

**THE CAUSAL RELATIONSHIP BETWEEN PARTICIPATORY
DECISION MAKING, JOB SATISFACTION AND TEACHER
PERFORMANCE IN BHUTAN**



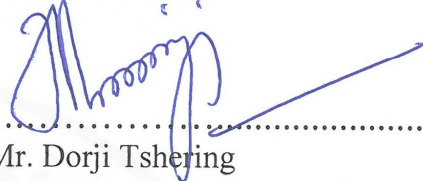
DORJI TSHERING

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR
THE DEGREE OF MASTER OF EDUCATION
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FACULTY OF GRADUATE STUDIES
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Thesis
entitled
**THE CAUSAL RELATIONSHIP BETWEEN PARTICIPATORY
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PERFORMANCE IN BHUTAN**



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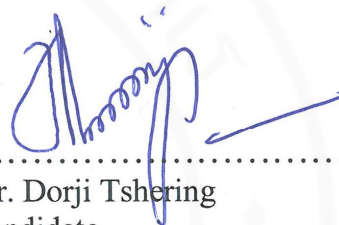
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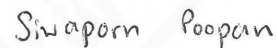
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THE CAUSAL RELATIONSHIP BETWEEN PARTICIPATORY DECISION MAKING, JOB SATISFACTION AND TEACHER PERFORMANCE IN BHUTAN

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ABSTRACT

The purpose of this article was to develop and validate the causal relationship between participatory decision-making, job satisfaction and teacher performance in Bhutan. A sample of 228 teachers was selected through multistage sampling technique. The questionnaires were distributed to all the teachers of nine secondary schools having classes seven to twelve. Descriptive analysis was performed by using the SPSS program for Windows. The correlations and the significant relationships between observed variables were studied. The conceptual model was empirically validated by using structural equation modeling with LISREL. The causal model of teacher performance consisted of three latent variables; they are participatory decision making, job satisfaction and teacher performance. All the latent variables were measured by nine observed variables.

The results showed that casual model of teacher performance in Bhutan fit with the empirical data, as indicated by excellent fit indices, Chi-square= 13.87, $df= 10$, $p = 0.18$, GFI = 0.99, AGFI = 0.94, RMR = 0.01, RMSEA = 0.04. All the relationships among three constructs and their dimensions were found to be statistically significant at the significance level of 0.01. Test results showed that participatory decision making had significant direct effects on job satisfaction and teacher performance. Similarly, job satisfaction had a significant direct effect on teacher performance. As mediated by job satisfaction, participatory decision making had a significant indirect effect on teacher performance.

The key to promote teacher performance is to enhance teacher job satisfaction and encourage participatory decision making in schools. It is hoped that findings in this study will help school principals to understand how teacher performance can be affected by the influence of participatory decision making and job satisfaction, both directly and indirectly.

KEY WORDS: PARTICIPATORY DECISION MAKING / TEACHER PERFORMANCE / JOB SATISFACTION / CAUSAL RELATIONSHIP

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LIST OF ABBREVIATIONS



AES	Annual Education Statistics
EMSSD	Education Monitoring support Service Division
HSS	Higher Secondary School
JS	Job Satisfaction
MoE	Ministry of Education
MSS	Middle Secondary School
PDM	Participatory Decision Making
PPD	Policy and Planning Division
REC	Royal Educational Council
RUB	Royal University of Bhutan
TP	Teacher Performance

CHAPTER I

INTRODUCTION

1.1 Background and Rationale of the Study

His Majesty the 5th king in his address at the 3rd Convocation of the Royal University of Bhutan in February 17, 2009 said

“I cannot go into details of the education sector – there are experts among us who can do this. All I know is, as simple as it sounds, that our hopes and aspirations as a nation must be reflected in what is taught to our future generations in the classroom. This is my view. I urge parents, policymakers and the general public to reflect on this. Keep in mind”.

5th Druk Gyalpo 3rd Convocation Address, RUB, Paro (2009)

The formal education system of Bhutan has been promoted and expanded since first five-year plan in 1961 to address the basic educational needs and develop human resources required for the socio-economic development of the country. At the same time, the expansion of education system has been accompanied by a rapid growth in enrolment of students as a result of the Royal government’s commitment to education. Within the period of four decades under the dynamic leadership of 4th and 5th king the modern education system had expanded to 666 schools and institutes in 2011(Annual Education Statistics, 2011).

In order to improve the quality of education system in Bhutan, the new paradigm of change was introduced in leadership and management approach in 2010. The transition of principals’ roles from administrators and managers to instructional leaders was one of the ten charters under compact agreement signed by the Ministry of Education with the Royal Government of Bhutan (EMSSD, 2010).

The quality has become a slogan in Bhutanese society. There was a consensus that the quality of Education in Bhutan has declined over the years. The

lack of quality in teaching, contributes to a relatively new, but now persistent, view of low professional esteem. Combined with demanding workloads and poor pay, the noble teaching profession has failed to attract the bright graduated students for teaching profession. This might have lead to poor performance in imparting quality education to the students (REC, 2009). According to Akhlaq, Amjad, Mehmood, Seed ul, et al. (2010), the quality of education and its product is unquestionably influenced by teacher performance.

Many studies have concluded that the single most important factor determining the quality of the education a child receives is the quality of his teacher. Effective education is effective teaching. Hence, the success and quality of students depends on the performance of the teachers. The task of a teacher is focused to education both within and outside the classroom; they leave deep impact on the development and attitudes of their students. Teacher guides the students for the advancement of their career. Therefore, having good teacher makes a big difference in students' success (Khan, Khan, Shah, Iqbal & Aziz, 2011).

Teachers have a greater role in their students' intellectual, personal and social development. A supreme art of teaching is to bring positive change in the overall behavior of students. Teacher performance is one of important fundamental components that determine learning outcomes. Teacher performance play and important role on students acheivement. Many researchers have concluded that there exist a significant positive relationship between teacher performance and students achievement. According to Olayiwola (2006), low performances of teachers have direct impact on the performance of their students in external examinations.

Numerous studies have been done on factors affecting students' performance and the evidences have clearly suggested that one of the factors affecting students' achievement was teacher performance. According to Yeh (2009), "student achievement may be improved if high performing teachers are substitute for low performing teachers".

According to The Quality of School Education in Bhutan report (2009), Bhutanese students are performing below expectations of their grade level on both basic and advanced academic skills and lack basic communication and analytical skills. Teacher quality is correlated with a maximum of about 50 percent of the

students' performance. Achievement is significantly and systematically correlated with teachers. Female teachers have a large and significantly positive impact on test scores. Trained teachers have a large and significantly positive impact on scores in both grades.

Quality Learning Survey in Bhutan (2007) revealed that teacher quality performance alone explains 26 to 45 percent of the variance in the test scores of students in Class II and IV. However many researchers have concluded that quality of teacher performance is affected by many factors such as participatory decision making (Sarafidou & Chatziioannidis, 2013; Sukirno & Siengthai, 2011; Abahumna, 2010) and Job satisfaction (Adeyemi, 2011; Sukirno & Siengthai, 2011; Hoy & Miskel, 2008). According to Educare (2009), the teachers' professional satisfaction has been diminishing and teaching is becoming less and less rewarding.

The success of the school and the teacher performance is determined by how much teachers are involved in decision-making process. In school, decisions are made on teacher professional development, financial management, students' welfare and management, school policy, resources and materials and curriculum and instructions (David & Maiyo, 2010; Kipkoech & Chesire, 2011; Abahumna, 210; Keung, 2008; Samkange, 2012). Involvement of teachers in decision-making process will demonstrate the higher degree of commitment and performance.

Abahumna (2010) and Samkange (2012) said deprivation of teachers participating in school decision make teachers dissatisfied. The majority of teachers wanted to participate in school level decision, but they were not involved. (Hoy & Miskel, 2008) pointed out that participation in decision making is positively related to the individual teacher's satisfaction with the profession of teaching. According to Samo (2010), teaching is a dynamic process which requires the co-ordination and cooperation from teachers. In order to use any resources efficiently and effectively in schools, the active participation of teachers is very important. The main purpose of decision-making process is to get maximum possible benefit from the available resources

Sarafidou and Chatziioannidis (2013) expressed that participatory decision-making has become an important tool for the school managers to motivate the teachers and to enhance their job performance. The empowerment of members will

enhance the level of job satisfaction and promote the sense of responsibility in performing the job. Cheng (2008) said that teacher participation in school decision have many advantages for teachers and school, such as increased job dedication and job satisfaction.

According to Perševica (2011), teacher job satisfaction is an essential component for imparting quality education. It determines their interest, motivation and attitude towards work, which thereby influence the professional performance of the teacher. Chaudhury and Banerjee (2004) said when the subordinates feel themselves satisfied with the job, they demonstrate high moral which ultimately lead to the success of school goals and objectives. Highly satisfied teachers increases productivity and classroom performance in the college (Katoch, 2012)

In Bhutan, providing quality education to the fast growing children has become a mammoth task to ministry, school leaders and teachers. This is because teaching profession in Bhutan has failed to attract bright and capable students (REC, 2010). Furthermore, mismatch between teaching loads, supportive working conditions, teacher deployment and equitable reward have been a major factor that led to teacher job dissatisfaction.

Based on literature review it was understood that there exist a relationship whereby teacher participation in decision-making process and job satisfaction has direct and indirect effect on teacher performance. Although the participatory decision making, Job satisfaction and teacher performance were studied before by several researchers, the affect of participatory decision making and job satisfaction on teacher performance have not receive much attention.

The main purpose of the study was to develop and validate the causal relationship between participatory decision-making, job satisfaction and teacher performance in Bhutan. This study explored three direct causal relationships among three latent variables and one indirect causal relationship between participatory decision-making and teacher performance by keeping job satisfaction as a mediator; (1) Causal relationship between participatory decision and job performance, (2) Causal relationship between Job satisfaction and teacher performance, (3) Causal relationship between Participatory decision making and Job satisfaction and (4) Indirect causal

relationship between participatory decision making and teacher performance keeping job satisfaction as mediator.

