
School Level Technical Domain			2.78	1.11	3.55	0.91	0.78	0.87
Class Level Managerial Domain	A11	Selection of subject to be taught	2.20	1.11	3.96	0.93	1.77	1.40
	A10	Selection of class to be taught	2.66	1.12	4.13	0.84	1.48	1.28
	A12	Setting rules to award students	2.10	1.03	3.56	0.92	1.47	1.23
	A13	Setting rules penalty rules	2.41	1.05	3.62	0.93	1.20	1.13
Class Level Managerial Domain			2.34	0.83	3.82	0.73	1.48	1.02
Teacher participation in decision making			2.66	0.86	3.64	0.65	0.99	0.68

The four decision domains represented the overall dimensions of participation in decision making in an aided secondary school organization. The level of teacher participation in decision making could be represented by the scale mean of the four decision domains. The higher the scale mean of a decision domain, the higher would be the level of participation in that domain.

4.4.2.2 School Level Managerial Domain

Decision issues in the School Level Managerial domains included:

1. Allocation of human resource
2. Allocation of financial resource
3. Determination of school administration structure
4. Recruiting supporting staff
5. Setting department budget
6. Evaluating department performance
7. Recruiting teaching staff
8. Setting appraisal criteria
9. Appraising teachers

These decision issues were related to resource allocation, determination of school administrative structures, staff recruitment, budgeting, appraising teacher performance and school-evaluation systems. The reliability of this scale was 0.92.

All the Mohrman's (1978) managerial decision issues, Chan's (1997) school level management decision issues, Bacharach's (1990) strategic personnel decision issues and most of the Schneider's (1984) managerial decision issues were grouped into this factor.

Mohrman's (1978) and Schneider (1984) managerial decision issues were related to procurement and disposal of resources. Bacharach's (1990) strategic personnel decision issues were concerned with career issues and allocation of resources. This factor reflected the decision issues concerning school wide and managerial concerns, and participation in this decision domain included the participation in the managerial support function at the school level. However, the four factor structure of this aspect of the research was different to the work of Chan's (1997) who proposed six decision domains, including a 'group level technical domain' and a 'group level managerial domain' which the current research did not explore. The decision issues "setting department budget" and "evaluating department performance", contributed to the 'group level' decision domain in Chan's study but were part of the 'school level managerial' domain of the present study.

The mean score of actual participation in the school level managerial decision domain was 1.78 (sd=0.73), of desired participation 3.06 (sd=0.86) and for decision condition 1.30 (sd=0.9). The item with the highest mean score on actual participation was "Appraising teachers" (M=2.15). The item with the highest mean score on desired participation was "Setting Appraisal Criteria" (M = 3.36). The item with the highest mean score on decision condition was "Allocation of human resource" (M=1.50). The item with the lowest mean score on actual participation was "Allocation of human resource" (M=1.50). The item with the lowest mean score on desired participation was "Recruiting supporting staff" (M=2.27). The item with the lowest mean score on decision condition was "Appraising teachers" (M=1.21).

4.4.2.3 Class Level Technical Domain

Decision issues in the class level technical domain included:

1. Setting learning objectives
2. Adoption of teaching materials
3. Development of curricula
4. Selection of textbooks
5. Selection of teaching methodology
6. Tailoring the curriculum
7. Evaluation of teaching outcomes
8. Setting homework policies
9. Purchasing teaching equipment

These decision issues were related to the curriculum and were instructional in nature. They reflected decisions about the development and tailoring of curriculum, instructional activities, planning and evaluation, teaching preparation and related affairs. The reliability of this scale is 0.91.

All of the Schneider's (1984) technical decision issues, Bacharach's (1990) operational personal decision issues and Chan's (1997) class level technical decision issues were grouped into this factor. Most of the Mohrman's (1978) technical decision issues were grouped in this factor except the issues "setting disciplinary policies" were grouped in factor 3. Schneider and Mohrman's technical decision issues are directly related to the class instruction. Bacharach's (1990) operational personal decision issues

concern the core technology of school, which involve the teacher's knowledge, skill and abilities. Chan's class level technical decision issues are related to classroom instructional and professional task of the school such as teaching, evaluation, student guidance. This factor reflects the decision issues concerning class level and technical decision issues, participation in this decision domain includes the decision regarding decision related to technical task of school such as teaching and evaluation in class level.

The mean score of actual participation in the class level technical decision domain was 3.72 (sd=0.87), of desired participation 4.12 (sd=0.64) and for decision condition 0.41 (sd=0.54). The item with the highest mean score on actual participation (M=4.18) and desired participation (M = 4.37) was "Select teaching methodology" The item with the highest mean score on decision condition was "Purchase of teaching equipment" (M = 0.63). The item with the lowest mean score on actual participation (M=3.29) and desired participation (M=3.89) was "Purchase of teaching equipment. The item with the lowest mean score on decision condition was "Select teaching methodology" (0.20).

4.4.2.4 School Level Technical Domain

Decision issues in School Level technical domain included:

1. Determining department working schedule
2. Determining department goals
3. Determine disciplinary policies
4. Determining school goals
5. Planning school development

Participation in this decision domain included decisions regarding technical and professional tasks in the school level decision area. The reliability of this scale was 0.94. The decision issues “setting school goals” and “setting disciplinary policy” from Schneider’s managerial decision domain are obviously related to school wide level decisions.

The decision issues “determining the department working schedule” and “setting departmental goals” from Chan’s group level technical domain, although closely related to the technical operation of the school, are close to ‘teachers’ personal visions for the school’. In traditional school management, ‘setting school goals’ was viewed as a managerial decision domain and teachers were excluded. This may have changed with the implementation of the school based management policy in Hong Kong aided schools, which directs school management committees to involve the teachers in setting the mission and vision of schools. This means that it is unclear whether these factors are decision issues related to technical task or professional task of school.

Similarly, “setting disciplinary policy” was a technical decision issue in Mohrman’s model (1978), but a managerial decision issue in Schneider’s model. Policy setting is the decision related to school level, and setting disciplinary policy is related to student guidance, which is within the professional task of the school. Bacharach et al (1990) categorized these issues as operational organizational decision domains. Both decision issues require teachers to share their views and decide the direction and procedure of the policy. Therefore these four decision issues were categorized in the school level technical decision domain.

The mean score of actual participation in the school level technical decision domain was 2.78 (sd=1.11), of desire to participate 3.55 (sd=0.91) and for decision condition 0.78 (sd=0.87). The item with the highest mean score on actual participation and desire to participate was “Setting department goals”. Actual participation was (M=3.04), desire to participate was (M = 3.72) and decision condition was (M=0.69). Teachers still desire to have more involvement in setting department goal. The item with the lowest mean score on actual participation (M=2.60) and desired participation (M=3.35) was “setting school goals”. The item with the lowest mean score on decision condition was “selecting department working schedule” (M=0.68).

4.4.2.5 Class Level Managerial Domain

Decision issues in the class level managerial domain included:

1. Selection of subject to be taught
2. Selection of class to be taught
3. Setting rules to reward students
4. Setting penalty rules

The decision issues of the class level managerial domain were related to the management of instruction, which included the planning of human resources in teaching and other instructional activities, the criteria for academic awards and the disciplinary measures applied in the classroom. All Chan’s class level managerial issues were grouped into this factor. Participation in this decision domain included decisions related to the managerial support function of the school at the whole school level. The reliability of this scale was 0.92.

The mean score of actual participation in the class level managerial decision domain was 2.34 (sd=0.83), the mean score of desire to participation was 3.82 (sd=0.73), and the mean score for decision condition was 1.48 (sd=1.02). The item with the highest mean score on actual participation (M=2.66) and desire to participate (M = 4.13) was “Selection of class to be taught” The item with the highest mean score on decision condition was “Selection of subject to be taught” (M=1.77). The item with the lowest mean score on actual participation (M=2.10) and desired participation (M=3.56) was “Setting rules to award students”. The item with the lowest mean score for decision condition was “Setting penalty rules” (M=1.20).

4.4.2.6 Overall Decision Dimension

The mean scores for an overall decision dimension were also constructed. The mean score of actual participation in the overall decision dimension was 2.66 (sd=0.86), of desired participation 3.64 (sd=0.65) and for decision condition .99 (sd=0.68). “Select teaching methodology” in the class level technical decision domain was the item with the highest mean score for both actual participation (M=4.18) and desired participation (M = 4.37). The item with the highest mean score on decision condition (M=1.77) was “Selection of subject to be taught” in the class level managerial decision domain. The item with the lowest mean score on actual participation (M=1.50) was “Allocation of human resource” in the school level managerial decision domain. The item with the lowest mean score on desired participation (M=2.27) was “Recruiting supporting staff” in the school level managerial decision domain. The item with the lowest mean score for decision condition (M = 0.20) was “select teaching methodology” in the class level technical decision domain.

4.4.2.7 Level of Participation in Each Decision Domain

The levels of teacher participation in each decision domain are presented in figure 2. The highest level of actual participation in the 4 decision domains is found in the class level technical domain (3.72). The lowest score of actual participation is found in the school level managerial domain (1.78). The highest score of desired participation (4.12) is found in the class level technical domain. This suggested that teachers strongly desired to participate in the class level technical domain. The lowest score of desired participation (3.06) was found in the school level managerial domain. The greatest discrepancy (1.30) between actual and desired participation occurred in the school level managerial domain. The least important discrepancy (0.41) between actual and desired participation was found in the class level technical domain.

Figure 4.2 Line Chart for Mean Scores of Actual and Desire to Participate in the four decision domains

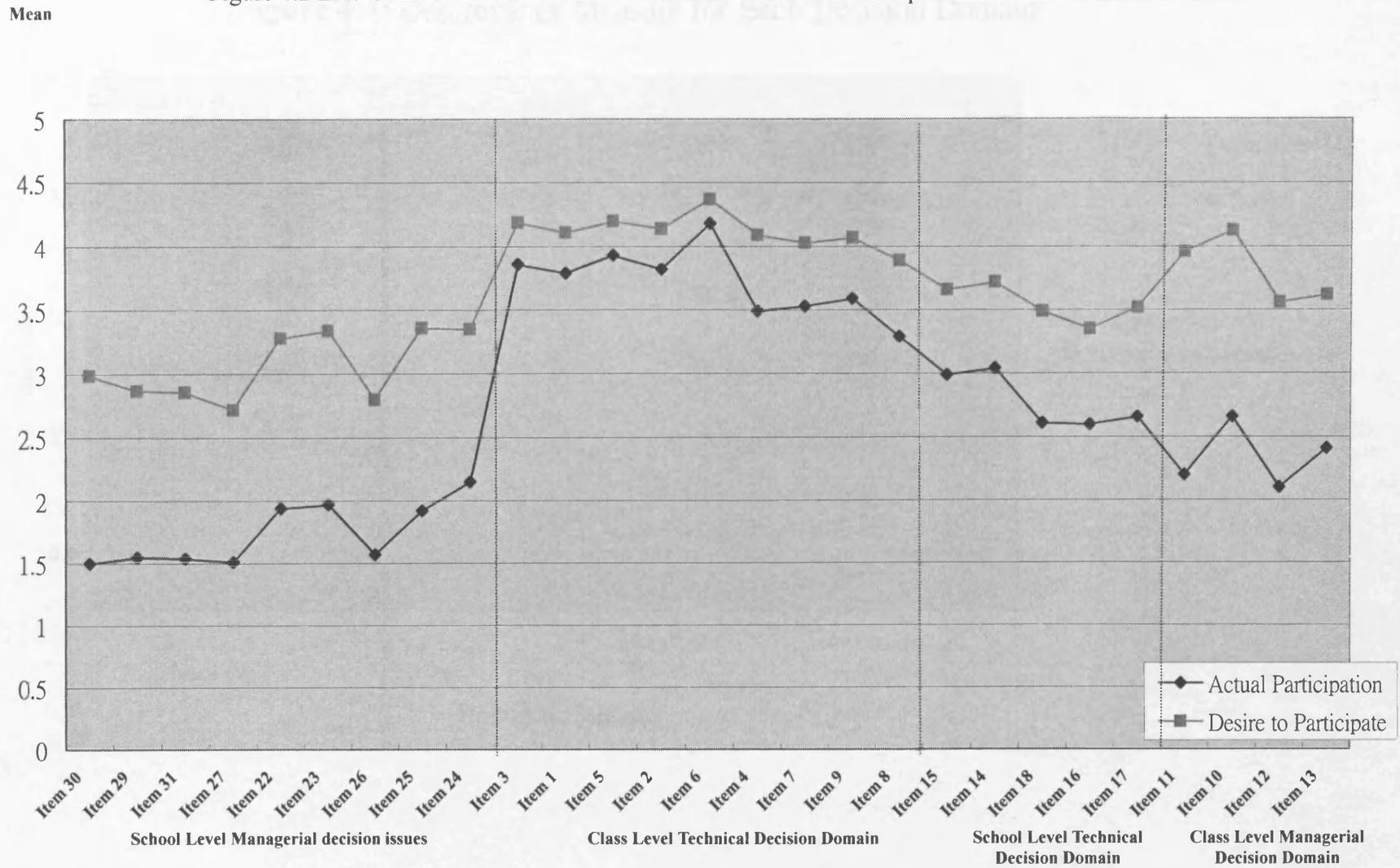
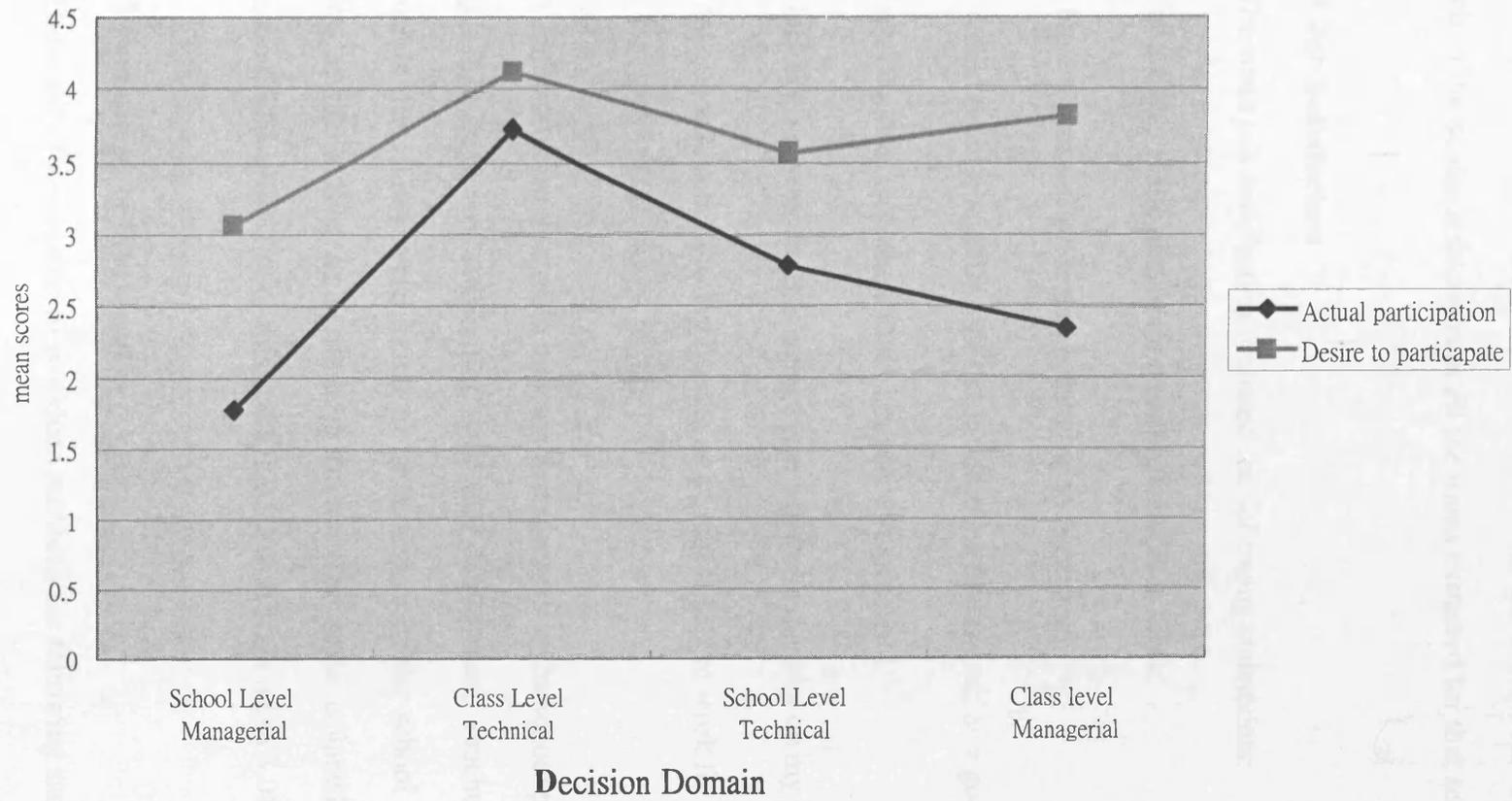


Figure 4.3: Discrepancy Measure for Each Decision Domain



4.4.3 The Affective Variables

The following are the description of the content and meaning of the affective variables: job satisfaction, perception of workload and job commitment. The description for each of the scales is taken from all the items extracted for that scale.

4.4.3.1 Job Satisfaction

The scale job satisfaction included the following statements:

1. For me this is the best of all possible schools to work.
2. I have a sense of pride and belonging to the school.
3. I would recommend this school to someone like myself as a good place to work.
4. I am proud to tell others that I am part of this school.
5. Deciding to work for this school was a definite mistake on my part.
6. I talk up this school to my friends as a great school to work for.

A high score on this scale indicate that teachers in the school perceived themselves having a high degree of satisfaction with their employment. Teachers at that school had their needs met. They were proud to be members of the school and would consider teaching at the school as a life-long career. The scale is labelled as scale for job satisfaction. The reliability of this scale is 0.92 with scale mean 3.04 (sd=0.89).

4.4.3.2 Perception of Workload

The scale of perception of workload included the following statements:

1. Too much administrative routine work that disrupt my teaching.

2. Department and school meeting, which occupy much of my working time.
3. Too many meeting which occupy much of my working time.
4. There is too much paper work.

A high score on this subscale indicates that the workload perception by the teachers is heavy. There are much more non-teaching duties in their job. In general, teachers are required to take time to attend meetings, work on paper work and deal with non-teaching duties. Besides teaching, they are required to manage student discipline problems after school. This scale was label as scale for perception of non-teaching workload. The reliability of this scale is 0.80 with scale mean 3.66 (sd=0.74).

4.4.3.3 Job Commitment

The scale job commitment includes the following statements.

1. I commit to my teaching
2. I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.
3. I express a high degree of commitment to the school.

A high degree of this scale indicates that the teachers in the school express a high degree of commitment to teaching and to the school. Teacher find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders. This scale was labelled as job commitment. The reliability of this scale is 0.83 with scale mean 3.52 (sd=0.81).

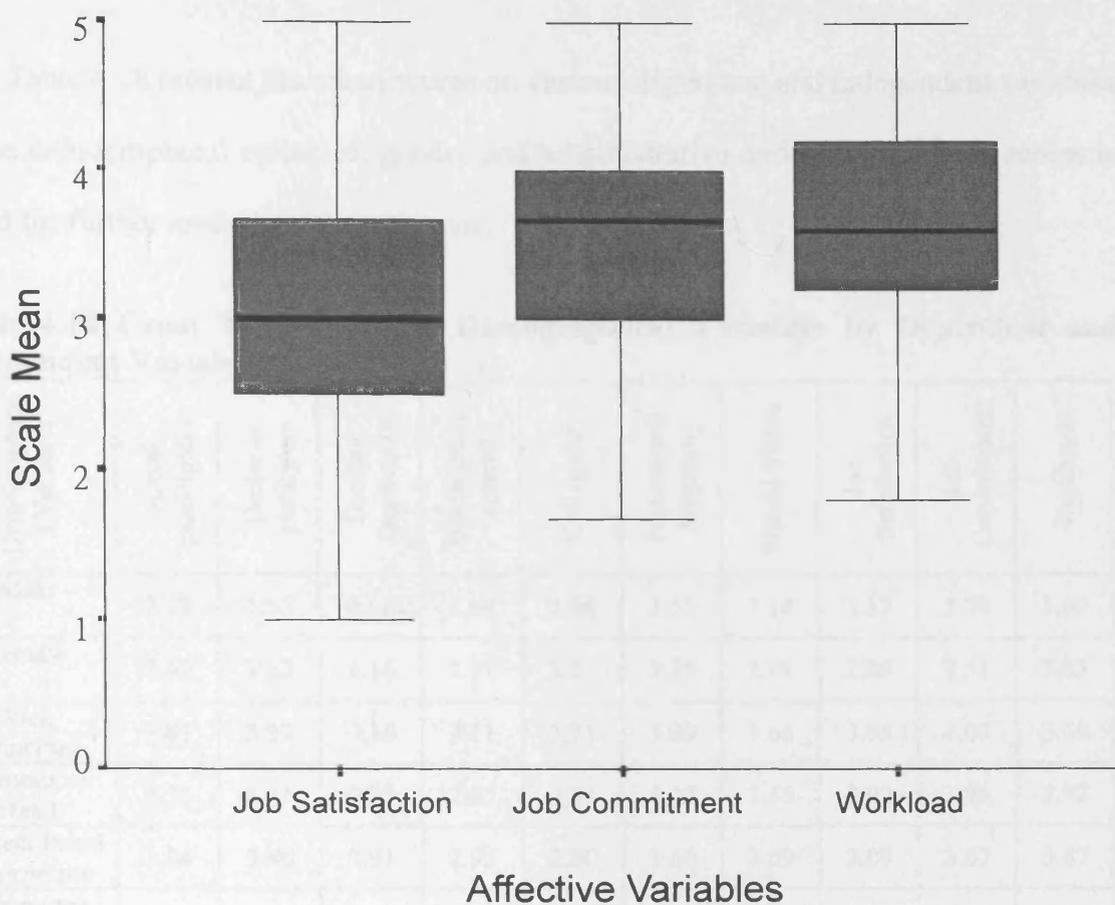
The mean scores for the three variables of affective outcome: job satisfaction, commitment and perception of their workload were constructed by equally weighting the mean of each item respectively and are summarized in Table 4.17. The mean score for job satisfaction was 3.04 (sd=0.89), commitment 3.52 (0.81) and perception of workload 3.66 (0.74). The highest score of the variables of affective outcome was for perception of workload (3.66) and the lowest score was for in job satisfaction (3.04).

Table 4.17 Mean and Standard Deviation for the three Variables of Affective Outcomes

Dimension	Item		Mean	SD
Job Satisfaction	Q59F205	For me this is the best of all possible schools to work.	3.18	0.99
	Q60F206	I have a sense of pride and belonging to the school.	3.09	1.02
	Q56F202	I would recommend this school to someone like myself as a good place to work.	2.76	1.08
	Q55F201	I am proud to tell others that I am part of this school.	2.97	1.05
	Q58F204R	Deciding to work for this school was a definite mistake on my part.(*)	3.70	1.07
	Q57F203	I talk up this school to my friends as a great school to work for.	2.73	1.11
Mean and Standard Deviation for Job Satisfaction			3.04	0.89
Workload	Q67F602	Department and school meeting which occupy much of my working time	3.49	0.97
	Q66WORKL	Department and school meeting which occupy much of my working time	3.47	1.02
	Q68F603	Too much administrative routine work that disrupt my teaching.	3.82	0.89
	Q70F605	There is too much paper work	3.69	0.93
Mean and Standard Deviation for Workload			3.66	0.74
Job Commitment	Q65JOBSCO	I commit to my teaching	3.52	0.81
	Q63F105	I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.	3.79	0.73
	Q64F106	I express a high degree of commitment to the school.	3.54	0.81
Mean and Standard Deviation for Job Commitment			3.52	0.81

* Remark: Item Q58F204R negative statement for job satisfaction, and had been recoded before conducting factor analysis.

Figure 4.4 Blot plot diagram of the affective variables



The mean score of perception of their workload ($m=3.66$ $sd=0.74$) is the highest among the affective variables. The level of their job commitment ($m=3.52$ $sd=0.81$) is higher than the level of their job satisfaction ($m=3.04$ $sd=0.89$). The distributions of these affective variables were shown in figure 4 by using blot plot diagram. The range of distribution of job satisfaction ($sd=0.89$) is the largest among the affective variables, while perception of workload had the smallest range of distribution. This reflected that teacher perception toward workload was more consensual than their perception on job satisfaction.

4.4.5 Cross Tabulations of Demographical Variables by Dependent and Independent Variables

Table 4.18 present the mean scores on various dependent and independent variables of the demographical variables: gender and administrative duties. These mean scores is listed for further analysis in next chapter.

Table 4.18 Cross Tabulations of Demographical Variables by Dependent and Independent Variables

Demographical Variables	Actual participation	Desire to participate	Decision Deprivation	Bureaucratic control	Collegiality	Professional Autonomy	Shared Vision	Job Satisfaction	Job Commitment	Workload
Male	2.78	3.65	0.88	3.04	2.86	3.51	3.14	3.17	3.70	3.69
Female	2.49	3.63	1.16	2.91	2.51	3.35	2.98	2.89	3.51	3.63
Vice Principal	3.81	3.97	0.16	3.11	3.71	3.89	3.68	3.95	4.03	3.60
Committee Head	3.36	4.11	0.75	2.87	2.91	3.42	3.15	3.02	3.95	3.92
Subject Panel Chairperson	3.04	3.96	0.91	2.95	2.80	3.60	3.09	3.09	3.67	3.87
Committee Member	2.37	3.40	1.05	2.98	2.61	3.32	2.99	2.96	3.54	3.64
Class Teacher	2.33	3.51	1.19	3.04	2.58	3.40	3.05	3.05	3.53	3.44
Executive Member	3.32	4.09	0.74	3.05	3.10	3.56	3.23	3.25	3.89	3.81
Non Executive Member	2.48	3.54	1.07	2.97	2.61	3.41	3.02	3.00	3.56	3.63
With teacher training	2.67	3.66	1.00	2.96	2.70	3.45	3.06	3.02	3.60	3.68
Without teacher training	2.35	3.38	1.04	3.34	2.95	3.43	3.19	3.50	3.80	3.34
Doctorate Degree	2.51	3.57	1.06	3.13	2.64	3.38	3.13	3.00	3.72	3.77
Master Degree	2.63	3.63	1.01	2.97	2.71	3.44	3.02	3.01	3.56	3.67
Post graduated Degree	2.50	3.51	1.01	2.88	2.86	3.57	3.33	3.42	3.54	3.70
Bachelor Degree	2.87	3.76	0.91	2.92	2.69	3.44	3.07	3.04	3.78	3.58
College Diploma	3.13	4.04	0.91	3.63	3.67	3.83	3.25	3.50	3.83	3.40

4.4 Chapter Summary

This chapter outlined the demographic characteristics of the samples and described the procedures of verifying the validity and reliability of the research instrument. The construct validity and the reliability of the instrument had been validated by factor analysis and reliability test. All the variables had been operationalized in this chapter for further analysis.

In chapter 5, the research questions outlined in chapter 2 will be tackled. The statistical analysis of the questionnaire data tests a number of hypotheses that lead to conclusions regarding the research questions will be presented. The research questions involve teacher's perception of their participation in decision making and the difference between their desired and actual level of participation. The relationship of teachers' perceptions of their participation in decision making with the demographical variables of the teachers, variables of managerial climate of the school, and variables of teacher affective outcome related to work would be determined.

Chapter 5.

Analysing the Data

5.1 Introduction

This chapter is structured around the research questions outlined in chapter 3. It presents a statistical analysis of the questionnaire data and tests a number of hypotheses that lead to conclusions regarding the research questions. The chapter is divided into four main sections. The first section answers questions concerning teacher's perception of their participation in decision making and the difference between their desired and actual level of participation. It is about the status quo of teachers' decision making, which was identified as decision-deprivation in chapter 4.

The second, third and fourth sections present statistical data about the relationship of teachers' perceptions of their participation in decision making with a number of independent variables. These variables are grouped under (a) the demographic characteristics of the teachers, (b) teachers perceptions of the managerial climate of the school, and (c) teachers perceptions of affective factors related to work.

5.2 Teachers Perceptions Of Their Participation In Decision Making.

In chapter 4 the data about teacher's perceptions of their participation in decision making was described and analysed. Five measures were created to describe teachers' perceptions of decision making in five important domains: an overall decision making domain; a school level domain focused on technical issues; a school level domain focused on management issues; a classroom level domain focused on technical issues; and a classroom level domain focused on management issues.

5.2.1 Teachers Perceptions Of Their Actual And Desired Participation In Decision making.

Was there any significant difference between teachers' perceptions of the "level of actual participation" and "the level of desired participation" in any of these domains? In order to answer this question the data was explored through applying the null hypothesis to each of the domains and using the statistical Paired – Samples T Test procedure to test it. This procedure compares the mean scores of two variables for a single group. In this case the difference between the values of the variables of actual participation and desired participation for each case were tested to establish if the average of discrepancy differed from 0. Table 5.1 summarizes the result of the T-test on the mean scores of actual and desired participation in the four decision domains.

5.2.2 Overall Decision making

The hypothesis that there was no significant difference between the "mean scores of actual participation" and "the mean scores of desired participation" in the overall decision domain was made. The mean of the paired differences between actual participation and desired participation was 0.99. The p value (sig. 2- tailed) association with the t statistic of 29.53 was very small (<0.0005), indicating that a mean difference of 0.9 departed significantly from 0. There was a significant difference between the mean scores of actual participation and desired participation.

5.2.3 School Level Managerial Domain

The hypothesis that there was no significant difference between the "mean scores of actual participation" and "the mean scores of desired participation" in the school level managerial domain was made. The mean of the paired differences between actual participation and desired participation was 1.3. The p value (sig. 2- tailed) association

with the t statistic of 28.67 was very small (<0.0005), indicating that a mean difference of 1.3 departs significantly from 0. There was a significant difference between the mean scores of actual participation and desired participation.

5.2.4 School Level Technical Domain

The hypothesis that there was no significant difference between the “mean scores of actual participation” and “the mean scores of desired participation” in the school level technical domain was made. The mean of the paired differences between actual participation and desired participation was 0.78. The p value (sig. 2- tailed) association with the t statistic of 17.74 was very small (<0.0005), indicating that a mean difference of 0.78 departed significantly from 0. There was a significant difference between the mean scores of actual participation and desired participation.

5.2.5 Class Level Managerial Domain

The hypothesis that there was no significant difference between the “mean scores of actual participation” and “the mean scores of desired participation” in the class level managerial domain was made. The mean of the paired differences between actual participation and desired participation was 1.48. The p value (sig. 2- tailed) association with the t statistic of 28.85 was very small (<0.0005), indicating that a mean difference of 1.48 departed significantly from 0. There was a significant difference between the mean scores of actual participation and desired participation.

5.2.6 Class Level Technical Domain

The hypothesis that there was no significant difference between the “mean scores of actual participation” and “the mean scores of desired participation” in the class level technical domain was made. The mean of the paired differences between actual

participation and desired participation was 0.41. The p value (sig. 2- tailed) association with the t statistic of 15.15 was very small (<0.0005), indicating that a mean difference of 0.41 departed significantly from 0. There was a significant difference between the mean scores of the actual participation and desired participation.

To summarize: significant differences between the mean scores of actual participation and desired participation were found in all the decision domains. Table 5.1 summarizes the results.

Table 5.1 Summary of T-test on the Mean Scores Actual and Desire in the Four Decision Domains

Decision Domain		Mean scores	SD	Mean Difference	T-value	Significant level
School Level Managerial	Actual participation	1.77	0.73	1.30	28.66	0.000
	Desired participation	3.08	0.86			
Class Level Technical	Actual participation	3.71	0.79	0.41	15.15	0.000
	Desired participation	4.13	0.65			
School Level Technical	Actual participation	2.78	1.11	0.78	17.74	0.000
	Desired participation	3.56	0.91			
Class Level Managerial	Actual participation	2.34	0.84	1.48	28.85	0.000
	Desired participation	3.83	0.72			
Overall	Actual participation	2.65	0.68	0.90	29.53	0.000
	Desired participation	3.65	0.63			

5.2.7 Differences Between Decision Domains

The ANOVA test was used to establish if there were significant differences between the mean scores for actual and desired decision making and for the measure of

discrepancy in the five decision domains. The results are displayed in Table 5.2. The test established that the differences in all areas were statistically significant.

5.2.7.1 Actual Participation

The mean scores for actual participation were: 1.78 in the school level managerial domain; 3.72 in the class level technical domain; 2.28 in the school level technical domain; and 2.34 in the class level managerial domain. The significant level in the ANOVA is 0.0005 with F value = 348.154. This finding suggested that the mean scores of actual participation were significantly different for these four decision domains. The Scheffe post hoc test revealed that the mean scores of actual participation in each decision domain were significantly different.

5.2.7.2 Desired Participation

The mean scores for desired participation were: 3.06 in the school level managerial domain; 4.12 in the class level technical domain; 3.35 in the school level technical domain; and 3.82 in the class level managerial domain. The significant level in the ANOVA is 0.0005 with F value = 127.05. This finding suggested that the mean scores of desired participation were significantly different for these four decision domains.

The Scheffe post hoc test revealed that the mean scores of desired participation in each decision domain were significantly different.

5.2.7.3 Discrepancy measure

The mean scores for desired participation were: 1.03 in the school level managerial domain; 0.41 in the class level technical domain; 0.78 in the school level technical domain; and 1.48 in the class level managerial domain. The significant level in the

ANOVA is 0.0005 with F value = 130.13. This finding suggested that the mean scores of the discrepancy measure were significantly different for these four decision domains. The Scheffe post hoc test revealed that the mean scores of desired participation in each decision domain were significantly different.

Table 5.2 Compare Means Scores of Actual, Desired and Discrepancy Participation Among the 4 Decision Domains by ANOVA Test

<i>Compare mean score of actual participation on the four decision domains</i>						
Decision domains	Mean Scores on actual participation	<i>post hoc test</i>				
		Decision domains	School Level Managerial	Class Level Technical	School Level Technical	Class Level Managerial
School Level Managerial	1.78	School Level Managerial				
Class Level Technical	3.72	Class Level Technical	*			
School Level Technical	2.78	School Level Technical	*	*		
Class Level Managerial	2.34	Class Level Managerial	*	*	*	
F ratio	348.154					
P value	.000					
<i>Compare mean score of desired to participation on the four decision domains</i>						
Decision domains	Mean Scores on desired to participate	<i>post hoc test</i>				
		Decision domains	School Level Managerial	Class Level Technical	School Level Technical	Class Level Managerial
School Level Managerial	3.06	School Level Managerial				
Class Level Technical	4.12	Class Level Technical	*			
School Level Technical	3.54	School Level Technical	*	*		
Class Level Managerial	3.82	Class Level Managerial	*	*	*	
F ratio	127.05					
P value	.000					
<i>Compare mean score of discrepancy on participation on the four decision domains</i>						
Decision domains	Mean Scores Of discrepancy on participation	<i>post hoc test</i>				
		Decision domains	School Level Managerial	Class Level Technical	School Level Technical	Class Level Managerial
School Level Managerial	1.30	School Level Managerial				
Class Level Technical	0.41	Class Level Technical	*			
School Level Technical	0.78	School Level Technical	*	*		
Class Level Managerial	1.48	Class Level Managerial	*	*	*	
F ratio	130.13					
P value	.000					

5.3 Demographic Factors And Participation In Decision making

Stepwise multiple linear regression analysis was used to answer the following questions for exploring the relationship between the level of teacher involvement and their demographic.

1. Were teachers' perceptions of their participation in decision making related to personal and professional demographics such as gender, educational level, teacher training, rank, administrative duties and years of teaching experience?
2. Were the decision deprivation related to personal and professional demographics?
3. Could the independent demographic variables be used to predict the level of teacher participation in decision making and decision deprivation?

As gender, teacher training, rank and administrative duties are categorical variables, they were transformed into dummy variables as follows:

Gender: male teacher, female teacher,

Training: teacher with professional training, teacher without professional training,

Administrative Duty: vice principal, head of department, subject panel chairperson, committee member class teacher, executive committee member and non-executive committee member.

The coding for these three new variables was 1 if they met the condition and 0 if other conditions applied. Analysis was performed with all the independent variables entered in the equation. Table 5.3 displays the structure coefficient independent p value, and partial p value for the predicting variables.

Table 5.3 The Relationship Between the Demographic Variables and Participation in Decision Making.