Therefore, structural equation modeling (SEM) was explored to develop and validate the causal relationship between the variables. The reason for the adopting SEM in this study was because as Nevin (2012) said, it has an ability to relate concepts that are proxy by one or more observed variables in a complex way. It can model relationships among concepts by taking into account the unreliability of their measures. SEM allows for more than one endogenous variable. Other multivariate techniques are not capable of incorporating these characteristics within a single comprehensive method.

1.2 Research objective

To develop and validate the causal relationship between participatory decision-making, job satisfaction and teacher performance in Bhutan.

1.3 Research question

How does the causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan fit with the empirical data?

1.4 Research hypotheses

1.4.1 Teacher Performance will be affected directly by the effect of participatory decision making and job satisfaction.

1.4.2 As mediated by job satisfaction, participatory decision making effect will indirectly affect on teacher performance.

1.5 Scope of the study

The main objective of this research was to develop and validate the causal relationship between participatory decision-making, job satisfaction and teacher performance in Bhutan. The study contains two endogenous latent variables and one exogenous latent variable. Job satisfaction and teacher performance are endogenous latent variables and participatory decision making is an exogenous variable. Participatory decision making variable has two observed variables; managerial and instructional. Job satisfaction has four observed variables such as mentally challenge work, equitable reward, supportive working conditions and supportive colleagues. Teacher performance was conceptualized by three observed variables; job dedication, teacher effectiveness and teacher-students interaction. The predictive relationship exogenous and endogenous variables were verified. The study was conducted in nine secondary schools with 228 teachers.

1.6 Operational definitions of the terms

Participatory Decision making refers to good practice management whereby subordinates are empowered with greater role and responsibilities. It is broadly categorized into two domains; managerial and instructional decision making domains.

Managerial refers to school level decision related to budget, disciplinary policy, hiring new teacher, setting and revisiting schools, in-service program, determining school schedule and allocating resources to subject head.

Instructional refers to school level decision related to curriculum, classroom teaching techniques and methodologies, Teaching Learning materials, reporting students progress, subject department or team is operating, procedures for assessing student and student record-keeping procedures and practices

Job Satisfaction refers to emotional feelings and contentment towards facets of their job such as mentally challenge work, equitable reward, supportive working conditions and supportive colleagues, which determine work performance.

Mentally challenge work refers to task which are neither very challenging nor very easy for the employees; the job that gives pleasure and satisfaction in doing it.

Equitable reward refers to any benefits such as pay, promotion and incentives given to the employees as per their work demand, community pay standard and individual skills and knowledge.

Supportive working condition refers to safe working environment free from danger, disturbances and closer to your home.

Supportive colleague refers to friends or co-workers who share skills, knowledge and give company whenever you are in need.

Teacher performance refers to behavior of a teacher, which exhibits self knowledge by adapting, varies means of methodologies for personal and social benefits. It is directly related to job dedication, teacher effectiveness and teacher-student interaction within the organization or institution.

Job dedication refers to loyalty and attachment behavior exhibit by showing concern and love towards profession learners and organization.

Teacher effectiveness refers to quality teaching taught by the teachers as per the need and standard of the students. It includes lesson planning, classroom teaching, teaching aids and teaching planning and organizing.

Teacher-student interaction refers to positive exchange of ideas and opinions to create conducive environment for teacher and learners.

1.7 Research contributions

Overall, the present study is expected to make the following contributions:

1.7.1 It is expected that findings and recommendations from this study would bring benefits to school managers and teachers in making a good participatory decision.

1.7.2 It is expected to bring benefits to the policy maker to revisit some of the policies related to the impact of teacher performance by job satisfaction and participatory decision making in schools.

1.7.3 It is expected to bring benefits in understanding the causal relationship between participatory decision making, job satisfaction and teacher performance.

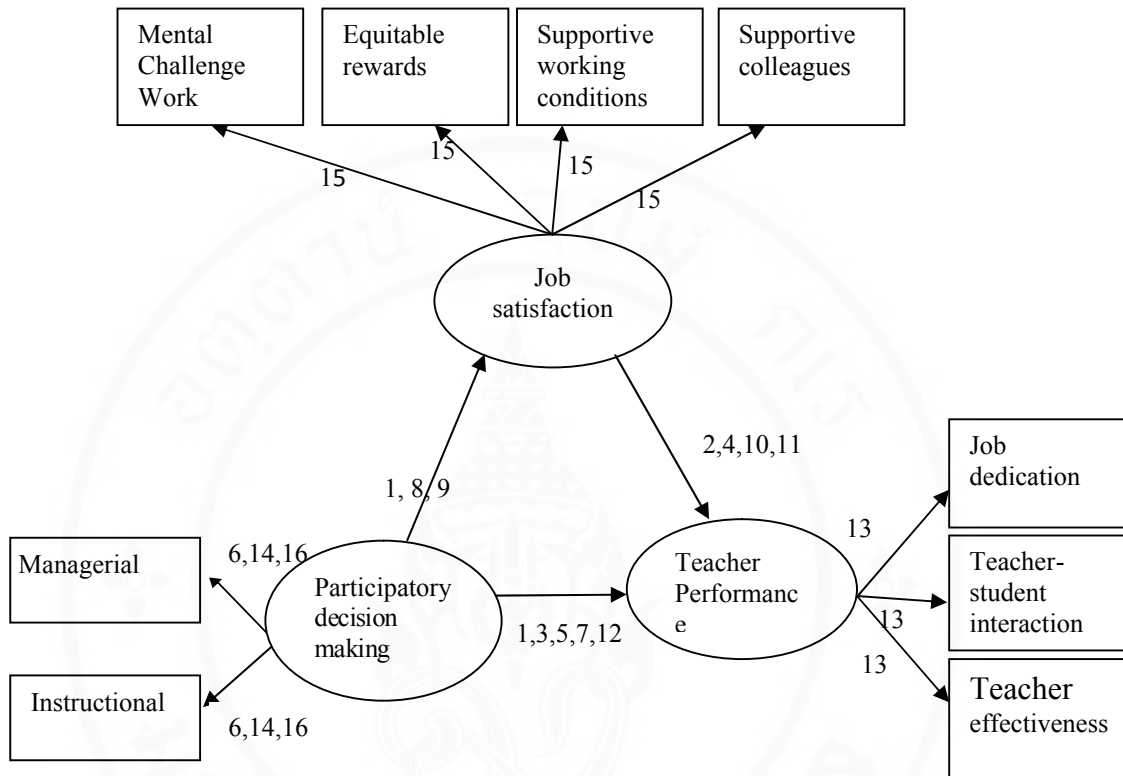
1.8 The conceptual model of the study

The relationship between participatory decision making and teacher performance was based on previous researchers such as Sarafidou and Chatziioannidis (2013), Adeyemi (2011), Abahumna (2010), Mualuko, Mukasa and Judy (2009) and Saad (2012). These researchers revealed that there was a relationship between these two unobserved variables. Similarly, the relationship between participatory decision making and job satisfaction was based on Sarafidou and Chatziioannidis (2013), Muindi (2011) and Khan, Ahmad and Hamed (2011). Researchers confirmed that there was a relationship between these two latent variables. The relationship between job satisfaction and teacher performance was conceptualized from researchers like Adeyemi (2011), Mawoli and Babandako (2011), Grady (1984) and Katoch (2012).

However, the relationship between the latent variables and its observed variables were based on three theories namely Mohrman's, Cook and Mohrman's theory (1978) for participatory decision making, Robbins theory (2003) for job satisfaction and Cai and Lin theory (2006) for teacher performance. Participatory decision making has two variables; managerial and instructional. Job satisfaction has four variables; mentally challenge work, equitable reward, supportive working conditions and supportive colleagues. Teacher performance was conceptualized by three variables; job dedication, teacher effectiveness and teacher-students interaction.

The researcher(s) identification is marked by number between the constructs and observed variables.

Conceptual Model



Note:

- | | |
|--------------------------------------|---|
| 1. Sarafidou & Chatzioannidis (2013) | 9. Khan, Ahmad, Aleem, and Hamed (2011) |
| 2. Adeyemi (2011) | 10. Grady (1984) |
| 3. Sukirno & Siengthai (2011) | 11. Katoch (2012) |
| 4. Mawoli & Babandako (2011) | 12. Saad (2012) |
| 5. Abahumna (2010) | 13. Cai and Lin (2006) |
| 6. Cheng Chi (2008) | 14. David & Maiyo (2010) |
| 7. Mualuko, Mukasa, & Judy (2009) | 15. Robbins (2003) |
| 8. Muindi (2011) | 16. Mohrman's, Cook and Mohrman (1978) |

Figure 1.1 Conceptual Model

CHAPTER II

LITERATURE REVIEW

This chapter presents theories and concepts built on participatory decision making, job satisfaction and teacher performance. It is divided into five sections as follows; (2.1) Concept of participatory decision making; (2.2) The Concept of job satisfaction; (2.3) Concept of teacher performance; (2.4) Related research to teacher performance and (2.5) Linear Structural Relationship Model

2.1 Concept of Participatory Decision Making

The concept of participatory decision making is explained in two parts; (2.1.1) Definition of participatory decision making and (2.1.2) Participatory decision making domains

2.1.1 Definition of Participatory Decision Making

Participatory decision making is defined as “the totality of such forms of upward exertion of power by subordinates in organizations as are perceived to be legitimate by themselves and their superiors” (Lammers, 1967). It is also understood as a manifestation of group cohesiveness (Sparrowe & Liden, 1997).

According to Vroom (2003), participatory decision making is a shared leadership. It is a team-building function, cohesively working together to achieve the organizational goals through combination of individual goals. It encourages the involvement of stakeholders at all levels of an organization in the analysis of problems, development of strategies, and implementation of solutions (Performance Theories, 2009)

Sarin and McDermott (2003) pointed out that participatory decision making fosters the flow of new ideas and collaboration within the team which enhances problem solving capacities. However, Hill and Huq (2004) argued that it is

the empowerment of teachers. Teachers' involvement in participatory decision making in schools increases their authority and responsibility. The empowerment of the employee is simply transfer of organizational power. Sharma and Kaur (2009) affirmed that empowerment is generally interpreted to involve the transfer or delegation of decision-making power to employees.

Mulford, Kendall, and Kendall (2004) stated that schools with good practice of participatory decision making has following positive outcomes; the administrative stress is low, students are generally hard working, make good progress, eager to learn and are well behaved. Bogler and Somech (2005) also said teacher participation in decision making is the opportunity for teachers to take part in the decision-making process on issues that influence their school life. It improves the quality of decisions (Hoy & Miskel, 2008). But Poiana (2011) argued that no such formula has been discovered for increasing stakeholder participation in public decision making processes, even though an outstanding number of hypotheses has been put forward.

According to Group Decision Making (2009), participatory decision making was understood as "when the employee collectively come together to analyze problem and evaluate alternative courses of action and choosing best among the alternative solution. In contrast, Cheng Chi (2008) said participation in decision making had been shifted to reforming educational practices. It creates conducive conditions that facilitate improvement, innovation, and continuous professional growth.

Carmeli, Sheaffer and Halevi (2009) considered participatory decision making is a style of management that engages high level of participation on the part of employees. It is also a practice of sharing power among members of the team, and empowering them to partake in strategic decision-making. Beside this they said it is an important relational mechanism through which better strategic decision are made, since members interact with one another in a way that allows them to share their perspectives, voice their ideas and opinions, and tap their skills. Samo (2010) affirmed that it ensures the completeness of decision-making and increases team members' commitment to final decisions. In addition to this, Cheng Chi (2008) supported that it

helps teachers to build leadership capacities, fight the bureaucratic system of schooling and work towards the establishment of democratization

Ndu and Anogbo (2007) revealed that where teachers are not involved in decision making, the behavior of the teachers get change as if they are strangers within the school environment. Thus, most teachers do not put in their best commitment and dedication to the school. The consequences of poor decision making could be devastating and disastrous not only to the decision maker but to the entire school (Wadesango, Rembe & Chabaya, 2010). Decision disastrous occurs to the decision makers who fully rely on their own judgment of intelligence, power and confidence (Anderson & Kilduff, 2009).

As per Gokturk and Mueller (2010), participation in managerial decision making increases interest and power of teachers, thus increasing the productivity of class. Involving teachers' in managerial decision making domain not only see as a classroom instructor but also as an efficient member of larger organization. According to Forrester (2011) it has so many outcomes such as increased feelings of self efficacy and reduced levels of stress, improved job performance and increased job satisfaction. But, the exclusion of member in the decision making process lead to a range of negative psychological consequences such as social anxiety, losses of self esteem, sadness and anger (Guerra-Lopez and Norris-Thomas, 2011).

Many studies concluded that teacher participation in decision making had increased dedication towards own work, job satisfaction (Pereira and Osburn, 2007), increased motivation and greater responsibility (Cheng Chi, 2008; Sarafidou & Chatziioannidis, 2013), and satisfaction of teachers' self-esteem and self-actualization need (Keung, 2008). Sarafidou and Chatziioannidis (2013) also supported that the involvement of teachers in decision making process is to improve the quality and effectiveness in achieving its goals, strengthen their perception of personal ability and establish high performance work place.

Teachers are found to be central in the management of schools and their involvement in decision making process is such a sensitive issue in schools. Olorunsola and Olayemi (2011) said the success or failure of any school depend on the utilization of intellectual abilities of the group or human resources that helps the development of an organization or school. Udo and Akpa (2007) have also mentioned

that if teachers are adequately involved in decision making process, there would be job dedication and adequate support and the realization of school and opposition within the school will be minimized.

The increase involvement of teachers in decision making process would lead to lasting educational change, innovation, increase level of job satisfaction and less likely to change by any influence (Latham, 2011). Ketchen et al. (2004) in their study found out that it has many benefits in getting prolific outcomes and variety of opinions can be tapped to provide a greater array of ideas and thereby enhance creativity in decision making.

Everyday teacher's participation in the administrative activities enhances teachers to gain a lot of experience, remove boredom, frustration and increases workers commitment, efficiency and job satisfaction. Teacher involvement in school decision making facilitate better decision because they are close to students and best decision implementer (Keung, 2008).

In summary, participatory decision making is understood as a good practice management whereby teacher are empower with greater role and responsibilities to exchange their opinions and trap new ideas and skills. Bhutanese schools teachers participate in different decision making areas such as budget, professional development, student welfare, curriculum, construction and building, planning, setting school goals and objectives and school disciplines. Involvement of teachers in those decision making areas are found to be very important and crucial for achieving school goals and objectives.

2.1.2 Participatory Decision Making Domains

Marks and Louis (1997) identified four decision making domains for teachers to participate in decision. These are school operation and management, students school experiences, Teachers work life and control over classroom instructions.

1) School operation and management:

- Planning the school building budget
- Determining the school schedule

- Determining the specific professional and teaching assignment
- Establishing school curriculum and
- Determining the content of in service program

2) Students, School experiences:

- Determining students' behavior codes
- Disciplining students and
- Setting policy on grouping students in class by ability

3) Teacher work life:

- Involvement of the school staff in making decision that affects themselves and
- Influence of teacher respondent on decision within the school that directly affect himself or herself.

4) Control over classroom instruction:

- Selecting textbooks and other instructional materials
- Selecting content, topics and skills to be taught and
- Selecting teaching techniques

Rice and Schneider (1994) had categorized 20 decisional areas into two decision making domains: School wide/managerial and Instruction/technical domain. Similarly Mohrman, Cooke, and Mohrman (1978) studied twelve decision areas related to school issues studied by Belasco and Alutto. These 12 decisional areas were categorized into two main domains: managerial domain and instructional/technical domain.

1) Managerial Domain: Under managerial domain seven decisional areas are listed

- Hiring new professional personnel
- Planning school budget

- Determining specific professional assignment
- Resolving employee grievances
- Planning new building and facilities
- Resolving problems in community groups
- Determining professional salaries

2) Instructional Domain: It consist of five decisional areas, these are listed below

- Selecting specific instructional text
- Resolving learning problems of individual student
- Determining appropriate instructional methods and techniques
- Establishing general instructional policies
- Establishing classroom disciplinary policies

In conclusion, based on the above literature review decisional areas are grouped into two main decision domains; managerial and instructional/technical domain. Managerial domain is define as school level decision related to budget, disciplinary policy, hiring new teacher, setting and revisiting schools, in-service program, determining school schedule and allocating resources to subject head. Instructional domain is defined as school level decision related to curriculum, classroom instructional techniques and material. Therefore, managerial domain and instructional domain was used as a participatory decision making variable for the study. These two variables were selected based on the intensive literature review and the relevancy felt in participatory decision making practiced in the schools of Bhutan.

2.2 The Concept of Job Satisfaction

The concept of the job satisfaction is divided into three parts; (2.2.1) Definition of job satisfaction, (2.2.2) Factors determining job satisfaction (2.2.3) and (2.2.3) Job satisfaction outcomes.

2.2.1 Definition of Job Satisfaction

Job satisfaction is the most popular variables used by the researchers to understand the employees' behaviors and attitude towards organization (Abu Taleb, 2013; Baotham, 2011). Knox and Anfara Jr (2013) said popularity of this variable is because the attitudes and feelings affect the behavior of the employees which determines the success and failure of an organization. However, Wilson and Frimpong (2004) said job satisfaction alone is not adequate in describing a complex phenomenon like employee behavior or performance.

According to Robbins (2003), job satisfaction is the differences between the amounts of reward receive and the amount of reward they deserved. Furthermore, he said person with high level of job satisfaction holds positive attitudes towards job; a person who is dissatisfied with job holds negative attitude towards job. But McShane and Glinow (2005) argued that job satisfaction is a set of attitudes about job characteristics. Employee get satisfied with some elements of job while other get dissatisfied.

As postulated by Takeda, Ibaraki, Yokoyama, Miyake and Ohida (2005), employee job satisfaction is mental and physical satisfaction. It is also determined by the attitude and behaviors of the employee which provides quality service to the people. However Akpofure, Ikhifa, Imide and Okokoyo (2006) stated that job satisfaction is an approach and stand towards one's profession or career. It is link to specific facets of the job, in relation to productivity and job performances shown from the outcomes.

As per Amzat and Idris (2012), it is an individual perception towards their profession career which is attached with their emotional expression, demonstrated towards their job. Suzuki et al. (2006) also referred job satisfaction to professional prospective that determine the services provided to the people. Yucel and Bektas (2012) said, it is an important sign of how workers feel about their jobs and understand the work behaviors such as organizational citizenship, absenteeism, and turnover.

Job satisfaction is the result of feelings and perception possessed by an employee towards his job (Chutia, 2012; Qureshi, Hayat, Ali & Sarwat, 2011). According to "Job Satisfaction" (2007) it is "a measure of how happy or pleased someone is with different aspects of the work environment or the occupation as a

whole". Kalhotra (2012) supported that job satisfaction is a pleasurable or positive emotional state resulting from the appraisal of one's job experience. It is a complex of interrelationships of likes, roles responsibilities, interaction, incentives and rewards; it has to be intimately related to all of them.

Maheshbabu and Jadhav (2012) defined job satisfaction was "a combination of psychological, physiological and environmental circumstance that makes a person to say I am satisfied with my job" or "employee's reaction to their job experience"(Panatik et al., 2012). But Daneshfard and Ekvaniyan (2012) said job satisfaction as the means or approach used to achieve personal goals. When a job fulfills an individual's expectation, the person often experience positive emotions. This positive emotion experienced by individual is referred to job satisfaction.

According to Amzat and Idris (2012), job satisfaction of teachers varies from country to country even it varies within country. For example, in Europe, both academic and non academic employees were highly satisfied with intrinsic factors such as achievement, relationship with their students, promotions and other related issues. But in USA as well as Asian and African continents, employees' job satisfactions were affected by both intrinsic and extrinsic factors. Luthan (2005) pointed out that there are three important components of job satisfaction: 1) job satisfaction is an emotional response towards work situation; 2) job satisfaction is generally determined by the extent that work outcomes fulfill or exceeds expectations; 3) job satisfaction represents or reflects several related attitudes.