R	0.443		
R ²	0.196		
Adjusted R ²	0.187		
F-value	23.275		
Sig. Level	0.000		
Predictor Variables	Standardized coefficients	t	Sig.
	Beta		
Constant		13.727	0.000
1. Female Teacher	-0.073	-1.701	0.090
2. Year of teaching experience	0.009	0.191	0.849
3. Teacher without professional training	-0.053	-1.231	0.219
4. Level of Education attained	0.010	0.225	0.822
5. Vice Principal	0.196	3.756	0.000
6. Committee chairperson	0.228	4.249	0.000
7. Subject panel chairperson	0.319	6.544	0.000
8. Class teacher	-.025	-0.548	0.584
9. Non executive committee member	-.124	-2.225	0.027
10. Rank	0.202	3.483	0.001

The overview of the stepping process indicated that ten predictors were included in the model. They were entered into the equation in this order: rank, without teacher training, subject panel chairperson, female teacher, level of education, class teacher, committee chairperson, year of teaching experience, vice principal, and non executive committee member.

Table 5.3 showed that, R² for the model was 0.196 and adjusted R² was 0.187. The percentage of variance accounted for the model was 19.6%. The significant level in the ANOVA was 0.0005, using an alpha level of 0.001 criterion. There was quite strong evidence against the hypothesis that all the regression coefficients were zero. The p value of the predicting variables: vice-principal, committee chairperson, subject panel chairperson, non-executive committee members and the rank were less than 0.05. The Standard coefficients of vice-principal (0.196), committee chairperson (0.228), subject

panel chairperson (0.319), non-executive committee members (-0.125) and the rank (0.202) suggested a predictive relationship between the level of participation in decision making and each of these predicative variables. These predicting variables were extracted from the categorical variable, administrative duties and rank. The results indicated that administrative duties held and rank made a contribution to the prediction of the level of participation in decision making.

Table 5.4 The Relationship Between the Demographic Variables and Discrepancy Measure in Decision making.

R	0.363		
R ²	0.132		
Adjusted R ²	0.106		
F-value	5.065		
Sig. Level	0.000		
Predictor Variables	Standardized coefficients	t	Sig.
	Beta		
Constant		5.926	0.000
11. Female Teacher	0.149	2.789	0.006
12. Year of teaching experience	-0.080	-1.371	0.171
13. Teacher without professional training	-0.033	-0.626	0.532
14. Level of Education attained	0.47	0.841	0.401
15. Vice Principal	-0.153	-2.355	0.019
16. Committee chairperson	-0.46	-0.684	0.495
17. Subject panel chairperson	-0.034	-0.563	0.574
18. Class teacher	0.088	1.559	0.120
19. Non executive committee member	-0.029	-1.414	0.679
20. Rank	-0.130	-1.787	0.075

The overview of the stepping process indicated that ten predictors were included in the model. They were entered into the equation in same order as the predication model of level of predication. Table 5.4 showed that, R² for this model was 0.132 and adjusted R² was 0.106. The percentage of variance accounted for the model was 13.2%. The significant level in the ANOVA was 0.0005, using an alpha level of 0.001 criterion. There was quite strong evidence against the hypothesis that all the regression coefficients were zero. The p value of the predicting variables: vice-principal, and female teacher were less

than 0.05. The Standard coefficients of vice-principal (-1.53), and female teacher (0.149) suggested a predictive relationship between the level of participation in decision making and each of these predicative variables.

The result of the multiple regression indicated that female teachers were a significant positive predictor for their decision deprivation. This reflected that the decision making of female teacher was significantly deprived (0.149) when compared with the other personal and professional demographical variables. On the contrary, vice principal is a significant negative predictor for their decision deprivation. The negative sign of the standard coefficients β of vice principal indicated an opposite direction in predicting the decision condition of the vice principals: their decision making were not deprived.

5.3.1 Explanation of Analysis

The relationship between teacher personal and professional demographics and the level of participation and decision deprivation were explored by the multiple regression tests. Vice-principal, committee chairperson, subject panel chairperson, and rank of the teacher were significant predictors with positive correlation with their perception in level of involvement in decision making. Teachers with these administrative duties are expected to have more involvement in the decision aiming process. Surprisingly, the duty of panel chairpersons has the highest correlation with their involvement in decision making among the administrative duties. The involvement is more than that of committee chairperson, and even vice-principal. While non-executive committee members were predictors with negative correlation with their level of involvement. The negative sign of β indicated an opposite direction that teacher with the duty of non-executive member was not expect to have a significant involvement in decision making. Rank is positively

correlated with the level of involvement, the higher of the teacher rank is, the more is the involvement in decision making.

Vice principal and female teacher were significant predictors for their decision deprivation. The decision making of female teachers was significantly deprived; their decision condition is 1.16 (Table 4.18). While the decision making of vice principals were not deprived. The mean of their decision condition is 0.16 (Table 4.18), which is the lowest among the decision condition of all of the other personal and professional demographical variables.

5.4 Management Culture And Participation In Decision making

In chapter 4 the data about teacher's perceptions of the management culture of their schools was described and analysed. Four measures were created to describe teachers' perceptions of bureaucratic control, professional autonomy, collegiality and shared vision. Teachers' perceptions of their participation in decision making were hypothetically related to their perceptions of the management culture of their schools. Therefore the predictability of the level of teacher participation in decision making by the independent variables: bureaucratic control, professional autonomy, collegiality and shared vision were assumed.

The four management practices were treated as independent variables to decision making in the five decision domains. Multiple linear regression analysis was used to test the hypotheses that

H₀₁: Bureaucratic control will be negatively related to the level of actual participation in decision making,

H₀₂: Collegiality will be positively related to the level of actual participation in

decision making

H₀₃ : Professional autonomy will be positively related to the level of actual participation in decision making.

H₀₄ : Shared vision will be positively related to the level of actual participation in decision making.

5.4.1 The Overall Decision Domain

Stepwise multiple linear regression analysis was used to predict the relationship between (1) the level of participation and (2) the level of discrepancy in the overall decision-domain and teachers' perceptions of the four management practices. The extents to which teachers' perceptions of bureaucratic control, professional autonomy, collegiality and shared vision predict their perceived level of participation and level of discrepancy in the overall decision-domain were explored. Table 5.5 displays the results of the regression. R² for the model was 0.196 and adjusted R² was 0.187. The percentage of variance accounted by the model was 19.6%. The significant level in the ANOVA was 0.0005 with F value = 23.275. Using an alpha level of 0.001 criterion, there was quite strong evidence against the hypothesis that all the regression coefficients were zero. The p value of the predicting variables collegiality (0.000) and professional autonomy (0.012) and bureaucratic control (0,007) were less than 0.05 and its standard coefficients were 0.365, 0.149 and -0.155 respectively. This suggested a predictive relationship between the level of participation in decision making and each of the predicative variables.

Table 5.6 displays the results of the regression. R² for the model was 0.129 and adjusted R² was 0.120. The percentage of variance accounted by the model was 12.9%. The significant level in the ANOVA was 0.0005 with F value = 14.008. Using an alpha level of 0.001 criterion, there was quite strong evidence against the hypothesis that all the

regression coefficients were zero. The p value of the predicting variables collegiality (0.000) was less 0.05 and its standard coefficients were -0.296 . This suggested a predictive relationship between the level of discrepancy in decision making and collegiality.

Table 5.5 The Relationship Among the Variables of Management Practices and Participation in the Overall Decision Dimension.

R	0.443		
R ²	0.196		
Adjusted R ²	0.187		
F-value	23.275		
Sig. Level	0.000		
Predictor Variables	Standardized coefficients	t	Sig.
	Beta		
Collegiality	.365	5.629	0.000
Shared vision	.067	1.108	0.269
Professional autonomy	.149	2.527	0.012
Bureaucratic control	-0.155	-2.708	0.007

Table 5.6 The Relationship Among the Variables of Management Practices and Discrepancy Measure in the Overall Decision Dimension.

R	0.359		
R ²	0.129		
Adjusted R ²	0.120		
F-value	14.008		
Sig. Level	0.000		
Predictor Variables	Standardized coefficients	t	Sig.
	Beta		
Collegiality	-0.296	-4.303	0.000
Shared vision	-0.051	-0.798	0.425
Professional autonomy	-0.074	-1.178	0.239
Bureaucratic control	-0.040	-0.654	0.513

5.4.2 School Level Managerial Decision Domain

Multiple linear regression analysis was used to predict the relationship between the level of participation in the school level managerial decision domain and teachers'

perceptions of the four management practices. The extents to which teachers' perceptions of bureaucratic control, professional autonomy, collegiality and shared vision predict their perceived level of participation in the School Level Managerial Decision Domain were explored. Table 5.7 displays the results of the regression. R^2 for the model was 0.214 and adjusted R^2 is 0.205. The percentage of variance accounted for the model was 21.4%. The significant level in the ANOVA was 0.0005 with F value = 25.996. Using an alpha level of 0.001 criterion, there is quite strong evidence against the hypothesis that all the regression coefficients are zero. The p value of the predicting variables collegiality (0.000) shared vision (0.032) and bureaucratic control (0.027) were less than 0.05 and its standard coefficients were 0.462 and 0.131 and -0.127 respectively. These suggested a predictive relationship between the level of participation in decision making and each of these predictive variables. If the variable of collegiality and shared vision increases 1 unit, the participation in class level technical decision domain will increase 0.462 and 0.131 units respectively. If the variable of bureaucratic control increases 1 unit, the level of participation in the school level managerial decision domain will decrease 0.127 unit.

5.4.3 Class Level Technical Decision Domain.

Multiple linear regression analysis was used to predict the relationship between the level of participation in the class level technical decision domain and teachers' perceptions of the four management practices. The extent to which teachers' perceptions of bureaucratic control, professional autonomy, collegiality and shared vision predict their perceived level of participation in the class level technical decision domain were explored. Table 5.7 displays the results of the regression. R^2 for the model was 0.109 and adjusted R^2 was 0.100. The percentage of variance accounted for was 10.9%. The significant level in the ANOVA was 0.0005 with F value = 11.741. Using an alpha level of 0.001 criterions, there was quite strong evidence against the hypothesis that all the

regression coefficients were zero. The p value of the predicting variable professional autonomy (0.000) was less than 0.05 and its standard coefficient was 0.327. This suggested a predictive relationship between the level of participation in the class level technical decision domain and this predicative variable. If the variable of professional autonomy increased 1 unit, the level of participation in class level technical decision domain would increase 0.327 unit.

5.4.4 School Level Technical Decision Domain

Multiple linear regression analysis was used to predict the relationship between the level of participation in the school level technical decision domain and teachers' perceptions of the four management practices. The extent to which teachers' perceptions of bureaucratic control, professional autonomy, collegiality and shared vision predict their perceived level of participation in the school level technical decision domain were explored.

Table 5.7 displays the results of the regression. R^2 for the model was 0.134 and adjusted R^2 was 0.125. The percentage of variance accounted for in the model was 13.4%. The significant level in the ANOVA was 0.000 with F value = 14.780. Using an alpha level of 0.001 criterions, there was quite strong evidence against the hypothesis that all the regression coefficients were zero. The p value of the predicting variables collegiality (0.000) professional autonomy (0.024) and bureaucratic control (0.36) and its standard coefficients were 0.281 and 0.140 and -0.127 respectively. These suggested a predictive relationship between the level of participation in decision making and each of these predictive variables. If the variables of collegiality and professional autonomy increased 1 unit, participation in the school level technical decision domain would increase 0.281 and 0.140 units respectively. If the variable of bureaucratic control increased 1 unit, the

level of participation in the school level technical decision domain would decrease by 0.127 units.

5.4.5 Class Level Managerial Decision Domain.

Multiple linear regression analysis was used to predict the relationship between the level of participation in the class level managerial decision domain and teachers' perceptions of the four management practices. The extended to which teachers' perceptions of bureaucratic control, professional autonomy, collegiality and shared vision predict their perceived level of participation in the class level managerial decision domain were explored. Table 5.7 displays the results of the regression. R^2 for the model was 0.132 and adjusted R^2 was 0.123. The percentage of variance for the model accounted for 13.2%. The significant level in the ANOVA was 0.0005 with F value = 14.587. Using an alpha level of 0.001 criterion, there was quite strong evidence against the hypothesis that all the regression coefficients were zero. The p value of the predicting variables collegiality (0.000) and bureaucratic control (0.022) were less than 0.05 and their standard coefficients were 0.334 and -0.138 respectively. These suggested a predictive relationship between the level of participation in decision making and each of these predicative variables. If the variable of collegiality increased 1 unit, participation in the school level technical decision domain increased 0.334 unit. If the variable of bureaucratic control increased 1 unit, participation in the class level managerial decision domain decreased 0.138 unit.

The variable of collegiality was the predictor of the level of participation in decision making in all the domains except the class level technical decision domain. The variable of shared vision was the sole predictor of the school level managerial domain and did not predict the level of participation in the other decision domains significantly. The variable

of professional autonomy was the predictor of the level of participation in the technical domain at both class and school level. All the above predictors have positive relations with the dependent variables. The variable of bureaucratic control was the predictor of the level of participation in all decision domains except the class level technical domain, which had a negative relation with the dependent variable. The negative sign of the correlation between bureaucratic control and level of participation indicated that as bureaucratic control increased, the level of teacher participation in decision making decreased.

Table 5.7 The Relationship Among the Variables of Management Practices and the level of Participation in Decision Domains.

	Teacher Participation in Decision Making											
	School level managerial domain			Class level technical domain			School level technical domain			Class level managerial domain		
R	0.426			.330			.366			.364		
R ²	0.214			.109			.134			.132		
Adjusted R ²	0.205			.100			.125			.123		
F-value	25.996			11.741			14.780			14.587		
Sig. Level	0.000			.000			.000			.000		
	Beta	t	Sig.	Beta	t	Sig.	Beta	t	Sig.	Beta	t	Sig.
Collegiality	.462	7.177	.000	.077	1.117	.265	.281	4.196	.000	.334	4.940	.000
Shared vision	.131	2.157	.032	-.073	-1.139	.255	.052	4.149	.416	.107	1.686	.093
Professional autonomy	-.043	-.740	.460	.327	5.229	.000	.140	.814	.024	.207	.439	.661
Bureaucratic control	-.127	-2.225	.027	-.094	-1.551	.122	-.127	2.267	.036	-.138	-2.306	.022

5.5 Affective Outcomes And Participation In Decision making

In chapter 4 the data about teacher's affective outcomes was described and analysed. Three variables were operationalised: teachers' perceptions of their job satisfaction, teachers' job commitment and teachers' perceptions of their workload.

5.5.1 Actual Participation and the Affective Outcomes

Pearson's product moment correlation method was used to measure the strength and direction of relationships amongst actual participation, job satisfaction, job commitment and workload. Table 5.8 displays the correlations amongst the variables of teacher affective outcome and the levels of participation in each of the five decision domains. The analysis produced some interesting results. Job satisfaction (from 0.169 to 0.372) and job commitment (from 0.141 to 0.216) were positively correlated with the overall decision domain. This meant that the more that teachers perceived themselves to be involved in decision making, the higher was their job satisfaction and the higher their commitment to teaching. Teachers' perceptions of workload was positively correlated (0.127) with the class level technical domain. This suggested that the greater their participation the class level technical decision domain, the more likely they were to feel that they had a high workload.

Table 5.8 Correlation among the level of participation in various decisions domain and the variables of affective outcomes

	<i>Job Satisfaction</i>	<i>Job commitment</i>	<i>Perception of Workload</i>
Level of Participation in School Level decision domain	0.330**	0.196**	0.47
Level of Participation in Class Level Technical domain	0.169**	0.141**	0.127*
Level of Participation in School Level Technical Domain	0.228**	0.153**	0.53
Level of Participation in Class Level Managerial Domain	0.309**	0.192**	-0.012
Level of Participation in Overall Decision Domains	0.372**	0.216**	0.068

**** Correlation is significant at the 0.01 level**

*** Correlation is significant at the 0.05 level**

5.5.2 Level of Participation and Affective Outcomes

Further statistical procedures were used to develop a variable for level of actual participation in decision making. The mean scores of actual participation in each of the five decision domains were trichotomized to form three levels of decision involvement: high, medium and low. These were used as independent variables against which to compare the affective variables.

The mean scores of job satisfaction, job commitment and workload at each level were compared by one-way ANOVA respectively. Table 5.9 display the results of the ANOVA tests.

5.5.3 The Overall Decision Domain

Job Satisfaction & Job Commitment

The significant level of the ANOVA Test for the mean scores of job satisfaction on each level of participation in decision making was 0.0005 with F value = 13.480 and the significant level for job commitment was 0.0005 with F value = 8.481. This finding suggested that the three mean scores attained on job satisfaction and job commitment were different for each level of decision participation. The Scheffe *post hoc* test revealed that respondents who perceived themselves as having a high level of participation in decision making also had a significantly higher level of job satisfaction and job commitment than those who perceived themselves as having a medium or low level of participation in decision making. Also respondents with medium involvement in decision making had a significantly higher level of job satisfaction and commitment than those with low participation.

Workload

There was no significant difference (p value=0.185) among the three mean scores

attained on perception of workload for different levels of decision participation.

5.5.4 School Level Managerial Decision Domain.

Job Commitment and Job Satisfaction.

The significant level of the ANOVA Test for the mean scores of job satisfaction for each level of participation was 0.0005 with F value = 20.174. For job commitment it was 0.005 with F value = 5.466. (Table 5.7). This finding suggested that the three mean scores attained on job satisfaction and job commitment were different for each level of participation in the school level managerial decision domain. Scheffe *post hoc* test revealed that respondents with high level participation had a significantly higher level of job satisfaction and job commitment than those with medium or low level participation. Also respondents with medium level participation had a significantly higher level of job satisfaction and commitment than those with low level participation.

Workload

There was no significant difference (p value=0.199) among the three mean scores attained on perception of workload for high, medium or low participation in the school level managerial decision domain.

5.5.5 Class Level Technical Decision Domain

The significant level of the ANOVA Test for the mean scores of job satisfaction on each level of participation in the class level technical decision domain was 0.006 with F value = 5.175. The significant level for job commitment was 0.047 with F value = 3.085. (Table 5.7) This finding suggested that the three mean scores attained on job satisfaction and perception of workload were differ for each level of participation in Class level technical Decision Domain. Scheffe *post hoc* test revealed that respondents in level of highest perceived participation had a significantly higher level of job satisfaction and

perception of workload than those in levels of lowest participation. There was no significant difference (p value = 0.106) among the three mean scores attained on job commitment for each level of participation in Class Level Technical decision Domain.