Abram Maslow suggested that the main factor that caused people to join an organization, stay in it, work hard, perform well towards its goal, was actually of needs. The five hierarchy of needs are Physiological, Security and Safety, Social affiliation, Esteem and Self-actualization. The first three needs are lower level needs in the hierarchy where as esteem and self-actualization is higher hierarchal needs. When the lower needs in the hierarchy is satisfied, higher order need emerged and motivate the person to do something to satisfy it (Owens, 1991).

According to Herzberg's Two-Factor Theory (1959), people job satisfactions are influenced by two sets of factors: Motivator Factors and Hygiene Factors. Motivator factors give positive satisfaction but hygiene factors are important to ensure an employee is not dissatisfied. He categorized factors such as policy,

supervision, interpersonal relations, working conditions, and salary as hygiene factors and achievement, recognition, the work itself, responsibility, and advancement as motivators. Theory states the absence of hygiene factors can create job dissatisfaction, but their presence does not motivate or create satisfaction. Mau, Ellsworth and Hawley (2008) said, the presence of extrinsic satisfiers does not lead to true job satisfaction, but their absence can lead to dissatisfaction. Even Peršēvica (2011) retreated that job satisfaction is driven by internal and external factors. Internal factors are indentified by peculiarities of the class and interrelation between pupils and teachers. External factors are determined by so many factors which decide teachers' satisfaction with their profession such as salary, cooperation and administrative support.

In fact, job satisfaction is an emotional feelings and contentment resulted from own profession or career.

2.2.2 Factors determining Job Satisfaction

Robbins (2003) categorized four main primary factors that determines job satisfaction. The first one is a mentally challenging work. The second determinant is equitable reward next determinant is supportive working conditions and the last determinant is supportive colleagues.

1) Mentally challenging work: Employees always prefer to work where they could exhibit and use their skills and abilities. They also prefer to work where there is variety of task, freedom, and feedback of their work given by manger time to time as per their performance. So that it helps employee to grow professionally. This features make work mentally challenging. Jobs that have too little challenge create boredom, but too much challenge creates frustration and feeling of failure. Most of the employee experience pleasure and satisfaction under normal work challenge. Therefore, it is a task which is neither very challenging nor very easy for the employees; the job that gives pleasure and contentment in doing it.

2) Equitable rewards: Employees want pay system and promotion policy as they think and in line with their expectation. When pay is made as per their work demand, individual skill and community pay standard, satisfaction is likely to result.

Many employees prefer to work with less money in a less demanding job, preferred work place or payment made as per the amount of work they do. Employees get satisfied with equal pay for equal work, fair promotion and practices. Promotion provides employees an opportunity for personal growth, more responsibilities, and increased social status. Employees will experience job satisfaction if promotions are made fair and transparent as per their deservedness.

Any benefits such as pay, promotion and incentives given to the employees as per their work demand, community pay standard and individual skills and knowledge is known as equitable reward.

3) Supportive working conditions: Employees are always concerned with their work environment for both personal comfort and facilitating doing a good job. It was studied that employees always preferred the peaceful and co-existence working environment free from danger and suffocation. For instance, temperature, light, noise, and other environmental factors should not be extreme or low. Most of the employees prefer to work very close to their home, in clean and relatively modern facilities, and with adequate tools and equipments. It is a safe working environment free from danger, disturbances and closer to your home.

4) Supportive colleagues: Many employee quit job not because of money or achievement, but due to poor social interaction. Friendly and supportive co-workers lead to increased job satisfaction. Employees' job satisfaction increases when the immediate supervisor is understanding and friendly. They also prefer to work under a manager who offer praise for good performance, listen to employee's opinions and showing personal interest in them. It refers to a friends or co-workers who share skills, knowledge and give company whenever you are in need.

There are numerous factors that determine the job satisfaction of the employees; however researcher had used above four components such as mentally challenge work, equitable rewards, supportive working conditions and supportive colleagues for measuring job satisfaction of teachers in Bhutan. Based on above literature review, researcher felt that these variables are very much related to job satisfaction of Bhutanese teachers.

2.2.3 Job Satisfaction Outcomes

Robbins (2003) and Luthans (2005) assessed the impact of job satisfaction on employee productivity, absenteeism and turnover.

1) Satisfaction and productivity: Our notion towards satisfaction and productivity is if the worker is happy the productivity will be more. But many researchers concluded that there is no consistent relationship between satisfaction and productivity. Even if there is a relationship between these variables the relation will be consistently low. Satisfied employee doesn't mean that he or she is a high producer. Reward is observed to an important catalyst to make employee satisfy which lead to better performance of the employees. Further and in-depth studies are required to understand more about the relationship between satisfaction and productivity.

2) Satisfaction and Turnover: Satisfaction is negative related to turnover. It is well known that if the employee are satisfied with their job, turn over will be less. But sense of dissatisfaction will lead to absenteeism. Labor market conditions, alternative job opportunities and tenure with organization are important factors that lead to employee turnover. Even if employees are satisfied, they join elsewhere which provides better opportunities for their personal growth and development. But if jobs are difficult to get, even unsatisfied employees will not leave the job.

3) Satisfaction and absenteeism: Inverse relationship was found between satisfaction and absenteeism. When employee satisfaction increases the absenteeism decreases and when satisfaction is low the absenteeism is high. However, employees who feel that their work matters a lot have less absenteeism than those employees who did not feel this way.

In brief, employees job satisfaction can be judge by the three main factors namely the productivity of the organization, turn over and absenteeism. It was found out that there exist a positive relationship between teacher job satisfaction and productivity, turnover and absenteeism. Therefore fulfilling the need of employees' expectation is felt genuine so that it minimizes the job dissatisfaction of the employees.

2.3 Concept of Teacher Performance

The concept of Teacher Performance is divided into three parts; (2.3.1) Definition of Teachers Performance (2.3.2) Components of Teacher Performance and (2.3.3) Factors affecting teacher (Job) Performance.

2.3.1 Definition of Teacher Performance

Performance refers to the degree of accomplishment of the tasks that make up an individual's job (Rue & Byars, 1977). It is a term used to depict how well an employee performs his or her work-related duties. Performance is important to workers and employers because it inevitably influences decisions regarding promotions, terminations, merit increases, and bonuses (Caillier, 2010).

Scriven, Wheeler and Haertel (1993) defined teacher performance as teacher job activities, whereby teacher competence and abilities as well as of the context within which the teacher works is demonstrated. Teacher performance can be describe in terms of performance in teaching, lesson preparation, lesson presentation, mastery of subject matter, competence, teachers' commitment to job and extra-curricular activities and also in managerial areas such as effective leadership, effective supervision, effective monitoring of students' work, motivation, class control and disciplinary ability of the teachers (Adeyemi, 2011). In fact, performance is the way in which they get task (Jones, Jenkin & Lord, 2006).

Teacher performance referred to set of teaching behaviors consistent with education and teaching goals of a course (Cai & Lin, 2006). It is the behavior demonstrated by the teacher in the process of teaching and it is known to be related to teachers' effectiveness (Raza & Arid, 2010). But, it is always difficult to assess the effectiveness of teachers. Teaching being a noble profession, teachers have a greater role in their students' intellectual, personal and social development (Cox & Yamaguchi, 2010).

But Wang (2007) argued that teacher professional performance refers to teachers' manifestation of teaching skills or capability of a teacher to demonstrate in class with an emphasis on teachers' ability to perform instructional task. Additionally, Sarwar, Aslam and Rasheed (2010) also explained that quality of school depends upon the high performance of the school teachers in achieving their job tasks

According to Olayiwola (2011) teacher performance is a supreme art that brings positive change in the overall behavior of students. Low performance of teachers directly affects the performance of their students in external examinations. Teacher performance is one of the important factors that determine school effectiveness and learning outcomes. It was argued that the teacher effectiveness and creativity can be enhanced through pre-service and in-service training (Nadeem et al., 2011).

A good teacher performance not only satisfies the class with his prominent teaching style, but also manages time and other duties besides teaching. He/she has to teach effectively in the class with high teaching quality. Beside teaching responsibilities, teacher has to shoulder additional responsibilities, such as discipline includes managing ethics and discipline in class, motivating students, ensuring students' interaction, and maintaining a proper link with the parents of students and administration of educational institution (Akhlaq, Amjad, Mehmood, Seed-ul-Hassan, & Malik, 2010 & Hanif, 2010).

The quality of educational process and its product is unquestionably depending on teachers' job performance. The entire education of the children remains shaky if the performance of teachers is weak and ineffective. Therefore effective job performance of teachers is a must for educational improvement. (Murtaza & Siddiqui, 2011).

The job performances of teachers are many and diverse. Teachers need to manage class discipline, execute other assigned responsibilities by head. Beside this, teacher has to be regular and punctual. Teacher attitude in dealing with students must remain same without biases and partiality. Teachers have to perform a wide range of roles and responsibilities that may relate to teaching, school management, curriculum changes, educational innovations, teacher education, working with parents, and community services (Akhlaq, Amjad, Mehmood, Seed ul & Malik, 2010).

The fairness of the teacher workload is related to teachers' level of morale, commitment to school, and job satisfaction. Teachers who are satisfied with workload demonstrate higher level of moral, commitment and job satisfaction than teachers who perceived their workload as unfair. The high moral and committed teachers with job satisfaction will exhibit better teaching performance than others. It was concluded that,

the teacher satisfaction, commitment and moral are not only the performance indicators but also personnel directors (Reyes & Imber, 1992).

In brief teacher performance refers to behavior of a teacher, which exhibits self knowledge by adapting, varies means of methodologies for personal and social benefits. It is directly related to job dedication, teacher effectiveness and teacher-student interaction within the organization or institution.

2.3.2 Components of Teacher Performance

Ferris, Bergin, and Wayne (1988) conceptualized teacher job performance into seven performance dimensions. These were: 1) Relations with students; 2) Preparation and planning; 3) Effectiveness in presenting subject matters; 4) Relation with other staff; 5) Self-improvement; 6) Relations with parents and community and 7) poise.