5.5.6 School Level Technical Decision Domain.

Job satisfaction and Job Commitment

The significant level of the ANOVA Test for the mean scores of job satisfaction on each level of participation in school level technical decision domain was 0.0005 with F value = 9.129. The significant level for job commitment was 0.016 with F value = 4.196. (Table 5.9) This finding suggested that the three mean scores attained on job satisfaction and job commitment were different for each level of participation. Scheffe post hoc test revealed that respondents with low level participation had a significantly lower level of job satisfaction than those with medium or high level participation. Also respondents with medium level participation had a significantly lower level of job satisfaction than those in the highest participation. The respondents with high level participation had a significantly higher level of job commitment than those with lower levels of participation.

Workload

There was no significant difference (p value = 0.732) among the three mean scores attained on perception of workload for each level of participation in the school level technical decision domain.

5.5.7 Class Level Managerial Decision Domain

Job Satisfaction and Job Commitment

The significant level of the ANOVA Test for the mean scores of job satisfaction on each level of participation in class level managerial decision domain was 0.0005 with F

value = 19.235. The significant level for job commitment was 0.005 with F value = 7.776. (Table 4.21). This finding suggested that the mean scores attained on job satisfaction and job commitment were different for each level of participation in class level managerial decision domain. The Scheffe post hoc test revealed that the respondents with high level participation had a significantly higher level of job satisfaction and job commitment than those with medium or low participation. Also respondents with medium level participation had a significantly higher level of job satisfaction and commitment than those with low level participation.

Workload

There were no significant difference (p value=0.425) among the three mean scores attained on perception of workload for each level of participation in class level managerial decision domain.

Table: 5.9 Compare the mean scores of various affective outcomes among the difference level of participation in various decision domains

Independent variables	Level	Dependent Variables											
		Job Satisfaction			Job commitment			Perception of Workload					
Level of Participation in School Level Managerial decision domain		Scores	post hoc test			Scores	post hoc test			Scores	post hoc test		
			Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest		
Level of Participation in School Level Managerial decision domain	Lowest	2.76				3.48				3.65			
	Middle	2.96				3.61				3.63			
	Highest	3.42	*	*		3.75	*	*		3.73			
	F ratio		20.174			F ratio	5.466			F ratio	0.688		
	P valve		0.000			P valve	0.005			P valve	0.503		
Level of Participation in Class Level Technical decision domain		scores	post hoc test			scores	post hoc test			scores	post hoc test		
			Lowest	Middle	Highest		Lowest	Middle	Highest		Lowest	Middle	Highest
	Lowest	2.85				3.55				3.55			
	Middle	3.08				3.57				3.65			
	Highest	3.20	*			3.73				3.80	*		
F ratio		5.175			F ratio	3.085			F ratio	3.804			
P valve		0.006			P valve	0.047			P valve	0.023			
Level of Participation in School Level decision domain		scores	post hoc test			scores	post hoc test			scores	post hoc test		
			Lowest	Middle	Highest		Lowest	Middle	Highest		Lowest	Middle	Highest
	Lowest	2.80				3.50				3.65			
	Middle	3.07	*			3.63				3.61			
	Highest	3.26	*			3.73	*			3.74			
F ratio		9.129			F ratio	4.196			F ratio	1.066			
P valve		0.000			P valve	0.016			P valve	0.345			
Level of Participation in Class Level Managerial decision domain		scores	post hoc test			scores	post hoc test			scores	post hoc test		
			Lowest	Middle	Highest		Lowest	Middle	Highest		Lowest	Middle	Highest
	Lowest	2.74				3.49				3.71			
	Middle	2.99				3.55				3.62			
	Highest	3.39	*	*		3.79	*	*		3.67			
F ratio		19.235			F ratio	7.776			F ratio	0.568			
P valve		0.000			P valve	0.000			P valve	0.567			
Level of Participation in Overall decision domain		Scores	Post hoc test			Scores	Post hoc test			Scores	Post hoc test		
			Lowest	Middle	Highest		Lowest	Middle	Highest		Lowest	Middle	Highest
	Lowest	2.79				3.46				3.57			
	Middle	2.93				3.58				3.72			
	Highest	3.40	*	*		3.79	*	*		3.70			
F ratio		18.379			F ratio	8.481			F ratio	1.532			
P valve		0.000			P valve	0.000			P valve	0.217			

5.5.8 Discussion of Results

- (1) There was a positive correlation between the variables of teacher participation in decision making and the variables of job satisfaction and commitment in all the decision domains.
- (2) The variable of teacher participation was not correlated with the variable of teacher perception of their workload.
- (3) The higher the level of teacher participation in the decision making, the higher would be their job satisfaction.
- (4) The higher is the level of teacher participation in the decision making, the higher would be their commitment except in class level decision domain.

- (5) The higher is the level of teacher participation in the class level technical decision domain, the higher would be their perception of workload.

5.6 Chapter Summary

This chapter presented a series of statistical analysis on the independent variables of level of participation in decision making in regarding to the research questions. Five domains of school based decision making were identified: an overall decision making domain; a school level domain focused on technical issues; a school level domain focused on management issues; a classroom level domain focused on technical issues; and a classroom level domain focused on management issues. Teacher's perception of their participation in decision making and the difference between their desired and actual level of participation were determined. The relationship of teachers' perceptions of their participation in decision making with the demographical variables of teacher, the variables of managerial climate of the school, and the variables of teacher perceptions of affective factors related to work were explored. The above statistical findings will be discussed in Chapter 6.

Chapter 6

Discussion of Findings

6.1 Introduction

In the preceding chapters five domains of school based decision making were identified: an overall decision making domain; a school level domain focused on technical issues; a school level domain focused on management issues; a classroom level domain focused on technical issues; and a classroom level domain focused on management issues. This chapter discuss all the statistical findings related to the status quo of decision participation, demographic variables and management practices affecting teacher participation in decision making, and the affective outcomes of participation in decision making.

6.2 The Status Quo of Decision participation

Teachers were asked questions about their actual participation and their desired participation in decision making in all five of these domains. The significance of the mean difference between the “level of actual participation” and “the level of desired participation” in the four decision domains and the overall participation dimension were tested by T-test. Results indicated that there were significant difference between the mean scores of actual participation and desired participation in all five decision-domains. The results showed that teachers in Hong Kong Aided Secondary Schools desired a greater involvement in decision making than they perceived was occurring at the time they completed the questionnaire; that they were in a state of decision deprivation. This mismatch between actual and desired participation in school decision making was conceptualise as decision deprivation (Alutto, et al, 1973). Teachers reported higher levels of decision deprivation in the class level managerial decision domain (1.48) than others. The descending order of decision deprivation was class level managerial (1.48),

school level managerial (1.3), school level technical (0.78) and class level technical (0.41). The decision deprivation in the overall decision dimension was 0.99.

This result is consistent with Perry's study (1994), which showed that teachers in his sample desired more involvement than they perceived themselves having. It is also similar to Chan's study (1997), which investigated school based management in Hong Kong. Chan's study (1997) found that the involvement patterns of decision making demonstrated the deprivation state for both managerial and technical issues at individual, group and school levels. Chan also found that there were significant differences in discrepancy measures between technical and managerial issues and among decision issues at different levels.

Further analysis was conducted to investigate the significance of the mean differences of (1) actual participation, (2) desired participation and (3) decision discrepancy in the four decision domains using ANOVA.

The descending order of the level of actual participation in the four decision domains was as follows: class level technical (3.72), school level technical (2.78), class level managerial (2.34) and school level managerial (1.78) decision domains. The level of participation in class level technical domain (3.72) was significantly higher than the other decision domains. The level of participation in school level managerial domain (1.78) was significantly lower than the other decision domains.

This suggested that teachers in aided secondary schools in Hong Kong were called upon to use their professional knowledge to make curriculum and instructional decisions, which were in the technical domain at both class and school level. They were less active

in decisions in the managerial domain at class or school level, such as administrative policymaking. The study by Jongmans et al (1998) confirms this; it reports that teachers were unlikely to be involved in educational policy making and were rarely involved at all in administrative policy making.

The descending orders for the level of desired participation in the four decision domains was as follows: class level technical (4.12), class level managerial (3.82), school level technical (3.54) and school level managerial (3.06) decision domains. The level of desired participation in class level technical domain (4.12) was significantly higher than the other decision domains. The level of desired participation in school level managerial domain (3.06) was significantly lower than the other decision domains. They were least willing to participate in the school level decisions, technical or managerial and more willing to make decisions at the class level, technical or managerial; but teachers wanted to participate in the class level technical decision domain, which related to curriculum and instruction decisions more than any of the other decision domains.

These results were similar to the findings from Conley's study (1991) and Smylie's study (1992), which reported that teachers tend to express more desire for participation in decisions related to classroom instruction than for participation in administrative and management decisions. Conley (1991) also pointed out that teachers' expectations and desires vary substantially among teachers and across decision domains.

The descending orders for the decision deprivation was as follows: class level managerial (1.48), school level managerial (1.30), school level technical (0.78) and class

level technical (0.41) decision domains. The level of discrepancy on participation in class level managerial domain (1.48) was significantly higher than the other decision domains. The level of discrepancy on participation in class level technical domain (0.41) was significantly lower than the other decision domains. The highest decision deprivation domain was class level managerial domain; the lowest decision deprivation domain was class level technical domain. This result were different from the findings of Bacharach's study (1990) which reported that decision deprivation appeared lower for operational-personal (class level technical) and strategic-personal (class level managerial) domains than for operational organizational (school level technical) and strategic-organizational (school level managerial) domains. The greatest decision deprivation was in the organizational-operational decision domain.

The decision domain with the highest level of actual participation was the class level technical decision domain, which was also the domain in which the teachers desired to participate most. The decision content of the class level technical domain was related to instructional and teaching activities. Teachers wanted to participate in decisions about instructional issues more than other issues. The decision domain in which the teachers desired to participate least was the school level managerial domain. These findings support the argument that teachers generally seek greater influence over operational classroom decisions and not over strategic resolutions that deal with matters outside the realm of the classroom (Sharp 1992, quoted in Wall et al, 1998; Conley et al, 1990).

The highest issue of decision deprivation was "Selection of subject to be taught" in the class level management domain, which was also the domain of greatest decision deprivation. Teacher wanted to participate in decisions about managing the instructional

resource, which was an area of their professional expertise. It seems that teachers had less control than they desired about what they taught. The domain of least decision deprivation was the class level technical domain, where apparently teachers could exercise their professional autonomy in making decision. Conley et al (1990) have argued that school based management will require not only more decentralised decision making to school management, but decentralisation and participatory management at the school management level so that more teachers are involved in decisions. The class level managerial domain seems an obvious area in which teachers should participate fully in decision making.

6.3 Demographic variables affecting teacher participation in decision making

The predictability of teacher demographic variables to the level of their participation were determined by multiple regressions. Teacher demographic variables included gender, educational level, teacher training, rank, administrative duties and years of teaching experience. A significant relationship was found between the demographic variables and the level of teachers' participation in decision making; all together the demographic variables explained 19.6% (Table 5.3) of the variance of teacher participation in decision making. Further analysis was done by multiple regressions to determine the predictability of teacher demographic to their decision deprivation. A significant relationship was found between the demographic variables and level of decision deprivation; all together the demographic variables explained 13.2% (Table 5.4) of the variance of decision deprivation of teacher.

Vice-principal, committee chairperson, subject panel chairperson, non-executive committee members and rank made a significant contribution to the prediction of participation in decision making with it's p value less then 0.05. This finding suggested

that the level of teacher participation in decision making was not associated with teachers' gender, education level, teacher training, years of teaching experience. Furthermore, vice principal and female teacher made a significant contribution to the predication of their decision deprivation.

Teachers in aided secondary schools are assigned with administrative duties in addition to teaching assignments, such duties empower them with a certain level of involvement in the decision making process. Some of the administrative duties are expected to have a significant influence in decision making processes. For example, vice-principal is the senior management position in the school, committee chairperson and subject panel chairperson are the managers of a department or team of the school. The characteristics of these administrative duties are both managerial in nature and require decisions independently in their daily works. Therefore, teachers with these administrative duties are expected to have a higher involvement in decision making than teachers with other duties. So, it is not surprising that vice principals, subject panel chairperson and committee chairperson were identified as significant positive predictors to their participation in decision making.

But surprisingly, panel chairpersons have the highest correlation with their participation in decision making among these administrative duties. As an instructional leader, panel chairperson was required to make curriculum and instructional decisions by using their professional knowledge, and set a good teaching example to their colleagues. In general, teachers have a perception that their involvement in the class level technical domain, which is related to curriculum and instruction issues, was significantly higher than the participation in other decision domains. The role and duties of the panel chairperson may reinforce them to have such a perception, and this may explain why their

perception of the panel chairperson toward the involvement in the curriculum and instructional issues is higher than the teachers with other duties.

The major role of the executive committee is to formulate school policies and make important decision at the in whole school level. The members of the executive committee usually include the principal, vice principals, subject panel chairpersons, committee chairpersons and teacher representatives. Obviously, the level of involvement of the executive committee members in decision making is more than the non-executive members. The results of the multiple regressions showed that executive member is not a significant predictor for their level of involvement in decision making, but instead, some of the executive members: vice principals, subject panel chairperson and committee chairperson are significant predictors for their level of participation. The incorporation of the teacher representatives in executive committee may affect the significance of executive member as a predictor to participation. On the contrary, non-executive committee members cannot attend the executive committee meeting to discuss some important decision issues related to school management decision domain. Non-executive member was identified to be a significant negative predictor for their participation. This reflected that the involvement of a non-executive member in decision making was expected to be significantly lower than the teachers with other duties, since there was a negative correlation between their decision status and the level of participation.

Teacher rank were a positive predictors to the level of involvement of decision making. This result reflected that the more senior the teachers are, the higher are the level of their participation in decision making. This finding is consisted with Perry's study (1994), which levels of actual participation differed by rank level of teacher. The higher the rank the more the participation is. Cheng (1992) and Wong (1996) also reported that

teacher participation in schools is hierarchical in nature, teacher at different ranks hold different expectation of participation. They claim that rank-and-file teachers often see participation as a privilege granted from above rather than as a right. This result reflected that decision involvement was not shared among different ranks of teachers; oppositely teachers are treated with in regard to rank in decision making process.

Among the predictors of teacher participation, only vice principal was identified as a significant predictor with negative correlation with decision deprivation. This result suggest that vice principal had a higher involvement in decision making (3.81), and the decision condition (0.16) of them was not in the status of decision deprived, and may even be in an equilibrium status (See table 4.18).

Although gender was not a predictor for teacher participation, female teachers were identified as a positive predictor for decision deprivation. This reflected that the decision making of female teacher was significantly deprived.

Level of education and years of teacher experience are not predictors for teacher participation, nor predictors for decision deprivation. These findings mutually supported the claims for teacher's rank and administrative duties are the predictors for participation. I could conclude that in the aided secondary school in Hong Kong, senior teachers with administrative duties are expected to have a higher involvement in decision making.

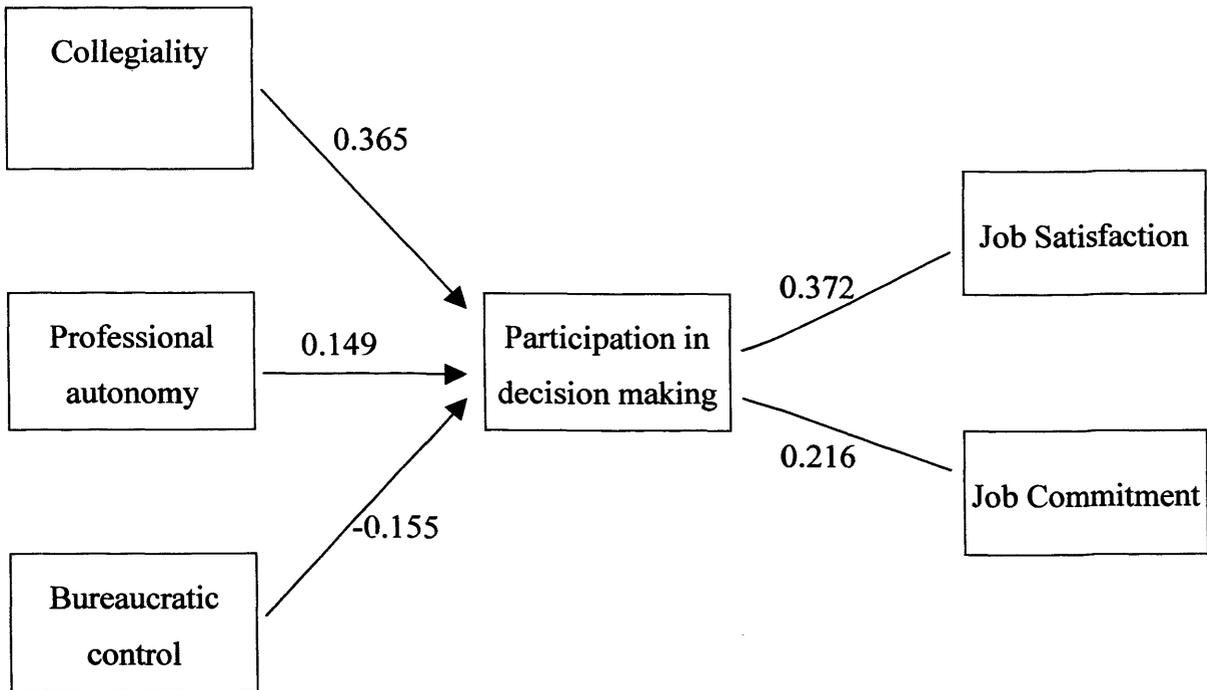
6.4 Theoretical Frameworks for Participation in Decision making

One of the research questions posed at the end of chapter two concerned the possibility of building a theoretical framework for shared decision making from the findings of this research. Theoretical frameworks have been built to predict the level of teacher participation in the five decision domains from the variables of school managerial practices, and the correlation of the variables of teacher affective outcomes levels of participation. The Figures 6.1 – 6.5 (below) show the theoretical frameworks for participation in the decision domains. The arrows represent the predictors of the level of participation in the specific decision domain. The numerical values attached with the arrows indicate the standardized coefficients β of the predictors. The lines represent a significant correlational relation between the two variables, and the numerical values attached to the line indicate the value of the correlation.

6.4.1 Participation In The Overall Decision Domain

A predictive relationship between the level of participation in the overall decision making domain and the predicative variables of collegiality, professional autonomy, and bureaucratic control were found. The variable of shared vision was not significantly related to teacher participation in the overall dimension. This suggests that enhancing the practices of collegiality and professional autonomy in schools would promote teacher participation in decision making. On the other hand, tighter bureaucratic control would reduce the level of teacher participation. The variable of collegiality has the greatest effect on increasing the level of teacher participation. The effect of collegiality for enhancing teacher participation was nearly 2.5 times greater than the effect from professional autonomy, and 2.4 greater than the effect of reducing bureaucratic control.