Hasan (2004) categorized factors affecting teacher performance into two types; 1) external factor and 2) internal factor. There are many external factors that influence the students learning depending upon the type of teacher. Every teacher has different strategies of teaching depending upon the standard of the students. Despite having many external factors, teachers should come together and make workable framework by integrating internal factors. Factors that have affected student performance are the knowledge, aptitudes, attitudes, and values of a teacher.

1) Attitude: The primary attribute of a good teacher is the ability to create a warm, friendly atmosphere in the classroom. Teacher must have positive attitude towards teaching and have sympathetic attitude towards deviant children. Therefore, teacher teaching should be geared more towards the needs of the child.

2) Subject Mastery: Teacher should have in depth study in all aspects of the subjects to enrich classroom situation. In order to enrich self knowledge and update the understanding of the subject, teacher should choose the course that he/she has been teaching for many years.

3) Teaching Methodology: There are four categories into which methods of teaching can be divided. These are; teacher directed methods, student directed methods, inter active methods and problem solving method.

4) Personal Characteristics: There are many personal characteristics that teachers adapt in the classroom atmosphere. Communication has been found to be very important and affective tool in teaching competency. In order to understand the language teacher should use appropriate verbal, diagrammatic or symbolic forms and avoid technical jargon. The teacher should focus more on key concepts and vocabulary and give precise directions to students and refrain giving ambiguous directions.. It was well concluded that, the factor of subject mastery was perceived by the principals, teachers themselves and students to be at the highest level among the four factors of teachers' professional performance.

Similarly, Akhlaq, Amjad, Mehmood, Seed-ul-Hassan and Malik (2010) have identified many factors such as teach effectively, manage time, manage classroom discipline, regular and punctual, good interaction with students, parents and colleagues and attitudes which contributes for effective teacher performance.

However, teachers' performance had been broadly categorized into three major categories, i.e. Task performance, contextual performance and adaptive performance (Bakker & Bal 2010; Cai & Lin, 2006)

According to Cai and Lin (2006), teacher performance involves six dimensions, including occupational morality, job dedication, assistance and cooperation, teacher effectiveness, teacher–student interaction into two categories: These six dimensions are categorized into two high-layer factors: contextual performance and task performance. Contextual performance and task performance are not totally independent, but of stronger correlation. In teacher job performance, contextual performance influences total performance remarkably.

Task Performance: It refers to set of regulated job behaviors a teacher must do. It is also understood, when the employee meets the known expectations and requirements of his or her role specified in his or her job description (Griffin, Parker & Neal, 2007). Task performance involves patterns of behaviors that are directly involved in producing goods or service or activities that provide indirect support for the organization's core technical processes (Werner, 2000). When employees use technical skills and knowledge to produce goods or service through the organization's core technical process, or when they accomplish specialized tasks that support these core functions, they are engaging in task performance (VanScotter, 2000). According

to Emin (2009), education is negatively correlated with task performance ($r = -0.25, p < 0.01$), but positively and weakly correlated with contextual performance ($r = 0.05$).

The teachers' task performance is teacher effectiveness, teacher–student interaction, and teaching value (Cai & Lin, 2006).

1) **Teacher Effectiveness:** It refers to the behaviors teacher represents in teaching planning, teaching organizing, and expressions to teaching contents (Cai & Lin, 2006). It is positively correlated with students' learning (Stein, Fujisaki, Davis & MacLean, 2012). Teaching and learning conditions have direct impact on teaching effectiveness (Ngware & Ndirangu, 2005). It is an individual's assessment of his or her own organizational and planning abilities before taking action to achieve a certain goal (I-Hua Chang, 2012). Akhlaq, Amjad, Mehmood, Seed-ul-Hassan & Malik (2010) had categorically expressed teacher effectiveness are pre-existing teacher characteristics, teacher competence teacher, performance student learning experience, student learning outcomes, external teacher education, school organizational environment, classroom environment, curriculum, per-existing student characteristics and school-based teacher education/staff development

2) **Teacher –student interaction:** It refers to the communicative and interactive behaviors between teacher and his/her students inside or outside class (Cai & Lin, 2006). Teacher's guidance encouraged the student to express and share his ideas or identify and solve problems (Zhi-Feng Liu, Chun-Hung, Pey-Yan, Han-Chuan & Huei-Tse, 2013). The atmosphere of the relationship between teacher and student changes from impersonal and authoritarian to warm, supportive and friendly (Zhi-Feng Liu et al., 2013). The positive interaction would led to the growth of both teacher and student professionally and academically (Zhi-Feng Liu et al., 2013). The quality of teacher–student interactions is a key setting feature that has the potential to influence children's peer behavior during this developmentally important time (Amy & Robert, 2011).

3) **Teaching value:** It is the positive changes of students in every aspect caused by teaching. Teacher–student interaction refers to the communicative and

interactive behaviors between teacher and his/her students inside or outside class (Cai & Lin, 2006).

Contextual performance: It includes a set of behaviors such as occupation morality, job dedication, assistance and cooperation (Cai & Lin, 2006). It is defined as individual efforts that are not directly related to their main task function but are important because they shape the organizational, social, and psychological context that serves as the critical catalyst for task activities and processes (Werner, 2000). It is a form of discretionary behavior that demonstrates an employee's willingness to participate in the organization and interact with other members (VanScotter, 2000).

1) Job dedication : It is the behaviors teacher represents in reflecting education and teaching tasks, summarizing work experience, showing concern and love to every student, and perfecting teaching skills and knowledge to adjust himself/herself to the epochal change (Cai & Lin, 2006). It focuses on self-disciplined behaviors such as following rules, working hard, and taking the initiatives to solve problems at work (Tang & Wang, 2010). It can improve individual and organizational performance, it is often considered a highly valued employee behavior by organizations (Chung et al., 2011). The degree of employee dedication depends on employee trust in a manager in the hospitality organizations. (Gill, 2008). Job position, higher quality of working life, social dysfunction and lower stress has direct effect on job dedication (Jenaro, Flores, Orgaz & Cruz, 2011).

2) Occupation Morality: It refers to the behaviors teacher represents in obeying occupation criteria and normative disciplines, showing identification and support to organizational goals, having deep love in educational career, being enthusiastic and responsible to his/her job, etc (Cai & Lin, 2006). It is a vital ingredient in the success of the human enterprise (Wangdi, 2008). It is understood as one's attitude towards accomplishing his work rather than emotions he displays during work, which in turn affects organizational and individual objectives. It is also determined by physical, emotional and attitudinal factors (Devi & Mani, 2010). Recent research findings states that teachers were dissatisfied with the amount and type of recognition and respect they received as teachers (Mackenzie, 2007). The low teacher moral is lack of supportive leadership with declining trends in professional interaction and participative decision making (Moloney, 2009) and poor status in the

community; poor salaries poor student behavior; excessive workload; poor leadership; poor working conditions; and increasing government accountability measures also contributes to low teacher moral (Mackenzie, 2007). Morale is seen as an employee attitude toward working conditions, on-the-job services, personnel policies, and relationships with super ordinates (Reyes & Imber, 1992).

3) Assistance and cooperation: It refers to the behaviors teacher represents in helping colleague initiatively, showing nicer team spirit, having nicer cooperation with students' parents, and being genuine to others (Cai & Lin, 2006).

The components of teacher performance is diverse and many. It is categorized into two groups basically task performance and contextual performance. However, for this study researcher has selected three variable attributes based on literature review and the performance exhibit by Bhutanese teachers. These attributes are job dedication, teacher effectiveness and teacher-student interaction. These three attributes are the core components of teacher job specification as per the performance management system (PMS) of Bhutanese teachers.

2.3.3 Factors affecting Teacher Performance

According to Uthawornying (2002, cited in Naseer, 2010), performance depends on two factors- motivation and ability. The motivation again depends on physical and social conditions and ability depends on intellectual ability, experience and education or training. Experience may have a direct or indirect impact on job performance. Increase in experience may produce increase in job knowledge, which leads to improved job performance (Emin, 2009).

Rue and Byars (1977) said the performance of the employee is affected by a lack of time, in adequate work facilities and equipments, restrictive policies, lack of authority, lack of cooperation from others, insufficient information, type of supervision, timing and even luck. For instance a skillful and motivated machine operator cannot be productive and useful without good working machine and proper raw materials.

Dorji (2007) carried out a study of teacher morale and motivation among 50 in-service teachers in Bhutan. The results have shown that the key factors contributing to low teacher morale and motivation were: (a) heavy workload and

disproportionate remuneration; (b) too (many) expectations with too little support; (c) lack of recognition and acknowledgement; (d) unfair placement and training opportunities; (e) public image and social status; and (f) lack of policy support.

According to Educare reports (2009), 286 Bhutanese teachers were questioned about the morale level, 3% of the teachers moral level was very high, 21% of the teachers moral level was high only, 61% of the teachers moral level was low and 12 % of the teachers moral level was very low. But Wangdi (2008) said, overall teacher moral under Trashigang district, Bhutan was moderately high ($M=2.88$).

Herzberg motivator- hygiene two-factor theory distinguishes human relations and motivation. The motivators such as challenging work, recognition, responsibility, achievement and work itself are intrinsic factors. Hygiene factors such as status, job security, salary and fringe benefits are extrinsic factors (Amzat & Idris, 2012).

Emin (2009) said poor workplace conditions (physical efforts, environmental conditions, and hazards) result in decreasing employee performance consisted of following organization rules, quality, cooperating with coworkers to solve task problems, concentrating the tasks, creativity, and absenteeism.

Sarwar, Aslam and Rasheed (2010) found eleven factors affecting the high job performance of university teachers of Islamia University of Bahawalpur, Pakistan. These factors are lack of teaching experience, overburden, strict evaluation, ambiguous job description, lack of training, deficiency of material and supplies, communication gap between senior and junior staff, student counseling, maintaining class room discipline, assessing students' work, least expectations for the career in teaching and behavior of the students with beginning teachers.

Akhlaq, Amjad, Mehmood, Seed ul, et al. (2010) study identified that stressful teacher demonstrate over commitment, inability to relax and concentrate, rushing through speeches, dissatisfaction over promotion/advancement prospects, frustrations about job and people's behavior, role ambiguity, feelings of insecurity, depression, anxiety, sleep disturbances, mental and physical exhaustion, blood pressure and other physiological problems. These factors have direct effect on teacher job performance.

Chansirisira (2012) research concluded four core competencies factors, which include teamwork, self-development, achievement motivation, and service mind had positive effects on work efficiency. The findings thus emphasize that all core competencies affect the performance efficiency of the civil service teachers and educational personnel in the Northeastern region of Thailand.

According to the above literatures reviewed teacher performance is affected by so many factors such as lack of time, in adequate work facilities and equipments, restrictive policies, lack of authority, lack of cooperation from others, insufficient information, type of supervision and timing. Beside this Bhutanese teachers are genuinely affected by teacher deployment, career advancement and training opportunities and mismatch between workload and incentives. The performance of teachers could be increase only if needs and demands are address accordingly.

2.4 Related Research to Teacher Performance

Related research to teacher performance is divided into two parts; (2.4.1) participatory decision making, job satisfaction and teacher performance and (2.4.2) job satisfaction and teacher performance.

2.4.1 Participatory Decision Making, Job Satisfaction and Teacher Performance

Sukirno and Siengthai (2011) concluded that participative decision making affect significantly on lecturer performance ($\beta = 0.219; p < 0.000$) in higher education institutions in Indonesia. It was strongly recommended that educational leaders should encourage lecturers to participate both emotionally and physically in decision making related issue such as school operations and management, students' school experiences, teachers' work life and control over classroom instruction to increase lecturer and university performance.

Furthermore, Mualuko, Mukasa and Judy (2009) examined the extent to which teachers are involved in school decision making process in comparison to their

desired extent of participation. The result of their study found that teachers have great desire to participate in school decision making. Researchers said in order to increase the performance of lecturers and ensure the quality of decision the lectures should be involved in school decision making process.

Saad (2012) also studied on the effects of teachers' participation in decision making on commitment. Teachers' participation in decision making about lesson planning had a significant relationship with loyalty and willingness to remain in school. But teachers' participation in curriculum management had a good relationship with turnover. Beside this, a strong influence had showed in teachers' participation in decision making about lesson planning. For that reason, teachers' positive participation in decision making would eventually affect the teachers' commitment in decision making at the school.

Samkange (2012) studied on teacher involvement in decision making for school administrator and management in Zimbabwe. The area of studies were financial management, conflict management, resources allocation, staff meeting agenda, teacher supervision, sports administration, syllabus interpretation and organizing school functions. The study found out that teachers were involved in decision making areas like curricular, lesson planning, preparation and presentation, syllabus interpretation and organizing school functions. But majority of the teachers were deprived from finance, supervision, resource allocation and conflict management.

A study done by Sarafidou and Chatziioannidis (2013) concluded that teacher participation in decision making would increase the levels of job satisfaction, and promote a sense of responsibility and commitment to organization. Their study also revealed that teachers' involvement in decision making was quit high in students' and teachers' issues, but low in managerial decisions. High participation in all three decision making domains could be due to positive perceptions of the leadership and collegiality components in schools. Teacher sense of efficacy and job satisfaction was the main attributes for participating in decisions concerning teachers' issues. However, teachers' job satisfaction was not found to be associated with teachers' levels of decisional deprivation and the impact of their actual involvement in decision.

Muindi (2011) examined the relationship between participation in decision making and job satisfaction among academic staff in public University of Nairobi. The

study adopted a descriptive survey research design. The population of the study was all non-management members of academic staff at the school of Business, University of Nairobi. The study found out that the employee's level of satisfaction was directly related to the level of participation in decision making. A significantly strong positive correlation was found between job satisfaction and participation in decision-making ($\rho=0.888$). Similarly, a positively strong correlation between participation in decision-making and job satisfaction was found in relation to general working conditions ($\rho=0.640$);

Abahumna (2010) studied on the level of teacher participation in decision making process at higher educational institute in Adama University, Ethiopia. He said benefits of involving teachers in decision making are limitless. His study found out that overall satisfaction level of teaching staff was low, where as desire level of the staff to participate is significantly very high. It was recommended that school head should create enough opportunity to share the responsibilities among teachers. Furthermore, researcher suggested that the allocation of task should be based on the interest of the individual teachers through participatory decision making.

Cheng Chi (2008) contended that teachers have greater desire to be involved in instructional decision than in curricular and managerial decision domain. Furthermore, decision deprivation was greater in the managerial and curricular domains than in the instructional domain. Teachers felt that they were insufficiently involved in school based curriculum and managerial decision that involved human resources, finance strategic management. Participation in curriculum and management was found to be related to job satisfaction, whereas instructional domain was related to work load. It was understood that teachers' participation in instructional decision domain simply increases their workload. Therefore, teachers did not want to participate in decision making. In addition, author argued that involving teacher in decision making process is an effective management strategy. This would satisfy teachers' self-esteem and self actualization need which ultimately led to job satisfaction and increased commitment. Keung (2008) study also revealed that teacher participation in curriculum decision making increase job commitment and participation in the instructional domain increases workload of teachers. Teacher

participation in decision making in the managerial and curricular decision domains is correlated to teachers' workload.

Another study conducted by Kipkoech and Chesire (2011) revealed that teachers were involved in management decisions making domain, but very less. Most of the managerial decisions were decided by school heads; however, decisions concerning students were left to the teachers. The deprivation of teacher participating in decision making had led to inefficiency of school management in secondary schools.

According to David and Maiyo (2010) study, crisis in the schools are mostly resulted due to lack of teachers and students participation in school decision making. Poor management would disturb the smooth functioning of the organization. They studied on the participation in decision making by secondary school students in Mwala district, Kenya. It was concluded that students participated least in decision making concerning curriculum and instruction, and students, management and welfare. It was found out that 95% of the students indicated that they would like to participate more in decision making. Since they were not involved in decision making, it may result to school disturbance and poor performance.

Akhlaq, Amjad, Mehmood, Seed ul, et al. (2010) confirmed that teacher performance is affected by lack of promotion and advancement opportunity, poor status and respect in teaching profession and in inadequate salary. Addition to this, it was also affected by poor recognition for the extra work, students discipline problems in classroom, and monitoring pupil behavior besides teaching. Furthermore, Shah, Musawwir Ur, Akhtar, Zafar and Riaz (2012) expressed, teacher's participation in the decision making process may make them more determined, and keen towards working in the Institution.

Mawoli and Babandako (2011) studied on academic staff level of motivation, dissatisfaction and performance at work. The study revealed that staff involvement in decision making had resulted to job satisfaction among staff members. The level of staff motivation in an academic setting was found to be very cordial and conducive. Therefore, the academic staff's job performance in terms of teaching is very high. Mark and Louis (1997) also found out that, participation in school decision making can enhance teachers' commitment, expertise, and effectiveness. Amzat and

Idris (2012) said, the ability to make effective decisions is vital to the successful performance of university academic staff as a whole.

2.4.2 Job Satisfaction and Teacher Performance

Relationship between job satisfaction and job performance became a hot topic for many researchers (Yanhan, 2013). According to Žemguliene (2012), there is little empirical support for the concept that job satisfaction causes job performance. However, Fisher (2003) study confirmed that increasing employee job satisfaction will have a positive effect on job performance. Increasing job satisfaction contributes significantly towards an increase in organizational commitment (H. Khan, Razi, Ali & Asghar, 2011; Nagar, 2012) and positively related performance (Peng, 2012).

Grady (1984) studied on the relationship between job satisfaction and teacher performance of vocational agriculture teachers in Louisiana. A total of 50 teachers were randomly selected for their study. His study revealed that higher job satisfaction was found in smaller schools and for more experienced teachers. Teachers were more satisfied with intrinsic job factors (i.e. Social Service, Moral Values, and Creativity) than extrinsic job factors (i.e. Company Policies and Practices, Advancement, and Compensation). However, teacher performance rating done by principal indicated that teacher should possess sound technical knowledge related to vocational agriculture than skillful in classroom teaching. Findings revealed that teacher performed better if they are satisfied with intrinsic factors.

Brumback (1986) studied on relationship between teacher job satisfaction and productivity as reflected by student academic performance. He study concluded that there was a significant difference between the mean score of teacher with high job satisfaction and teacher with low job satisfaction. Furthermore, teacher satisfaction with recognition received on the job was significantly related to student academic performance. Therefore, researcher recommended to increase the intervention design studies with recognition to boost teacher satisfaction to increase the productivity of the students (i.e. academic excellence).

Durecki-Elkins (1996) examined the relationship between teachers' job satisfaction level and performance appraisals. The sample for the study was elementary middle and high school teachers in three suburban school districts in one

county. Both non academic and academic teachers were selected for the research to minimize the bias. As per their findings job satisfaction was not related to performance outcomes on job appraisals. Principal or supervisors who could provide guidance and support to the teachers are more likely to experience higher levels of job satisfaction. Furthermore, Elementary, middle/junior high, and high school teachers differed significantly in their perceptions of process time, assessment input, and the appraiser as improvement resource.

Nguyen, Taylor and Bradley (2003) confirmed that the level of job satisfaction is determined by factors like pay, job security, promotion prospects, fringe benefits and the importance attached to the job. Balasundaram and Valeriu (2010) study also concluded that the employee job satisfaction due to above facets (i.e. high level of fair promotion, reasonable pay system, appropriate work itself and good working condition) would led to high level job performance. Furthermore, Chen (2010) study concluded that teachers were more satisfied with working conditions, leadership and opportunities for collaboration, but dissatisfied with their income workload and stress. These factors have contributed teachers to leave or move the teaching job.

Adeyemi (2011) investigated the relationship between teachers' job satisfaction and teachers' job performance in Secondary Schools in Ekiti State, Nigeria. The population for the study consists of 170 junior and 170 senior secondary schools. The study revealed that teachers' job satisfaction and teacher job performance was at a moderate level in the schools. Teachers' job satisfaction was found to be same in all schools but teachers' job performance was at a higher level in senior secondary schools than in junior secondary schools.