Figure 6.1 The Theoretical Framework for Teacher Participation in Decision Making

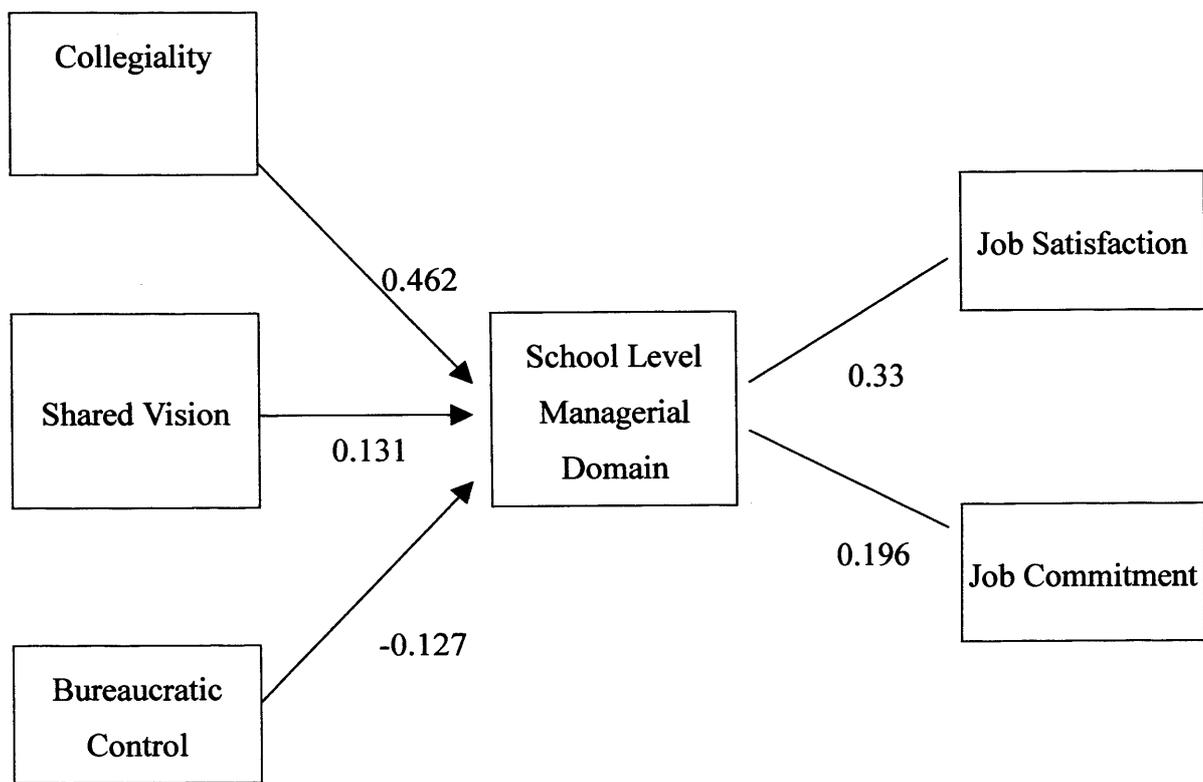


Job Satisfaction and job commitment were also positively correlated with the level of participation in the overall decision domain. Teachers with a higher level of perceived participation had a significantly higher level of job satisfaction and job commitment than those in levels of lower participation. Teachers' perceptions of workload were not significantly correlated with the level of participation in the overall decision domain or in any of the other decision domains with the exception of the class level technical decision domain.

6.4.2 Participation In School Level Managerial Decision Domain

A predictive relationship between the level of participation in the school level managerial decision domain and the predicative variables of collegiality, shared vision and bureaucratic control was found. The variable of professional autonomy was not significantly related to teacher participation in the school level managerial domain. It follows that enhancing the practices of collegiality and shared vision in school should promote teacher participation in the school level managerial decision domain. Tighter bureaucratic control would reduce the level of teacher participation. The variable of collegiality had the greatest effect (0.467) for increasing the level of teacher participation in this decision domain. Its contribution to increasing teacher participation was nearly 3.5 times greater than building shared vision, and 3.6 times greater than the effect of reducing the bureaucratic control.

Figure 6.2 Theoretical Framework for Teacher Participation in School Level Managerial Decision Domain



Job Satisfaction and job commitment were significantly correlated with the level of participation in the school level managerial decision domains. Teachers with a higher level of perceived participation had a significantly higher level of job satisfaction and job commitment than those in levels of lower participation.

Both the level of teachers' actual participation and the level of their desired participation were significantly lower in this domain than in the other decision domains. It appears from this research that most teachers in aided secondary schools do not get involved or wish to get involved in whole school issues related to resource allocation, school administrative structures, staff recruiting, budgeting, appraising teacher performance, school-evaluation systems or public relations.

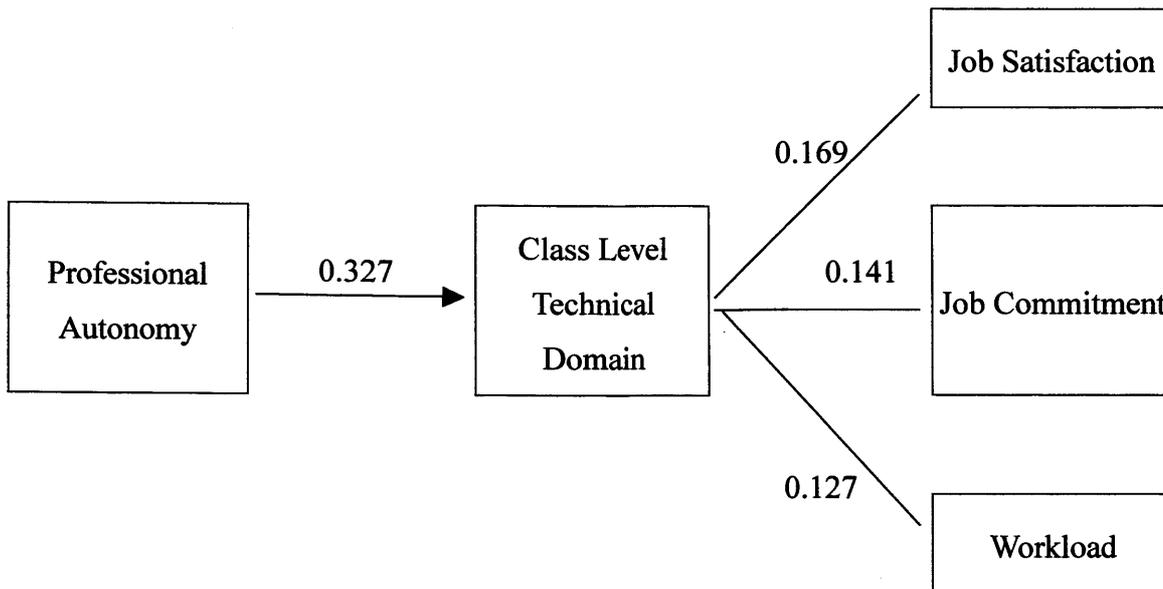
4.4.3 Participation In the Class Level Technical Decision Domain

Teacher participation in the class level technical domain was only predicted by the management practice of professional autonomy. This practice treasures the professional expertise and teaching autonomy of teachers in the school and encourages discretion in the exercise of decision making in the classroom. Professional autonomy was the sole predictor for participation in class level technical decision domain. This was a strong relationship; if the variable of professional autonomy increased 1 unit, the level of participation in class level technical decision domain would increase 0.327 units.

Bureaucratic control is not a predictive variable to the level of participation in class level technical decision domain. The level of participation in class level technical decision domain is not related to the bureaucratic control exercised by the school

authority. No matter how tight the bureaucratic control, teachers appear to be free to exercise professional autonomy in making technical decisions related to the classroom.

Figure 6.3. Theoretical Framework for Teacher Participation in Class Level Technical Decision Domain



Job Satisfaction, job commitment and perception of workload were all significantly correlated with the level of participation in the class level technical decision domain. Teachers who said they were responsible for decisions about technical matters in the classroom had a significantly higher level of job satisfaction although they also saw themselves as having a higher workload than teachers who made fewer decisions in this area.

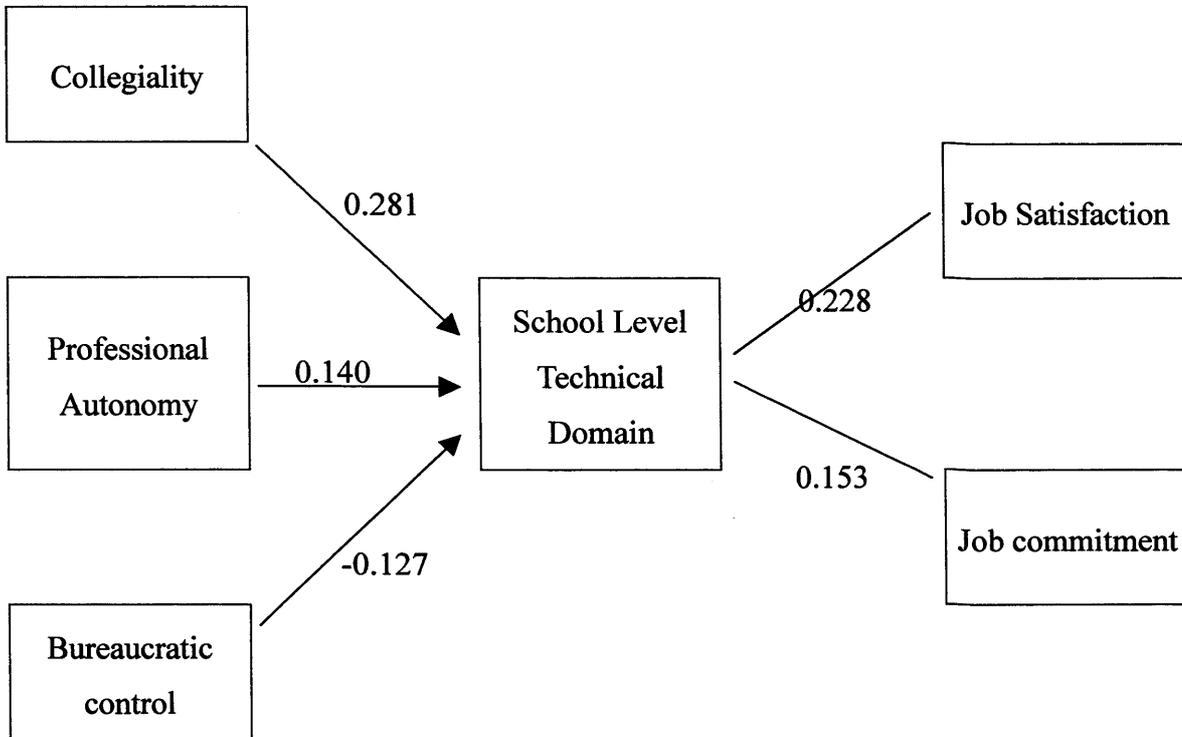
Decisions in the class level technical decision domain were about the curriculum and were instructional in nature. They included issues concerning the development and tailoring of the curriculum in the classroom, instructional activities, planning and evaluating students' work, teaching preparation and related affairs. This factor reflected technical decision issues concerning teachers' everyday work at the class level.

Both the level of actual participation and the level of desired participation were significantly higher in this domain than in the other decision domains. This reflects that teachers were highly involved in the class level technical decision domain, and they also wanted to have more participation in this domain. The discrepancy between actual and desired participation was significantly lower in this domain than in the other decision domains. This domain was perceived as the least decision deprived domain of all. Not surprisingly the decision deprivation in the issues related to teaching and learning is the least, since teacher could exercise professional autonomy to determine the decision issues in related to teaching and learning.

6.4.4 Participation in the school level technical decision domain

A predictive relationship between the level of participation in the school level technical domain and the predicative variables of professional autonomy, collegiality and bureaucratic control was found. If the variables of collegiality and professional autonomy were increased by 1 unit, teachers' participation in the school level technical decision domain would increase 0.281 and 0.140 units respectively. If the variable of bureaucratic control increased 1 unit, the level of participation would decrease by 0.127 units. This theoretical model is similar to that in the overall decision domain.

Figure 6.4 Theoretical Framework for Teacher Participation in School Level Technical Decision Domain

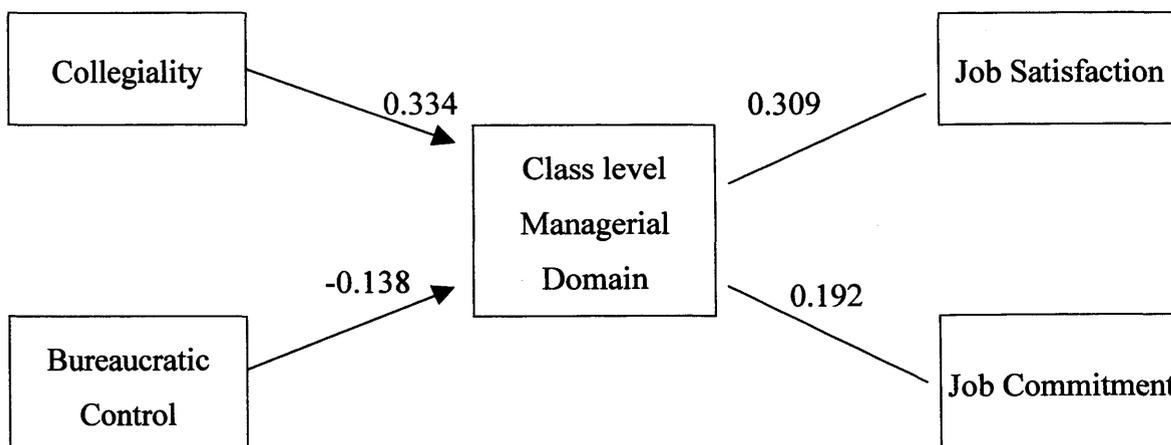


Job satisfaction and job commitment were significantly correlated with the level of participation in the school level technical decision domain. Teachers with a higher level of participation had a significantly higher level of job satisfaction and job commitment than those in levels of lower participation. The decision issues in the school level technical domain were related to determining goals for the school and the department, planning school development, planning school or department-wide working schedules and determining disciplinary policies.

6.4.5 Participation In Class level Managerial Decision Domain

A predictive relationship between the level of participation in the class level managerial decision domain and the predicative variables of collegiality and bureaucratic control was found. The variables of shared vision and professional autonomy were not significantly related to this domain. If the variable of collegiality increased 1 unit, the participation in school level technical decision domain would increase by 0.334 units. If the variable of bureaucratic control increased 1 unit, the level of participation in the class level managerial decision domain would decrease by 0.138 units.

Figure 6.5 Theoretical Framework for Teacher Participation in Class Level Managerial Decision Domain



Job satisfaction and job commitment were significantly correlated with the level of participation in this domain. Teachers with a higher level of perceived participation had a significantly higher level of job satisfaction and job commitment than those in levels of lower participation.

Teachers reported higher levels of decision deprivation in the class level managerial decision domain than in other domains. The decision issues of this decision domain were

related to the management of instructional issues, which included the planning of human resources in teaching and instructional activities, the criteria for academic awards and the disciplinary rules applied at the classroom level.

6.4.6 Conclusion to Section

There were a number of interesting findings in this section. One finding that deserves further reflection concerns teachers' perceptions of workload. Their perceptions of workload were not correlated with the measure of overall decision making. This meant that teachers did not see engagement in decision making affecting their workload or if they did they were willing to accept a higher workload in exchange for more influence on decision making. The one exception to the condition noted above was in the area of class technical decision making. Teachers who said they were responsible for decisions about technical matters in the classroom saw themselves as having a higher workload than teachers who made fewer decisions in this area. This reflected that a heavy workload was associated with the decision making in teaching which was the major duties of them. Alternatively, teachers, as a teaching profession, may consider decision making in instruction and curriculum to be a time consuming process. There was no relationship between teachers' perceptions of high workload and higher involvement in school-wide technical decision making. This reflected that technical decision making was less arduous at the school level than at the class level. This might also explain the finding that teachers' perceptions of their participation in managerial decision making at both classroom and school level was unrelated to perception of workload. Further research needs to be done in this area.

There was no significant difference among teacher's rank in the level of their perceptions of workloads. This reflected that teacher perception of workload is not related

to their job status in their schools. In turn, there was a significant difference among different type of administrative duties in the level of perception of workload. Scheffe Post hoc test shown that perception of workload of the class-teacher is significantly lower than that of the subject panel chairperson and committee chairperson. These reflect that teacher perception of workload is related to their administrative duties rather than their seniority. Under school based management policy, subject panel chairpersons and committee chairpersons with special administrative duties will receive more paperwork and management tasks than the classteacher.

Another interesting finding was that teachers experienced decision deprivation in the class level management domain and not in class level technical domain. This suggests that teachers felt that they ought to be involved more than was the current case in managerial decisions about management at the classroom level. This was in stark contrast to their views about their role in whole school management issues. Most teachers in aided secondary schools did not get involved or wish to get involved in whole school management issues. It has been suggested that teachers only seek greater influence over operational classroom decisions and not over strategic resolutions that deal with matters outside the realm of the classroom (Sharp, 1992; Conley et al, 1990).

6.5 Participation In Decision making And School Management Practices

The findings show that aspects of the management climates of the aided secondary schools in the study were related to the extent and scope of teachers' participation in decision making. The managerial climate of the school was examined under four specific school managerial practices: collegiality, bureaucratic control, professional autonomy and shared vision.

6.5.1 Collegiality

Collegiality means a strong collegial relationship and a high spirit of cooperation among teachers and principals. Collegiality has been linked to effective school improvement.

Collegiality was found to be a predictive variable of teacher participation in the overall decision dimension and all the decision domains except the class level technical domain. This finding is similar to that of Bondy et al (1994) who found that where a cooperative relationship was shared amongst teachers and administrators, the level of participation in decision making would be enhanced. It is also consistent with the finding of Taylor's study (1997) which reported that teachers with a higher level of participation in decision making perceived a higher level of collegiality than those with a lower level of participation.

Collegiality was not found to correlate with teachers' participation in the class level technical domain. This could be because in Hong Kong aided secondary schools, teaching in the classroom is an individual task for the teacher and seldom conducted through teamwork within a cooperation culture. Fullan et al (1992) find that teachers typically work in isolation and collaborative work among teachers is rare and difficult to sustain. This suggests that if collegiality is a crucial aspect of school improvement and school improvement is sought, teachers in aided secondary schools will have to change their style of teaching to embrace more teamwork and collaborative teaching. This has strong implications for another aspect of management climate, professional autonomy (see below).