Karthik and Venkatesh (2011) expressed that teacher pay with its performance not only improves student learning outcomes but is also likely to be popular among teachers. Atkinson et al. (2009) study revealed that financial incentives have positive impact on teacher's performance. Furthermore, Shah et al. (2012) found reward and recognition, supervision and work itself has positive effects on the job satisfaction. Khan et al. (2011) said low level of job satisfaction severely effects on the employee dedication and the accomplishment of organizational objectives and performance.

According to Hussain, Khan Sadozai and Malik (2011), job satisfaction has a strong positive relation with teaching behavior. This relationship was recommended to maintain because it has a positive impact on academic achievements of the students.

Singh (2012) studied on the effect of occupational stress and job-satisfaction of secondary school teachers in relation to their professional commitment. The sample of 200 male and 200 female teachers were selected from 400 secondary schools. Result revealed that there was no significant correlation between job satisfaction and professional dedication in secondary school teachers in Bikaner region. Furthermore, no significant correlation was found between job satisfaction and occupational stress in secondary school teachers. Female teacher average job dedication was found to be 45% and average job dedication of teachers was about 41%. However, 30.25% of teachers were found with high job dedication

Knox and Anfara (2013) said teachers with high job satisfaction always try to improve their teaching efforts and engage in continuing education. Qureshi et al. (2011) noted that, employee's performance are positively related with the job satisfaction, the motivated employee working on the behalf of the organization not for oneself would give better output to the organization.

Abu Taleb (2013) revealed that teachers' job satisfaction also varies upon the level of education. His findings publicized that the most satisfied with their jobs are those teachers with bachelor's degree, followed by diploma holders and finally master degree. Author further said, the lower level of job satisfaction could be due to insufficient skills and knowledge acquired in their training course which makes them incompetent. Highly satisfied teachers are those teachers who underwent rigorous 4 year training program. Therefore teachers with high job satisfaction have high job performance.

Justine (2011) studied the nature of working conditions under motivational practices on teachers' performance in secondary schools in Jinja district, Uganda. The target population was 225 and the sample size of the participants was 166. His study found out that 59.20% of the respondents ($M= 3.55$) favored nature of working conditions. Good working conditions were found necessary for all employees for their effective performance in institutions. The nature of working conditions was still

constructive in some institutions and this affected the actual performances in schools. Good working conditions were therefore, pertinent for all employees' performance in any institutions.

The above relevant findings could be concluded that there was an existing of a positive relationship between job satisfaction, participatory decision making and teacher performance. The summary of the findings are briefly explained in the following table.

Table 2.1 Summary of related research to Teacher Performance

Variable	Researcher(s)	Relation and Findings
Participatory Decision Making(PDM)	Cheng Chi (2008)	It will satisfy teachers' self-esteem and self actualization need which ultimately led to job satisfaction and increased commitment.
	Mualuko, Mukasa, and Judy (2009)	PDM helps to motivate teachers performance
	Abahumna (2010)	PDM has immense benefit to teachers as well as organizational.
	Sukirno and Siengthai (2011)	Significant relationship was found between PDM and lecturers performance
	Kipkoech and Chesire (2011)	PDM enhance the efficiency and productivity of the organization.
	Saad (2012)	It helps to build teachers' commitment.
	Sarafidou and Chatziioannidis (2013)	Increases level of job satisfaction and sense of responsibility and commitment.

Table 2.1 Summary of related research to Teacher Performance (cont.)

Variable	Researcher(s)	Relation and Findings
Job Satisfaction (JS)	Lovett (1982)	Small relationship exist between job satisfaction and first year teacher performance
	Grady (1984)	Higher JS and performance was found in smaller schools and for more experienced teachers
	Brumback (1986), and Chutia (2012)	JS was significantly related to student academic performance.
	Adeyemi (2011)	Moderate relationship was found between JS & TP.
	Singh (2012)	No significant correlation between JS and teacher professional commitment was concluded.

2.5 Concept of Linear Structural Relationship Model

The concept of Linear Structural Relationship model is divided into four parts; (2.5.1) Definition of Structural Educational Modeling, (2.5.2) Structural equation model matrix notation (2.5.3) Parts of Model, and (2.5.4) .The stages involved in Structural Equation Modeling.

2.5.1 Definition of Structural Equation Modeling

According to Reisinger and Turner (1999), “Lisrel stands for Linear Structural Relationships and is a computer program for covariance structure analysis”. As per Keith (1993) Lisrel is also know by different names--analysis of covariance structures, latent variable path analysis and causal analysis; statistical technique and

powerful explanatory method of testing the fit of data to a substantive theoretical model. It was introduced by Joreskog and Van Thillo in 1972.

Chi Keung (2008) described SEM was a set of statistical methods that builds relationships between one or more independent variables and one or more dependent variables to be examined. Structural Equation Modeling (SEM) expresses the linear causal relationship between latent variables. It is a powerful technique for effectively dealing with two or more variables which are highly correlated. Ceccatelli, Marianacci, and Tateo (2010) said, it was a mathematical buildup that connects dependent variables and the independent variable resulting in a structural equation.

Diamantopoulos (1994) stated that, it was a computer programme for covariance structure analysis, which builds a structure among latent and observed variables. It can distinguish between observed (measured) variables and unobserved(latent) variables (Cavusoglu, 2012). It can solve research problem related to relationship between latent constructs which are measured by observed variable (Nicholas, 1996). It is also applicable to both experimental and non-experimental data(Lei & Wu, 2007), it allows more than one endogenous variable (Cavusoglu, 2012).

2.5.2 Structural equation model matrix notation

X	=	E_{ke}	=	measured independent variable
Y	=	W_i	=	measured dependent variable
Z	=	X_i	=	latent exogenous construct explained by x -variables
η	=	E_{ta}	=	latent endogenous construct explained by y -variables
δ	=	Delta	=	error for x -variable
ϵ	=	Epsilon	=	error for y -variable
ζ	=	Zeta	=	Disturbance for endogenous variables
ΔX	=	Lambda X = LX	=	Loading for exogenous variables
ΔY	=	Lambda Y = LY	=	Loading for endogenous variables
Γ	=	Gamma	=	GA = endogenous Causal path from exogenous to
β	=	Beta	=	BE = Causal path

ϕ = Phi = PH = Variance and covariance of exogenous latent variables

ψ = Psi = PS = variance among Endogenous disturbance, c endogenous disturbance

$\Theta\delta$ = Theta-delta = TD = Measurement errors for exogenous variables

$\Theta\varepsilon$ = Theta-epsilon = TE = Measurement variables for endogenous variables

2.5.3 Parts of Model

SEM has two components (1) measurement model and (2) structural model. A measurement model specifies the relations between manifest (observed) variables and latent variables. A structural model specifies the relationship between the latent variables. When two models are combined, they form a SEM (Toe, 2010). The following illustration provides the concept of SEM.

Linear Structural equation model = measurement model + structural equation model

1) Measurement model

$$\mathbf{X} = (\Lambda_x)(\xi) + \delta$$

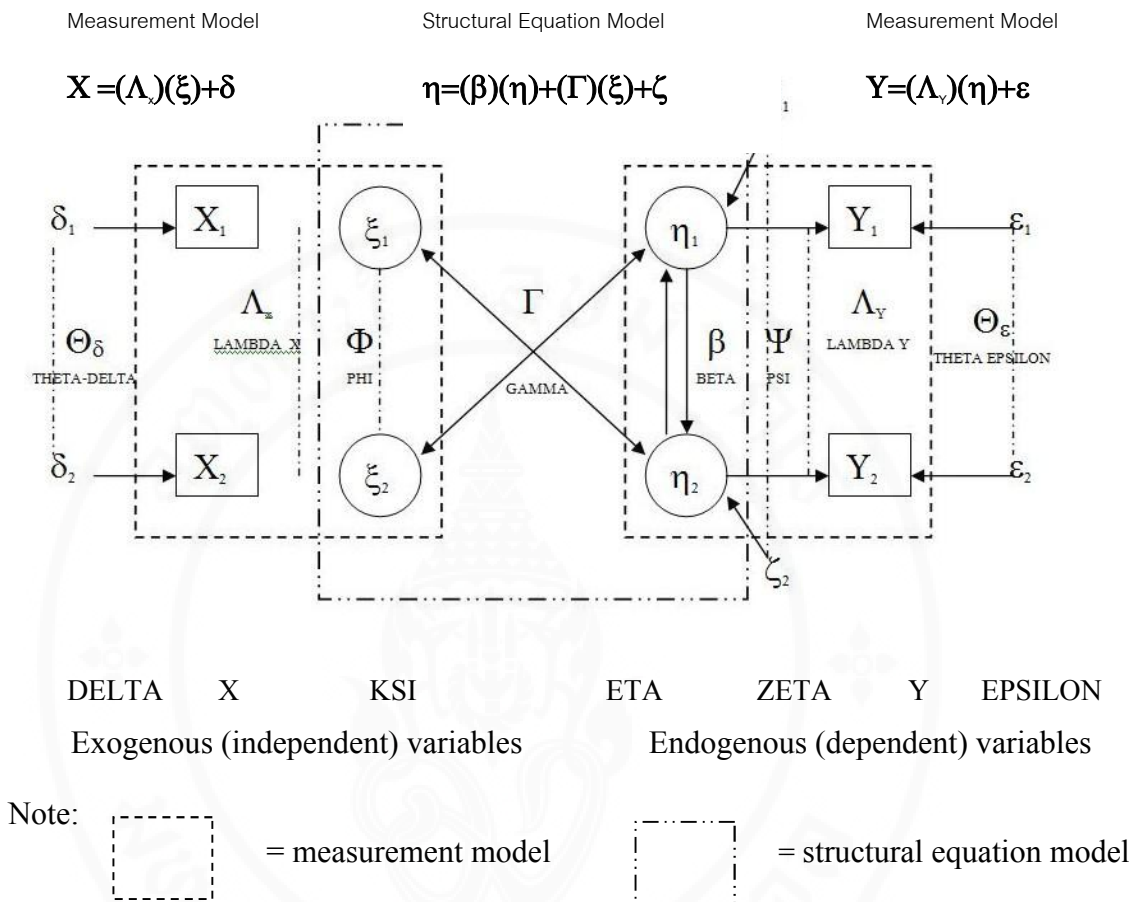
$$\mathbf{Y} = (\Lambda_y)(\eta) + \varepsilon$$