6.5.2 Bureaucratic Control

Bureaucratic control was found to be a predictive variable of teacher participation in the overall decision dimension and all the decision domains except class level technical domain. Bureaucratic control was negatively correlated with the level of participation in decision making. This suggests that the higher the level of management control, the lower would be the level of teacher participation in decision making.

It seems that the bureaucratic control exercised by many school administrations in aided secondary schools in Hong Kong is a barrier for implementing teacher participation in decision making. If the policy to increase teacher participation in decision making is to be implemented, it seems clear that bureaucratic control must be reduced.

This conclusion is replicated in the literature and a number of strategies for lessening bureaucratic control have been suggested. Johnson et al (1996) suggested the creation of democratic rules and procedures for enhanced teacher participation in decision making. Mutchler et al (1990) recommended a number of strategies to transform authoritative management styles into collaboration styles.

6.5.3 Professional Autonomy

Professional autonomy was found to be a predictive variable of teacher participation in the overall decision domain, the class level technical domain and the school level technical decision domain. Professional autonomy predicted participation in both technical domains.

A high level of professional autonomy indicates that teachers have a lot of discretion. At the classroom level, teachers exercise autonomy in relation to pedagogy. High

professional autonomy enables them to use their professional judgment to tackle students' individual differences. High professional autonomy in the school level technical domain suggests that teachers were consulted about the technical aspects of issues that influenced whole school policy.

These findings are replicated in the literature. Slegers et al (1995) reported that teacher participation in decision making and their professional orientation were related. Symile (1992) suggested that a norm of professional privacy was a predictor of participation in the decision domain concerning curriculum and instruction. This is an interesting finding as it was suggested above that teachers' focus on the class level technical domain reflected the isolated role of secondary school teacher.

Professional autonomy was not a predictor of participation in the managerial domain at either class and school level. This finding was similar to Wong's study (1998). Wong et al (1998) conducted a study in the SMI schools in Hong Kong for determining the factors affecting school planning. The study reported a negative relationship between the variable of teachers' professional autonomy and the variable of planning effectiveness. Wong's study showed that the professional autonomy of Hong Kong teachers would not contribute to school planning as in managerial domains. On the contrary, this finding was different from Jongmans et al's study (1998). Jongmans et al (1998) conducted research in The Netherlands to determine the relationship between teachers' professional orientation and their involvement in school policy making. The study showed that teachers' involvement in school policymaking and their professional orientation were related. In Hong Kong, secondary teachers' participation in the managerial domains is restricted by bureaucratic controls and on the whole their situation has been shown to be one of decision deprivation in relation to the management domain.

Differences in teachers' involvement in policy making have been seen to be related to differences in teachers' professional orientation in many studies (Sleegers et al, 1992; Knoers, 1994). The categorization of 'professional' was explored in Sleegers study. Teachers with an extended professional orientation were more involved in school policy making than their colleagues with a restricted professional orientation. It is likely that many teachers who exhibit the less extended professional orientation prefer to see the classroom rather than the whole school as their main decision domain. This seems to be a good explanation for some of the findings about secondary teachers in Hong Kong aided schools. The interesting question is whether this situation is brought about by school administrators' expectations that teachers have a less extended professional orientation or by teachers' reluctance to move out of the isolation of their classrooms and engage in school wide decision making. The measure of decision deprivation has thrown some light on this.

6.5.4 Shared Vision

Shared vision was a predictive variable of teacher participation in the school level management domain only. It is a genuine vision; people excel and learn, not because they are told to, but because they want to. (Senge, 1990) Teachers who saw themselves as contributing to building of shared vision also saw themselves as having a high level of participation in the school level management decision domain. These decisions involved resource allocation, the determination of school administrative structures, staff recruitment, budgeting, appraising teacher performance, school-evaluation and public relations.

There is a difference between executive member and non-executive member in their

perception of shared vision. Executive member has a higher degree of shared vision (3.23) than the non-executive member (3.02). Vice principal has a higher degree of shared vision (3.68) than the committee members' (2.99). In general the degree of shared vision of the senior teachers are higher than the junior teachers (see Table 4.18). Senior teachers are leaders of their departments and they have a much more clear vision than junior teachers.

Hanson (1998) assert that shared vision may be one of the critical success factors for implementing SBM for decentralization. Bondy et al (1994) found that shared vision was of the factors for enhancing teacher involvement in decision making. She suggested that one of the preconditions for the successful implementation of school based management was that schools should develop a clear and shared educational vision. This was not the case in Hong Kong's aided secondary schools and it would be an important area on which to focus resources if school based management and greater participation of teachers in decision making in all domains is to be achieved.

6.6 The Affective Outcomes Of Teachers' Participation in Decision making

Three affective aspects of teachers' work experience were considered: their perceptions of their job satisfaction, job commitment and workload. Job satisfaction and job commitment were positively correlated with levels of participation in all the decision domains. Perception of workload was only correlated positively with participation in the class level technical domain.

6.6.1 Job Satisfaction

The mean scores attained on job satisfaction were different for the three level of decision participation in all the decision domains. Teacher with higher levels of participation had significantly higher levels of job satisfaction than those with lower levels.

This result of a positive link between teachers' participation and job satisfaction was consistent with the findings from Alutto et al (1972); Conway, (1984); Schneider (1984); Bacharach et al (1990); Reyes (1989); Murphy et al (1995); and Imber et al (1990). They found a significant positive relationship between levels of teacher involvement and job satisfaction.

6.6.2 Job commitment

A number of researchers also found that there was a positive relationship between teachers' perceptions of job commitment and their participation in decision making (Reyes, 1989; Murphy et al, 1995; Weiss, 1993; Blasé et al, 1995)

In this study, the mean scores attained on job commitment were different for each level of decision participation in all the decision domains, except class level technical domain. It was found that there was no significant difference in job commitment from teachers irrespective of their actual or desired participation. There is no significant difference in job commitment among different level of participation in the class level technical domain. This is a very encouraging finding if it suggests that teachers are highly committed to the children they teach and their classroom pedagogy irrespective of other aspects of their classroom role. On the other hand it might merely reflect teachers'

reluctance to admit that they are not committed to their work in the classroom.

6.6.3 Workload

Conversely, the mean scores attained on perception of workload were only different for the class level technical domain. Teachers with the highest levels of participation perceived themselves as having a significantly higher workload than those with lower levels of participation. Decision discrepancy was lowest in the class level technical domain. 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 technical matters in the classroom must involve a higher 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 technical decision making area of the classroom as leading to a higher 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 maybe they would reduce their opportunities to engage in more decision making in these areas.

There is some evidence that teachers are being asked to make instructional decisions that it has not been their custom 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 judgment. This might be seen as both threatening and time consuming, leading to a perception of higher workload.

Participation in decision making in the overall decision dimension and other decision domains was not correlated to teachers' perceptions of workload. This result was different to that found in other studies (Malen et al, 1990; Duke et al, 1981). These other studies have found that teachers' participation in school-wide decision making 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.

6.7 Summary

A five decision-domain model (including an overall decision domain) for teacher participation in decision making was identified in this chapter. Decision deprivation was found in all the decision domains. Teacher rank and administrative duties were identified as the predictors for teacher participation. The management practices: bureaucratic control, collegiality, professional autonomy and shared vision were shown to have predictive capabilities in all the decision domains. Teacher perceptions of job satisfaction and job commitment were correlated with their level of participation in decision making. The perception of workload was only correlated with participation in the class level technical domain.

In chapter 7, general conclusions will be drawn and the scope and generalizability of the study discussed. Implication of the study and recommendation for increasing teacher participation in decision making will be discussed. New directions for further research will be identified.

Chapter 7

Conclusions and Comments

7.1 Introduction

This chapter presents a review of the study and a summary of the major findings from the analysis of the data. Conclusions about the study's findings are then presented along with their relationship to the literature. Implications are proposed for groups who would find the results of this study useful in extending their understanding of participative management. Finally, recommendations for further research are presented.

7.2 Review of the study

Teacher participation in decision making is one of the recommendations of school based management policy. School based management is a proposal to decentralize and debureaucratize school control (Guthrie, 1986) and to promote shared 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 will prevail (Conley, 1991).

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 way.

A major feature of the policy was that teachers should become involved in decision making. Unfortunately, policy documents tend to be general in nature and interpretation

and implementation are left to the 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.

Other research has suggested that expectations and desires about participation in decision making vary substantially among teachers and across decision areas (Conley, 1991). With this in mind, the current study adopted a conceptual model of decision making domains in which teachers' participation in decision making was examined at the classroom level and at the school level in terms of both technical and managerial decisions (See Chapters 1-3). In this way it was hoped to establish different patterns of decision making in which different groups of teachers might be involved.

Another purpose in conducting the research was to establish the degree to which teachers wanted to be involved in decision making. This was investigated by asking teachers to distinguish between the actual decision making in which they participated, and decisions in which they desired to participate but were not involved. Based on this information it was intended to use a model that distinguished decision saturation (actual decision making exceeded desired decision making), decision equilibrium (actual and desired decision making equated) and decision deprivation (actual decision making lower than desired decision making). In fact, since neither saturation nor equilibrium were reported by teachers in any of the decision domains, the pure decision condition was replaced with levels of decision involvement, all of which levels reflected varying degrees of deprivation.

Another factor that influenced the research design was the suggestion in some recent

reports that the involvement of teachers in decision making varied between different schools and that one of the factors that accounted for this was the management climate of the school (Chan et al, 1997). In the current study, the management climate of the school has been examined under four specific school managerial practices: bureaucratic control, professional autonomy, collegiality and shared vision. This model of management climate has led to new insights into teachers' perceptions of school management climates and it has been possible to show how the four managerial variables are linked with the form and extent of teachers' participation in decision making. These results may be of particular interest to policymakers and school administrators who wish to implement changes in the Hong Kong education system.

Another set of factors thought to relate to teachers' participation in decision making was their workload, job satisfaction and commitment to work. The implementation of school based management in the schools of Hong Kong clearly involved additional workload due to increased meetings, staff development programme, administration and paper work (Cheng, 1992). But the literature also asserts that teachers' participation in decision making increases their job satisfaction and work commitment (Murphy et al, 1995; Weiss et al, 1993; Blasé et al, 1995). These two findings appear to be at odds with each other. It was decided to investigate this conundrum to see if it could be illuminated by the variables outlined above. Results of this study clearly showed that affective outcomes are related to the form and extent of teachers' participation in decision making. Therefore, administrators could fine-tune the form and extent of teachers' participation in decision making to eliminate the negative consequence of empowerment and to achieve better quality decision making.

Three sets of instruments were developed to investigate teachers' perceptions of the

issues that form the purpose of the study. Their content was based on a careful examination of the literature. The validity and reliability of the instruments was established through rigorous statistical techniques. The empirical survey of teachers' perceptions of the issues was conducted using these instruments. Based on the findings, the following conclusions regarding teacher participation in decision making were arrived at.

7.3 The Status Quo of Teachers' Participation in Decision making

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. The overall pattern of teachers' participation in decision making was a condition of decision-deprivation. This was true for both managerial and technical issues and at both the classroom and school levels. Neither the decision condition of equilibrium nor the decision condition of saturation was significant. This result is similar to the research findings of Chan et al (1997); Bacharach et al (1990); Bacharach et al (1986); Benson et al (1987); Hoyt (1991); Johnston et al (1985); and Taylor et al (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.

While recognising that the overall state was one of decision deprivation, it was possible to construct a scale measuring three levels of decision deprivation: high, medium and low. This showed that teachers actual or desired participation in decision making

varied according to whether the decision domain was managerial or technical or whether the decision was to be made at the classroom or school level.

Teachers had greater desire to be involved in classroom instructional decisions than in school wide administrative 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 technical domain, at both the class and school levels; these decisions involved policymaking. The study by Jongmans et al (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 domain at both the classroom and school levels than in the technical domain. This showed that teachers felt that they were insufficiently involved in managerial decisions that involved the curriculum, the allocation of instructional resources and the determination of the classes to be taught.

The findings suggest that teachers in aided secondary schools in Hong Kong were more often called upon to use their professional knowledge to make curriculum and instructional decisions, which were in the technical domain at the class level 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. They were also involved (but to a lesser extent) in technical decisions at the school level. Decision-deprivation in the technical domain was greater at the school-level than at the classroom level. They were less involved in decisions in the managerial domain and therefore felt more greatly deprived because they could not affect managerial decisions that impacted on their classroom work particularly. However, the demographic data suggested that there were some significant differences between teachers in respect to these findings. The results of a multiple regression analysis showed that teachers in more senior positions, such as vice-principals did not perceive themselves to be in a state of decision-deprivation at all, while female teachers perceived themselves to be significantly more decision-deprived than their male colleagues. These findings have not formed the central focus of this study and will not be elaborated further but they point to important areas in which further research needs to be conducted.

7.4 The Management Climate of Schools

The current research shows that most teachers in Hong Kong aided secondary schools feel that they are denied a sufficient role in school decision making. This condition of decision-deprivation is at odds with a government policy that seeks to encourage a more participative approach to school management. In order to explore possible causes of decision deprivation, the management climate of the school was examined to determine whether particular types of management climate or particular aspects of management climates were more conducive to greater teacher participation in decision making than others. What are the management practices under which teachers' participation in decision making is most likely to flourish? It was hoped that an answer to this question would suggest diagnostic tools and strategies of use to school administrators who wished to move the schools towards a more participative management approach.

The managerial climate of the school was examined under four specific school managerial practices: bureaucratic control, professional autonomy, collegiality and shared vision. These four managerial practices were derived from the organization models of tight and loose-coupled systems and bureaucratic and cultural linkages, which were outlined in Chapter 2.

7.4.1 Bureaucratic control

Bureaucratic control refers to the degree to which authority is hierarchical and teachers' daily work is subject to standardised procedures and centralised rules. Not surprisingly, it was found that where bureaucratic control was seen to be an important feature of the school's management practice, most teachers perceived themselves to be less engaged in decision making than in schools where bureaucratic control was not a strong feature of the management climate. Although senior teachers were less decision-deprived than class teachers in all schools, this difference was significantly greater in schools with strong bureaucratic control where senior staff monopolised decision making. These schools appeared to have hierarchical decision making structures, with administrators and senior teachers holding all the decision making power and the class teachers exhibiting high decision deprivation.

Bureaucratic control was found to be a predictive variable of teacher participation in the overall decision dimension and all the decision domains except the class level technical domain. This was an interesting finding because it suggested that in the classroom teachers were insulated from school bureaucracy. Teachers could make their own rules in the confines of their classroom and in relation to issues that were deemed to be technical rather than managerial.

In schools where bureaucratic control was high, teachers perceived themselves to be significantly more decision-deprived than in other schools. It seems that the implementation of school based management and decentralised or shared decision making is problematic in hierarchical aided secondary schools where senior administrators control decision making.

In this type of situation, the senior school administrators who are expected to be the change managers who will bring about a more participative management situation deny class teachers access to decision making. If the government's school based management policy is to be implemented effectively, schools with bureaucratic management practices need to flatten their hierarchical authority structures to allow more teachers to participate in decision making. The current study suggests that teachers see this as particularly important in relation to decisions that demand professional knowledge and expertise or decisions that directly affect classroom practice. It seems clear from this result that teachers would support moves to give them a greater role in school level technical and classroom level-managerial decision making.

7.4.2 Collegiality

Collegial management is the opposite management approach to bureaucratic management. Management power is shared amongst colleagues and therefore decision structures are flattened (Bush 1995, p46). Collegial management is associated with an open, democratic and collaborative management climate where most teachers have a part in determining policy without regard to their rank.

Collegiality was found to be a predictive variable of teacher participation in the

overall decision dimension, in the two school level decision domains and in the class level managerial domain. It was the only management practice that was negatively correlated with decision deprivation. In other words the greater their perception of collegiality, the more teachers' felt that their actual decision making responsibility was close to what they desired. It is interesting that teachers did not associate collegiality with decision saturation. This suggests that collegiality encourages shared decision making which is not so burdensome as individual decision making. Another factor that affects teachers' willingness to embrace decision making is where their relationship with their principal is open, collaborative and supportive, features that have been shown as more likely to exist in a collegial climate (Smylie, 1992).

An interesting result from the current survey was that teachers did not associate collegiality with participation in the class level technical domain. There was no correlation between these two variables. It appears that teachers are used to making instructional decisions individually within the classroom. Neither conferring nor collaborating with other teachers is seen to be necessary for making instructional decisions inside classrooms. Therefore, a climate of collegiality was not seen to be significant in relation to teachers' perceptions of their decision making in this area. This is an important finding because although school based management is premised on the idea of wider teacher participation in decision making, it is also premised on more openness and accountability within schools. If class teachers are to participate in school management decisions, it seems only right that school managers should have some say in the technical decisions that teachers make in their own classroom. The issue of whether school based management should lead to more open classrooms as well as more open schools is one that policy makers need to consider much more carefully.

7.4.3 Professional Autonomy

Professional autonomy is the degree to which teachers use their professional values as a major reference in determining their practice and ensuring its high quality and self-regulation. These values derive from their systematic training including continuing professional development, their knowledge of education, and their specialised skills in curriculum and pedagogy. Professional knowledge and skills enable teachers to use professional judgement so that they can work independently of their contexts to tackle the problems of their clients.

In the current study professional autonomy was found to be a predictive variable of teacher participation in the overall decision domain and in the two technical domains at school and class levels. It was the only management practice of the four studied that was related to increased participation in technical decisions. However, professional autonomy was not related to increased decision making in the managerial domain at either the school or class level. This was an interesting finding, suggesting that teachers perceived professional autonomy in relation to the technical rather than the managerial aspects of education. This would indicate a 'restricted' rather than an 'extended' professionalism; one that saw their area of influence in terms of the means rather than the ends of education (Hoyle, 1975; 1980).

In Hong Kong, school administrators seldom exert control over instructional domains or hinder teachers' professional autonomy in teaching. For example, the subject panel committees of the school make decisions about the curriculum and pedagogy according to the abilities of their students. Principals rarely exert control over the curriculum or pedagogy. This is because school administrators may not be the subject experts, nor have received training in teaching the subject. They trust and respect the

professional autonomy of subject panel committees of their school.

In order to bring fully participative management to Hong Kong aided schools, there would need to be a change in teachers' perceptions of their own professionalism. The findings of the current study suggest that teachers view high professional autonomy in terms of increased participation in the technical decisions of schooling rather than participation in decisions about school policy and administration. Hong Kong government policy about school based management does not specifically refer to an extended view of teachers' professionalism. It does not support a more radical, extended view of the role of teachers in schools, even though the policy document supports an increase in teachers' participation in school decision making within regulated areas. This might suggest that the government does not want all teachers to be involved in school policy and administration decisions.

Decentralisation in Hong Kong schools has given considerable power to the aided schools to determine their own aims and policies. But the power of determining the aim of education is held by the central government and the school administrators do not have it in their power to pass it to teachers. In this case, participation in managerial decisions is participation in purely administrative issues that do not have implications for educational policy but only for school policy. Given this fact, it is understandable that professional teachers, whose concern is with educational issues, do not want to get involved in purely administrative decisions, about say office staff or building regulations. They would be more interested in decisions about what they teach and whom they teach.

7.4.4 Shared Vision

The fourth management practice used as a variable of management climate was shared vision. Shared vision refers to the commitment of all members of a school to agreed goals, purposes and mission. Shared vision in Hanson's (1998) study was the single most important force in determining the fate of a decentralization initiative. This suggested that shared vision was one of the critical success factors for implementing school based management. This seems to be the position taken by the Hong Kong education department in implementing school based management, where schools are required to produce an annual school plan including mission statements to guide their activities during the year. Under the Hong Kong school based management policy, there is a clear association between teachers increased participation in decision making and the idea that schools should have clear missions. However, this is not quite the same as advocating shared vision.

For shared vision there needs to be clear communication about goals, purposes and mission and established ways of inducting new members into the established values. Shared vision is often achieved through school ceremonies. Some of the best examples of promoting shared vision have come from schools that have undertaken the collaborative building of a school mission statement (Hardy, 1999).

Many studies have shown that shared vision is often the result of strong leadership, in which the leader sets the school's strategic direction (Chiu et al, 1996; Hanson et al, 1998; Bondy et al, 1994). In Chiu's study (1996), shared vision was the result of the principals' visions being shared amongst the teachers, empowering them and encouraging their involvement in school decision making. Although many other

researchers have found a link between shared vision and teacher's participation in decision making some caution is needed in generalising from this. Shared vision can result from strong leaders selling their own visions to teachers. The danger is that leadership becomes 'value engineering' and teachers are persuaded that they share the vision although they have not played a part in any of the decision making concerning the goals and vision. 'The very language within which visions and cultures are couched and the intentional privileging of some themes and issues over others frame how people think about organisational issues ... the impact of cultural manipulation and of the part played by leaders in moulding organisational members' thinking should not be under-estimated. (Bryman 1999, p. 37)

Although shared vision has been shown to be a factor for enhancing teacher involvement in decision making (Bondy, 1994) it is unclear whether teachers were actually involved in the decisions that determined the vision. These would be school level managerial decisions about the school's goals and strategic policy.

In the current research, shared vision was a predictive variable of teacher participation in the school level management domain only. Where teachers perceived the management climate as one with strong, shared vision, they were more likely to perceive themselves participating in school level managerial decisions. The perception of a management climate based on shared vision was not correlated with perceptions of teachers' participation in overall decision making, in technical decisions at the school level or in technical or managerial decisions at the class level.

The reason for this finding in the current study was that relatively few teachers perceived their schools as having a management climate with strong shared vision. Those

teachers who saw the management climate in this way were most likely to be in the more senior ranks. For example, vice principals were more likely than other teachers to identify the management climate of their schools as one with strong shared vision. These senior teachers were also more likely than other teachers to see themselves with high participation in school level managerial decisions. This finding is also supported by another result, which showed that vice principals were the only group to see themselves in a position of decision equilibrium, where they were involved in as much decision making as they desired.

This particular finding exposes the wide gap between the perceptions of senior staff and other teachers concerning the status quo of decision making in schools. Presumably senior staff had very different perceptions about the extent of decision participation by middle management and junior teachers. Their view of the management climate of the school as exhibiting strong shared vision, was probably accompanied by the view that teachers were involved in a whole range of decision making in the different domains. This perception was not apparently shared by teachers who were not so likely to perceive the school's management climate as one of shared vision and certainly felt more decision –deprived than did senior staff.

It seems that shared vision is an aspect of school management culture that demands a high level of teacher participation in school level managerial decision making. Where a school is based on shared vision one would expect the vision to emerge from the involvement of teachers in setting the goals of the school, i.e. in decisions concerning these goals. Where teachers do not participate in this type of decision making it is likely that they do not recognise a management climate based on shared vision as they have played little part in determining the vision.

If policy makers are convinced that a management climate based on shared vision leads to more effective schools there is considerable work to be done. First, teachers need to be involved in school level managerial decision making. This is not clearly supported by education department policy on school based management. Secondly, school administrators would need to be committed to ensuring that the staff shared a clear vision for the school and this would mean involving all teachers in school level managerial decisions about goals and mission. If the mission statements are determined by the senior management only and not shared among the teachers, teachers will not be interested in participation in the decision making of such activities. The current research suggests that vice principal's do not have an accurate view of the extent to which middle management and junior teachers perceive the management climate of shared vision. Vice principals would need to be committed to involving other teachers in their traditional sphere of decision making and the school mission statements should be constructed collaboratively among all the school members. Finally, middle management and junior teachers themselves would have to change because some teachers' vision does not extend beyond their classroom door.

7.5 Affective Outcomes

Teachers' perceptions of their job satisfaction, commitment and workload were associated with their perceptions of their involvement in decision making. Overall, teachers' involvement in decision making was linked to a higher level of job satisfaction and job commitment but there were differences in relation to decision domains. Results showed that involvement in school wide managerial decisions was associated with the highest job satisfaction and commitment. Involvement in instructional and curriculum decisions was associated with lower job satisfaction and commitment than in other

decision domains. This suggests that teachers' satisfaction could be increased by their greater involvement in managerial decisions. Thus, if the school level management decision domain were open to more teachers, more job satisfaction and commitment would be induced.

Chan (1997) reported that higher participation in decision making led to teachers perceiving themselves to have a higher workload. In the current study, teachers' perceptions of workload were not associated with their involvement in school level technical, class level managerial and school level managerial 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 higher 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' esteem needs and self-actualisation

needs. When these needs are satisfied, job satisfaction and commitment would result. Supporters of this theory argue that satisfied workers are more motivated and hence will be more productive (French et al, 1960). Administrators may assume that enhancing teacher involvement increases job satisfaction and commitment. 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 actual and desired levels of involvement will decline, as will their overall job satisfaction and commitment.

7.6 Recommendation for future research

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 different settings. Both the primary and tertiary settings would provide interesting contexts in which to extend the study. This would enrich the knowledge base on the varieties of management practices that may support increased teacher participation in decision making.

Research could be done on different participation structures such as parliamentary, advisory, and decision power groups, and on specific forms of participation and different phases of decision making such as identifying problems and determining solutions as

well as distinction between authority and influence in decision making. Unless these dimensions are clearly explored, research will continue to be vague as to which domain of power is being tapped by various forms of participation. Research should address itself to applying these conceptual frameworks to examining particular decision making structures and altered roles for teachers and administrators in group decision power.

Although research has addressed itself to identifying decision domains, we know little about how teachers and administrators interpret, protect, and negotiate these decisions in daily school management. Finally, the focus of this study has been on teacher participation in school-site decision making in school buildings. However, teachers play significant participatory roles at other levels of the education system, thus an under-researched area is the nature of teacher participation at other levels of public education, in education departments, school foundation organizations and teacher unions.

7.7 Conclusion

Teachers as professionals desire to participate in decision making in the organizations in which they are employed. It should be in the interests of the administrators to encourage participation, as the intent is to increase job satisfaction and to enhance greater commitment to the 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 many teachers may have when they are isolated in their classrooms. Teacher participation could be a way to reconcile the bureaucratic-professional conflicts in schools. If professionals' commitment and job satisfaction is to be enhanced, it should be done through shared decision making for allowing teachers discretion and autonomy.

In conclusion, this study extends our knowledge of the relationships between decision making involvement and management climate. It also reveals the issues of current and future concern for administrators and researcher interested in understanding the dynamics and complexities of deciding whom to involve in making what decision in our school. This study does not support the theory that school based management governance structures automatically enhance teachers' participation in decision making. School administrators should engage teachers in all the decision domains but especially the decision area of class level management. Teachers prefer to concentrate on teacher-related concerns about curriculum and instruction and it is through this preference that teachers may be encouraged to participating in a decision making process. The research suggests that schools need to build up a collegiate culture and shared vision; they should treasure teacher professionalism and allow teachers discretion in their work. They should diminish bureaucratic control and involve teachers in decision making. This is the way to more effective schools.

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Appendix I

QUESTIONNAIRE ON TEACHER PARTICIPATION IN DECISION MAKING

The University of Leicester and me are going to perform a research study on Teacher Participation in Decision making. We hope to receive the opinions from the teachers. You need not write your name in the questionnaires. All the information obtained will be used as academic research analysis and kept in confidence.

This questionnaire consists of three sections. Please complete all sections.

Section 1: Please tick whichever applicable.

1. Gender : Male Female

2. Years of teaching experience: _____

3. Have you received teacher training? : Yes No
(i.e. teacher certificate, Dip Ed., Cert. Ed. or equivalent)

4. The highest academic awards:
Doctoral Degree Master Degree
Postgraduate Certificate/Diploma Bachelor Degree
College Diploma

5. Rank : CM AM SAM PAM
GM SGM PGM

5. Major Duty:
Class master / Class mistress Committee Member
Subject Panel Chairperson Committee Head
Vice Principal Other Duties

7. Are you member of School Executive Committee? :
1. Yes No

Section 2: Please circle the number, which reflects your opinion of the following items:

What is your ***actual extent of participation*** in making this decision?

What is your ***desired extent of participation*** in making this decision?

1 = Very Low, 5 = Very High

Question No.	What is your actual extent of participation in making this decision?					Decision Issues	To what degree do you desire to participate in this decision?				
	Low	← →			High		Low	← →			High
1.	1	2	3	4	5	Adoption of teaching materials	1	2	3	4	5
2.	1	2	3	4	5	Selection of textbooks	1	2	3	4	5
3.	1	2	3	4	5	Setting learning objectives	1	2	3	4	5
4.	1	2	3	4	5	Tailoring the curriculum	1	2	3	4	5
5.	1	2	3	4	5	Development of curricula	1	2	3	4	5
6.	1	2	3	4	5	Select teaching methodology	1	2	3	4	5
7.	1	2	3	4	5	Evaluation of teaching outcomes	1	2	3	4	5
8.	1	2	3	4	5	Purchase of teaching equipment	1	2	3	4	5
9.	1	2	3	4	5	Setting homework policies	1	2	3	4	5
10.	1	2	3	4	5	Selection of class to be taught	1	2	3	4	5
11.	1	2	3	4	5	Selection of subject to be taught	1	2	3	4	5
12.	1	2	3	4	5	Setting rules to award students	1	2	3	4	5
13.	1	2	3	4	5	Setting rules penalty rules	1	2	3	4	5
14.	1	2	3	4	5	Setting department goals	1	2	3	4	5
15.	1	2	3	4	5	Setting department working schedule	1	2	3	4	5
16.	1	2	3	4	5	Setting school goals	1	2	3	4	5
17.	1	2	3	4	5	Planning school development	1	2	3	4	5
18.	1	2	3	4	5	Setting disciplinary policies	1	2	3	4	5
19.	1	2	3	4	5	Policies on teachers' professional development	1	2	3	4	5
20.	1	2	3	4	5	Curriculum decision for the whole school	1	2	3	4	5
21.	1	2	3	4	5	Appraising teachers	1	2	3	4	5
22.	1	2	3	4	5	Setting department budgeting	1	2	3	4	5
23.	1	2	3	4	5	Evaluate department performance	1	2	3	4	5
24.	1	2	3	4	5	Allocation of department duties to others	1	2	3	4	5
25.	1	2	3	4	5	Setting appraisal criteria	1	2	3	4	5
26.	1	2	3	4	5	Recruiting teaching staff	1	2	3	4	5
27.	1	2	3	4	5	Recruiting supporting staff	1	2	3	4	5
28.	1	2	3	4	5	Cooperate with external bodies	1	2	3	4	5
29.	1	2	3	4	5	Allocation of financial resource	1	2	3	4	5
30.	1	2	3	4	5	Allocation of human resource	1	2	3	4	5
31.	1	2	3	4	5	Setting school administration structure	1	2	3	4	5

Section 3: Please circle the number, which reflects your opinion of the following items

1 = strongly disagree 5 = strongly agree

		Strongly Disagree			Strongly Agree	
1.	Teachers must always get their orders from higher up.	1	2	3	4	5
2.	A well-established system of super ordination and subordination should be developed	1	2	3	4	5
3.	A good teacher should be one who conforms to accepted standards in the school.	1	2	3	4	5
4.	The same procedure for like situations should be followed at all times.	1	2	3	4	5
5.	Little action should be taken until decisions are approved by the school.	1	2	3	4	5
6.	Quality education is a management problem that should be solved by tight controls.	1	2	3	4	5
7.	Teachers should be regularly checked to prevent them from wrongdoing.	1	2	3	4	5
8.	Rules stating when teachers should arrive and depart should be strictly enforced.	1	2	3	4	5
9.	Teachers should be obedient, respectful, and loyal to the principal.	1	2	3	4	5
10.	Principal should frequently monitor the classroom teaching	1	2	3	4	5
11.	Teachers should have participation in decision making.	1	2	3	4	5
12.	Staff members should talk, observe, critique, and plan together.	1	2	3	4	5
13.	Teachers and administrators should provide constructive feedback to each other regularly.	1	2	3	4	5
14.	Active teacher participation at staff meetings should be encouraged.	1	2	3	4	5
15.	All teachers should be involved in deliberating on school goals at the beginning of the year.	1	2	3	4	5
16.	Teachers should not be in treated with regard to rank and should be treated equally.	1	2	3	4	5
17.	Teachers should be a highly trained and dedicated group of professionals.	1	2	3	4	5
18.	Teachers should be allowed to work within their own professional abilities.	1	2	3	4	5
19.	Teachers should subscribe to and diligently read the standard professional journals.	1	2	3	4	5
20.	Teachers should be encouraged to develop themselves professionally.	1	2	3	4	5
21.	Teacher are free to excise teaching methodology to tackled student individual difference according to their professional judgment	1	2	3	4	5
22.	Teacher should be responsible to the quality of teaching.	1	2	3	4	5
23.	Administrators should encourage teachers to evaluate their own performance and set goals for their own growth.	1	2	3	4	5
24.	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.	1	2	3	4	5
25.	Teachers should have freedom to engage in a variety of practices they think important.	1	2	3	4	5
26.	Teachers should be empowered in teaching and learning.	1	2	3	4	5
27.	Teachers should be allowed to exercise autonomy in their classroom pedagogy.	1	2	3	4	5
28.	Both teachers and administrators should have an agreement on the school goals, purposes and mission.	1	2	3	4	5
29.	At the beginning of school year, the school's general goals should be explained to the new teachers.	1	2	3	4	5
30.	The aims and goals of each department should follow the school vision.	1	2	3	4	5
31.	All the work should be coordinated for attaining the school vision.	1	2	3	4	5
32.	A work plan that gives an overview of the school goals should be written down.	1	2	3	4	5
33.	I am proud to tell others that I am part of this school.	1	2	3	4	5
34.	I would recommend this school to someone like myself as a good place to work.	1	2	3	4	5
35.	I talk up this school to my friends as a great school to work for.	1	2	3	4	5
36.	Deciding to work for this school was a definite mistake on my part.	1	2	3	4	5
37.	For me this is the best of all possible schools to work.	1	2	3	4	5
38.	I have a sense of pride and belonging to the school.	1	2	3	4	5
39.	This school really inspires me to give good job performance.	1	2	3	4	5
40.	I am willing to do extra work in order to help this school to be successful.	1	2	3	4	5
41.	I find that there is no specific reason to invest extra time and effort in activities beyond the	1	2	3	4	5
42.	I express a high degree of commitment to the school.	1	2	3	4	5
43.	I really care about the fate of this school.	1	2	3	4	5
44.	I will help students to solve their problems, even after school time.	1	2	3	4	5
45.	Department and school meetings occupy much of my working time	1	2	3	4	5
46.	There are too many non-teaching duties.	1	2	3	4	5
47.	Too much administrative routine work that disrupts my teaching.	1	2	3	4	5
48.	It takes me time to manage student discipline problems after school.	1	2	3	4	5
49.	There is too much paper work.	1	2	3	4	5

Appendix II
Raw Data

Section 1:

1. Gender : Male (56.4%) Female (43.2%)

2. Years of teaching experience: (mean = 10.75 sd = 6.87)

3. Have you received teacher training? : Yes (93.9%) No (6.1%)
(i.e. teacher certificate, Dip Ed., Cert. Ed. or equivalent)

4. The highest academic awards:
 Doctoral Degree (0.5%) Master Degree (17.7%)
 Postgraduate Certificate/Diploma (5.7%) Bachelor Degree (61.8%)
 College Diploma (14.2%)

5. Rank : CM (21.3%) AM (4.8%) SAM (1.8%) PAM (0.8%)
 GM (53.8%) SGM (15.5%) PGM (2.1%)

6. Major Duty:
 Class master / Class mistress (25.3%) Committee Member (38.8%)
 Subject Panel Chairperson (25.3%) Committee Head (8%)
 Vice Principal (2.8%)

7. Are you member of School Executive Committee? :
 2. Yes (18.8%) No (81.2%)

Section 2:

Question No.	What is your actual extent of participation in making this decision?					Decision Issues	To what degree do you desire to participate in this decision?				
	1	2	3	4	5		1	2	3	4	5
1.	3.5%	9.0%	23.1%	33.6%	30.8%	Adoption of teaching materials	0.8%	2.3%	18.1%	43.1%	35.8%
2.	4.0%	8.0%	21.1%	35.8%	31.1%	Selection of textbooks	0.8%	1.5%	19.3%	40.1%	38.3%
3.	1.8%	8.3%	21.8%	38.3%	30.0%	Setting learning objectives	0.8%	1.0%	15.3%	44.5%	38.4%
4.	4.8%	13.3%	29.0%	34.3%	18.8%	Tailoring the curriculum	0.5%	1.8%	18.3%	46.9%	32.6%
5.	1.5%	4.8%	21.8%	43.8%	28.8%	Development of curricula	0.3%	1.8%	14.3%	45.1%	38.6%
6.	1.0%	3.0%	14.3%	40.8%	41.0%	Select teaching methodology	0%	2.0%	8.3%	40.8%	49.0%
7.	2.3%	10.6%	35.9%	34.7%	16.6%	Evaluation of teaching outcomes	0.8%	1.3%	21.6%	46.9%	29.6%
8.	7.5%	20.6%	26.1%	27.3%	18.5%	Purchase of teaching equipment	1.5%	5.5%	25.0%	38.3%	29.8%
9.	4.5%	12.1%	25.1%	36.4%	21.9%	Setting homework policies	1.0%	2.5%	18.5%	44.3%	33.8%
10.	15.5%	32.8%	28.0%	17.5%	6.3%	Selection of class to be taught	1.3%	2.8%	13.8%	46.8%	35.5%
11.	33.5%	29.8%	23.0%	10.8%	3.0%	Selection of subject to be taught	2.0%	4.0%	21.2%	41.9%	31.1%
12.	35.8%	30.0%	25.5%	6.5%	2.3%	Setting rules to award students	2.5%	8.3%	33.9%	41.0%	14.3%
13.	23.3%	29.5%	32.0%	13.3%	2.0%	Setting rules penalty rules	2.8%	7.5%	30.3%	44.1%	15.3%
14.	11.6%	20.6%	31.7%	24.4%	11.8%	Setting department goals	2.3%	5.3%	28.9%	45.0%	18.6%
15.	12.3%	24.8%	28.3%	21.1%	13.5%	Setting department working schedule	2.8%	6.5%	32.8%	38.1%	19.8%
16.	25.6%	26.3%	21.3%	15.8%	13.5%	Setting school goals	8.8%	11.3%	34.6%	27.3%	18.0%
17.	22.1%	26.1%	24.9%	17.3%	9.5%	Planning school development	4.8%	8.0%	35.7%	33.9%	17.6%
18.	22.4%	26.9%	25.9%	17.6%	7.3%	Setting disciplinary policies	6.0%	7.0%	35.2%	35.7%	16.1%
19.	32.5%	29.0%	29.3%	8.8%	0.5%	Policies on teachers' professional development	5.0%	9.8%	36.8%	38.8%	9.5%
20.	36.8%	33.1%	22.1%	7.0%	1.0%	Curriculum decision for the whole school	5.0%	10.5%	36.0%	39.5%	9.0%
21.	41.1%	32.2%	17.8%	8.0%	1.0%	Appraising teachers	6.3%	13.0%	37.6%	33.8%	9.3%
22.	40.8%	32.0%	20.8%	6.0%	0.5%	Setting department budgeting	6.5%	11.8%	39.5%	31.8%	10.5%
23.	39.6%	32.6%	20.8%	5.3%	1.8%	Evaluate department performance	5.3%	11.5%	37.1%	36.6%	9.5%
24.	36.7%	26.4%	23.9%	11.6%	1.5%	Allocation of department duties to others	6.5%	10.3%	36.0%	36.3%	11.8%
25.	45.0%	27.3%	19.5%	7.8%	0.5%	Setting appraisal criteria	6.8%	10.6%	34.2%	36.7%	11.8%
26.	67.5%	16.3%	9.8%	5.0%	1.5%	Recruiting teaching staff	17.0%	20.8%	33.8%	21.8%	6.8%
27.	68.5%	19.0%	6.8%	4.5%	1.3%	Recruiting supporting staff	20.8%	20.5%	31.8%	20.3%	6.8%
28.	35.5%	28.8%	23.5%	9.8%	2.5%	Cooperate with external bodies	11.5%	13.3%	38.8%	29.3%	7.3%
29.	60.9%	26.3%	9.8%	2.5%	0.5%	Allocation of financial resource	13.5%	20.0%	38.3%	22.8%	5.5%
30.	64.5%	24.3%	8.5%	2.5%	0.3%	Allocation of human resource	11.8%	15.5%	41.8%	23.5%	7.5%
31.	64.8%	22.3%	8.8%	3.0%	1.3%	Setting school administration structure	15.3%	17.0%	40.0%	21.8%	6.0%

Section 3:

		1	2	3	4	5
32.	Teachers must always get their orders from higher up.	9.1%	24.9%	34.0%	27.0%	5.0%
33.	A well-established system of super ordination and subordination should be developed	9.9%	29.5%	36.9%	20.1%	3.6%
34.	A good teacher should be one who conforms to accepted standards in the school.	8.2%	19.9%	44.0%	22.0%	5.9%
35.	The same procedure for like situations should be followed at all times.	1.3%	11.2%	39.9%	41.5%	6.1%
36.	Little action should be taken until decisions are approved by the school.	3.3%	17.3%	40.5%	28.2%	10.7%
37.	Quality education is a management problem that should be solved by tight controls.	6.4%	28.8%	39.2%	19.8%	5.9%
38.	Teachers should be regularly checked to prevent them from wrongdoing.	11.6%	36.0%	39.6%	11.1%	1.8%
39.	Rules stating when teachers should arrive and depart should be strictly enforced.	4.3%	27.6%	38.2%	20.5%	9.4%
40.	Teachers should be obedient, respectful, and loyal to the principal.	5.4%	21.2%	45.2%	23.2%	5.1%
41.	Principal should frequently monitor the classroom teaching	4.3%	20.6%	38.2%	27.5%	9.4%
42.	Teachers should have participation in decision making.	11.7%	41.5%	31.6%	13.2%	2.0%
43.	Staff members should talk, observe, critique, and plan together.	5.1%	30.5%	37.7%	22.1%	4.6%
44.	Teachers and administrators should provide constructive feedback to each other regularly.	18.1%	34.4%	29.5%	15.0%	3.1%
45.	Active teacher participation at staff meetings should be encouraged.	5.4%	21.7%	34.4%	32.4%	6.1%
46.	All teachers should be involved in deliberating on school goals at the beginning of the year.	16%	33.3%	31.6%	16.8%	2.3%
47.	Teachers should not be in treated with regard to rank and should be treated equally.	16.5%	31.8%	28.8%	16.3%	6.6%
48.	Teachers should be a highly trained and dedicated group of professionals.	3.8%	11.2%	35.4%	39.2%	10.4%
49.	Teachers should be allowed to work within their own professional abilities.	2.5%	13.2%	45.3%	32.1%	6.9%
50.	Teachers should subscribe to and diligently read the standard professional journals.	3.8%	17.2%	35.4%	33.6%	10.0%
51.	Teachers should be encouraged to develop themselves professionally.	2.3%	8.4%	29.8%	44.6%	14.8%
52.	Teacher are free to excise teaching methodology to tackled student individual difference according to their professional judgment	2.6%	11.0%	37.0%	38.8%	10.7%
53.	Teacher should be responsible to the quality of teaching.	1.3%	7.6%	32.2%	44.8%	14.9%
54.	Administrators should encourage teachers to evaluate their own performance and set goals for their own growth.	2.6%	12.8%	38.3%	39.8%	6.6%
55.	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.	6.1%	17.6%	32.8%	32.9%	10.7%
56.	Teachers should have freedom to engage in a variety of practices they think important.	4.8%	13.3%	38.0%	39.0%	4.8%
57.	Teachers should be empowered in teaching and learning.	2.0%	9.9%	33.1%	45.3%	9.7%
58.	Teachers should be allowed to exercise autonomy in their classroom pedagogy.	1.0%	5.9%	19.6%	55.1%	18.4%
59.	Both teachers and administrators should have an agreement on the school goals, purposes and mission.	6.1%	17.6%	28.8%	34.9%	12.7%
60.	At the beginning of school year, the school's general goals should be explained to the new teachers.	3.1%	21.4%	47.8%	22.6%	5.1%
61.	The aims and goals of each department should follow the school vision.	2.0%	21.1%	46.8%	28.5%	1.5%
62.	All the work should be coordinated for attaining the school vision.	3.1%	17.3%	37.2%	33.6%	8.9%
63.	A work plan that gives an overview of the school goals should be written down.	5.3%	26.5%	44.8%	21.6%	1.8%
64.	I am proud to tell others that I am part of this school.	8.7%	22.6%	39.4%	21.4%	7.9%
65.	I would recommend this school to someone like myself as a good place to work.	13.7%	26.7%	35.4%	18.6%	5.6%
66.	I talk up this school to my friends as a great school to work for.	14.0%	29.0%	34.6%	14.5%	7.9%
67.	Deciding to work for this school was a definite mistake on my part.	29.3%	25.7%	35.4%	6.6%	3.1%
68.	For me this is the best of all possible schools to work.	4.9%	18.0%	40.4%	27.8%	9.0%
69.	I have a sense of pride and belonging to the school.	5.9%	21.6%	38.4%	25.7%	8.4%
70.	This school really inspires me to give good job performance.	1.0%	6.4%	44.0%	38.7%	10.0%
71.	I am willing to do extra work in order to help this school to be successful.	1.5%	9.4%	29.3%	46.8%	13.0%
72.	I find that there is no specific reason to invest extra time and effort in activities beyond the	0%	9.9%	36.6%	42.7%	10.7%
73.	I express a high degree of commitment to the school.	1.0%	6.4%	43.3%	38.7%	10.7%
74.	I really care about the fate of this school.	1.3%	4.8%	27.5%	50.1%	16.3%
75.	I will help students to solve their problems, even after school time.	0.3%	2.8%	29.0%	53.4%	14.5%
76.	Department and school meetings occupy much of my working time	2.5%	14.2%	34.6%	31.0%	17.6%
77.	There are too many non-teaching duties.	2.3%	12.5%	34.9%	34.9%	15.5%
78.	Too much administrative routine work that disrupts my teaching.	0.5%	6.9%	26.5%	42.1%	24%
79.	It takes me time to manage student discipline problems after school.	1.5%	7.9%	21.9%	39.2%	29.5%
80.	There is too much paper work.	1.8%	6.6%	32.7%	38.8%	20.2%

Appendix III
Pilot Test

Table A.1 Pilot Tests on the Scale of Bureaucratic Control

			Factor loading		1 st Deleted of items		2nd Deleted of items		
					Item Deleted	Factor Loading		Item Deleted	Factor Loading
			1	2		1	2		
1.	Q01 B101	Teachers must always get their orders from higher up.		.771			.611	*	
2.	Q10 B102	A well-established system of superordination and subordination should be developed		.834			.766	*	
3.	Q19 B103	A good teacher should be one who conforms to accepted standards in the school.	.621			.640			.621
4.	Q28 B104	The same procedure for like situations should be followed at all times.	.559			.581			.559
5.	Q37 B105	Little action should be taken until the school approves decisions.	.622			.662			.622
6.	Q02 B201	Quality education is a management problem that should be solved by tight controls.		.679			.547	*	
7.	Q11 B202	Teachers should be regularly checked to prevent them from wrongdoing.	.551			.555			.551
8.	Q20 B203	Rules stating when teachers should arrive and depart should be strictly enforced.	.479	.562	*				
9.	Q29 B204	Teachers should be obedient, respectful, and loyal to the principal.	.522			.534			.522
10.	Q38 B205	Principal should frequently monitor the classroom teaching	.800			.820			.800

Table A.2 The Reserved Items for the Scale of Bureaucratic Control

		Alpha
Q19B103	A good teacher should be one who conforms to accepted standards in the school.	.6621
Q28B104	The same procedure for like situations should be followed at all times.	.7158
Q37B105	Little action should be taken until the school approves decisions.	.6868
Q11B202	Teachers should be regularly checked to prevent them from wrongdoing.	.7158
Q29B204	Teachers should be obedient, respectful, and loyal to the principal.	.6795
Q38B205	Principal should frequently monitor the classroom teaching	.6975
Reliability Coefficient Alpha of the Scale =		.7264

Table A.3 Pilot Tests on the Scale of Collegiality

		Factor loading
Q03C101	Teachers should have participation in decision making.	.741
Q12C102	Staff members should talk, observe, critique, and plan together.	.817
Q04C201	Teachers and administrators should provide constructive feedback to each other regularly.	.745
Q13C202	Active teacher participation at staff meetings should be encouraged.	.827
Q22C203	All teachers should be involved in deliberating on school goals at the beginning of the year.	.733
Q47C206	Teachers should not be treated with in regard to rank and should be treated equally.	.548

Table A.4 The Reserved Items for the Scale of Collegiality

		Alpha
Q03C101	Teachers should have participation in decision making.	.8142
Q12C102	Staff members should talk, observe, critique, and plan together.	.7916
Q04C201	Teachers and administrators should provide constructive feedback to each other regularly.	.8135
Q13C202	Active teacher participation at staff meetings should be encouraged.	.7954
Q22C203	All teachers should be involved in deliberating on school goals at the beginning of the year.	.8205
Q47C206	Teachers should not be in regard to rank and treat equally.	.8261
Reliability Coefficients Alpha = .8396		

Table A.5 Pilot Test for the Scale of Shared Vision

		Factor loading
Q08T101	Both teachers and administrators should have an agreement on the school goals, purposes and mission.	.678
Q26T103	At the beginning of school year, the school's general goals should be explained to the new teachers.	.746
Q35T104	The aims and goals of each department should follow the school vision.	.776
Q44T105	Recognizing good teaching at a formal school ceremony should be present.	.746
Q50T106	A work plan that gives an overview of the school goals should be written down.	.748

Table A.6 The Reserved Items for the Scale of Shared Vision

Q08T101	Both teachers and administrators should have an agreement on the school goals, purposes and mission.	.7718
Q26T103	At the beginning of school year, the school's general goals should be explained to the new teachers.	.7414
Q35T104	The aims and goals of each department should follow the school vision.	.7333
Q44T105	All the work should be coordinated for attaining the school vision	.7472
Q50T106	A work plan that gives an overview of the school goals should be written down.	.7444
Reliability Coefficients Alpha = .7873		

Table A.7 Pilot Tests for the Scale of Professional Autonomy

		Factor loading		1 st Deleted of items		2 nd Deleted of items	
		1	2	Item Deleted	Factor Loading	Item Deleted	Factor Loading
Q06 L101	Teachers should be a highly trained and dedicated group of professionals.		.693		.703	*	
Q15 L102	Teachers should be allowed to work within their own professional abilities.	.621			.633		.747
Q24 L103	Teachers should subscribe to and diligently read the standard professional journals.		.730		.763	*	
Q33 L104	Teachers should be encouraged to develop themselves professionally.	.416	.489	*			
Q42 L105	Teacher are free to excise teaching methodology to tackled student individual difference according to their professional judgment	.783			.792		.820
Q48 L106	Teacher should be responsible to the quality of teaching.	.475			.495		.626
Q52 L107	Administrators should encourage teachers to evaluate their own performance and set goals for their own growth.		.742		.724	*	
Q34 L204	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.	.619			.633		.706
Q43 L205	Teachers should have freedom to engage in a variety of practices they think important.	.841			.833		.739
Q49 L206	Teachers should be empowered in teaching and learning.	.828			.831		.827
Q53 L207	Teachers should be allowed to exercise autonomy in their classroom pedagogy.	.759			.756		.735

Table A.8 The Reserved Items for the Scale of Professional Autonomy

		Alpha
Q15L102	Teachers should be allowed to work within their own professional abilities.	.8458
Q42L105	Teacher are free to excise teaching methodology to tackled student individual difference according to their professional judgment	.8332
Q48L106	Teacher should be responsible to the quality of teaching.	.8622
Q34L204	With narrow limits, individual teachers should be allowed to exercise self-direction and self-control.	.8511
Q43L205	Teachers should have freedom to engage in a variety of practices they think important.	.8469
Q49L206	Teachers should be empowered in teaching and learning.	.8313
Q53L207	Teachers should be allowed to exercise autonomy in their classroom pedagogy.	.8477
Reliability Coefficients Alpha = .8648		

Table A.9 The Pilot Tests for the Scale of Job Satisfaction

		Factor loading
201	I am proud to tell others that I am part of this school.	.821
202	I would recommend this school to someone like myself as a good place to work.	.816
203	I talk up this school to my friends as a great school to work for.	.862
204	Deciding to work for this school was a definite mistake on my part.(*)	.753
205	For me this is the best of all possible schools to work.	.769
206	I have a sense of pride and belonging to the school.	.826
207	This school really inspires me to give good job performance.	.656

* Indicate that the negative statement and to be recoded during the data input procedure

Table A.10 The Reserved Items for the Scale of Job Satisfaction

		Alpha	
1	201	I am proud to tell others that I am part of this school.	.8779
2	202	I would recommend this school to someone like myself as a good place to work.	.8780
3	203	I talk up this school to my friends as a great school to work for.	.8705
4	204	Deciding to work for this school was a definite mistake on my part.(*)	.8867
5	205	For me this is the best of all possible schools to work.	.8850
6	206	I have a sense of pride and belonging to the school.	.8766
7	207	This school really inspires me to give good job performance.	.8888
Reliability Coefficients Alpha = .8972			

Table A.11 The Pilot Tests for the Scale of Job Commitment

		Factor loading
Q01F 101	I am willing to do extra work in order to help this school to be successful.	.780
Q31F 106	I am willing to take up responsibility of and duties delegated by school.	.755
Q13F 103	I really care about the fate of this school.	.699
Q25F 105	I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.	.663
Q07F 102	I express a high degree of commitment to the school.	.540

Table A.12 The Reserved Items for the Scale of Job Commitment

			Alpha
1	101	I am willing to do extra work in order to help this school to be successful.	.6402
2	105	I find that there is no specific reason to invest extra time and effort in activities beyond the classroom borders.	.6909
3	106	I am willing to take up responsibility and duties delegated by school	.6543
4	103	I really care about the fate of this school.	.6787
5	104	I commit to my teaching.	.6543
Reliability Coefficients Alpha =			.7275

Table A.13 The Pilot Tests on the Scale of Teacher Perception on Their Workload

		1st					
						Deleted of items	
		Factor loading		Item Deleted	Factor Loading		
1	2	1	2				
602	Department and school meeting which occupy much of my working time	.522			.586		
603	Too much administrative routine work that disrupt my teaching.	.671			.704		
604	There are too many non-teaching duties.	.609			.615		
605	There is too much paper work.	.804			.743		
601	I need to work on holiday to clear the accumulate works.		-.811	*			
606	I need to work overtime after school hours.	.405	-.423	*			
608	I need to bring the students assignment back home for marking		-.791	*			
104	It takes me time to help student to solve their academic problems.		-.554	*			

Table A.14 The Reserved Items for the Scale of Teacher Perception on Their Workload

		Alpha
1	Department and school meeting which occupy much of my working time	.5452
3	Too much administrative routine work that disrupt my teaching.	.4705
4	There are too many non-teaching duties.	.5379
5	There is too much paper work.	.4385
Reliability Coefficients		Alpha = .5711