2) Structural equation model

η Mean latent endogenous variable

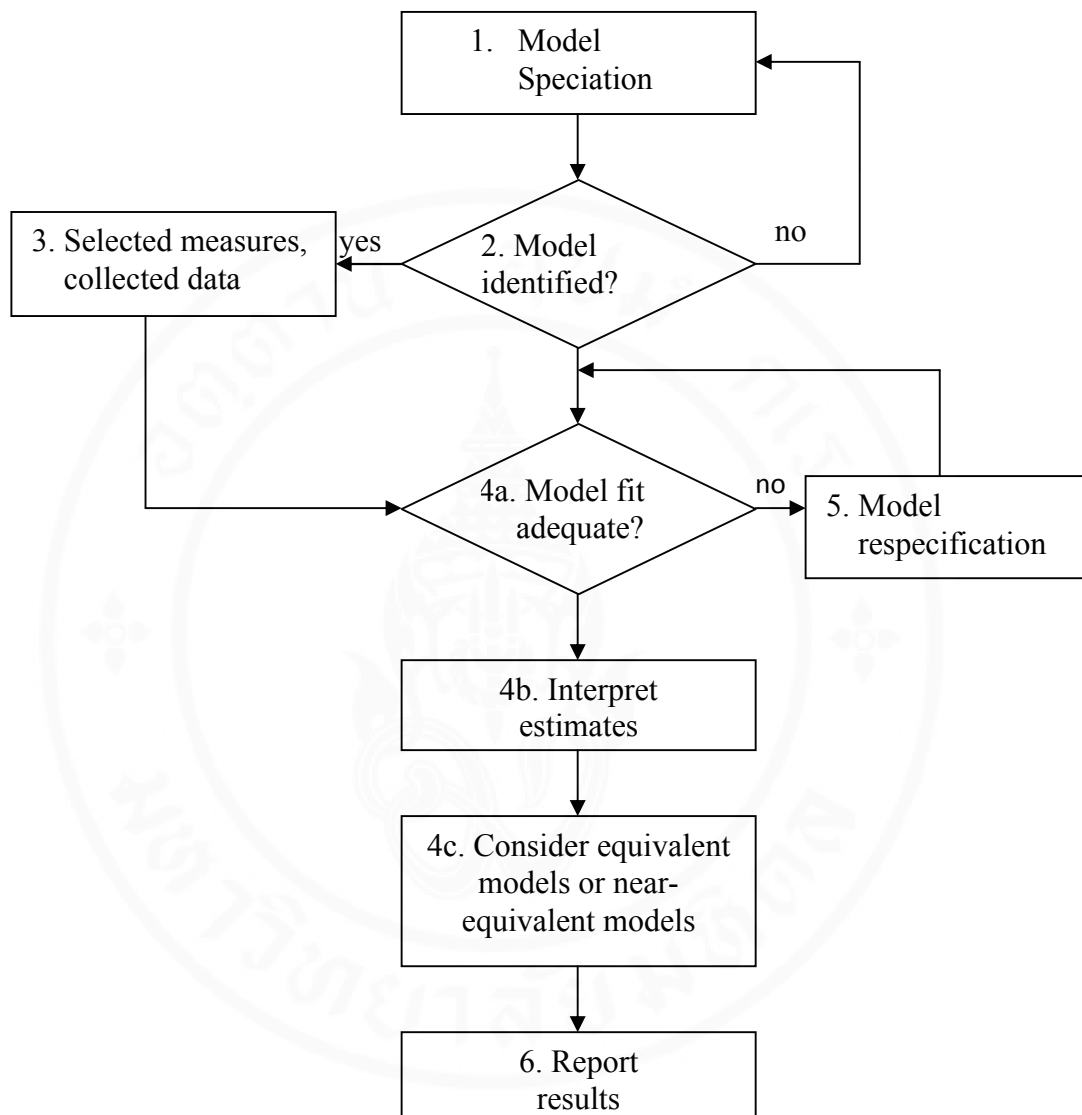
ξ Mean latent exogenous variable

$$\eta = (\beta)(\eta) + (\Gamma)(\xi) + \zeta$$



2.5.4 The stages involved in Structural Equation Modeling (SEM)

There are six stages involved in the development of SEM (Kline, 2011). They are (1) Model Specification (2) Model Identification (3) Model estimation (4) Model fit (5) Model modification and (6) Model interpretation.

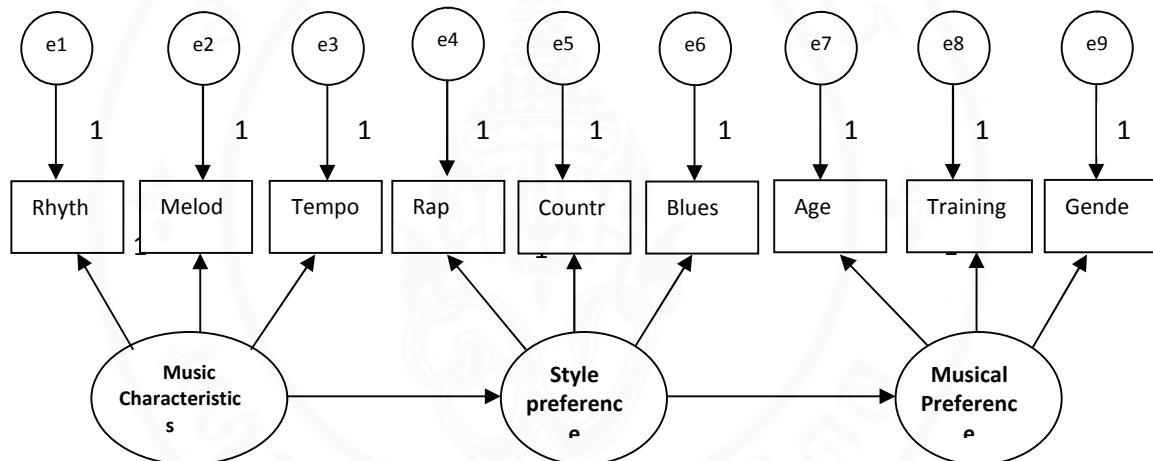


Source: Principles Practice Structural Equation Modeling 3rd edition, Kline (2011)

Figure 2.1 Six Stages of SEM

1) Model Specification: It is the representation of hypotheses in the form of structural equation model. So, first stage starts with model diagram with graphical symbols. In this stage researcher draws a conclusion of cause and effect of variables. He or she decides which variables to be included in the model and the direction of causation among those variables. It is the most important stage, because the model is the visual representation of the researcher’s theory (Keith, 1993). This stage one

focuses on the theoretical model which link between latent construct and their measurable variables (Reisinger & Turner, 1999). Relationships among the variables are represented by parameters or paths. This stage determines the parameters to be fixed, free or constrained. Fixed parameters are not estimated from the data and they are fixed at Zero (no relationship between variables). Free parameters are estimated from the observed data and it is assumed to be non-zero. Constrained parameters are specified either not to be equal to certain values or equal to another parameters in the model that need to be estimated (Teo, 2010).



Source: Structural equation modeling: a primer for music education researchers (Teo, 2010)

Figure 2.2 Structural Model

2) Model Identification: In this stage researcher has to concern whether the distinctive value for each free parameter can be obtained from the observed data. It depends on the choice of the model and the specification of fixed, constrained and free parameters. The following formula is used to determine whether a model is identified or not. $[\text{number of observed variables} (\text{number of observed variables} + 1)]/2$ (Teo, 2010). Iriondo et al. (2003) said this step verifies the parameters of the model through the observable set of variances and covariance. A necessary condition is the use of possibly over identified models where the degrees of freedom are greater than zero ($d.f. > 0$). Degrees of freedom are calculated by subtracting the number of parameters from the total number of variances and covariance in the model.

3) Model estimation: Structural equation model often has some fixed parameters and some free parameters to be estimated from the data. The parameters are regression coefficients and variance/covariance of independent variables (Lei and Wu, 2010). The goal of estimation is to produce a $\Sigma(\theta)$ (estimated population covariance matrix) that converges upon the observed population covariance matrix, S , with the residual matrix (the difference between $\Sigma(\theta)$ and S) as close to 0 or 0. In SEM computer programmes, the maximum likelihood (ML) estimator is widely used (Kline, 2011).

4) Model fit: The main purpose of model fitting is to determine how well the data fit the model (Teo, 2010). Model fit is done by comparing the hypothesized model covariance (from the specified model) with the sample covariance matrix (from the obtained data) (Lei and Wu, 2010). They should be relatively small to the size of the elements of the correlation matrices, to indicate that the fit of the models is acceptable. Schumacker and Lomax (2004, cited in Teo, 2010) suggested with three criteria. The first is a non statistical significance of the chi-square test. A non-statistically significant chi-square value indicates that sample covariance matrix and the model-implied covariance matrix are similar. Secondly, the statistical significance of each parameter estimates for the paths in the model. These are known as critical values and computed by dividing the un-standardized parameter estimates by their respective standard errors. If the critical values or t values are more than 1.96, they are significant at the .05 level. Thirdly, one should consider the magnitude and direction of the parameter estimates to ensure that they are consistent with the substantive theory. The tests of model fit indices are categorized into three fit indices; they are absolute fit, comparative fit, and parsimonious fit

Table 2.2 Test of Model Fit

Fit Index	Model Figure	Recommended Level	Reference
X^2	61.135, significant	Non-significant	Byrne (2001)
GFI	.94	>.90	Hair et al (2006)
AGFI	.89	>.90	Hair et al (2006)
SRMR	.04	<.05	Schumacker & Lomax (2004)
RMSEA	.98	<.05	Hu & Bentler (1999)
CFI	.97	>.95	Schumacker & Lomax (2004)
TLI	.95	>.90	Schumacker & Lomax (2004)

Note: GFI=Goodness-of-Fit; AGFI=Adjusted Goodness-of-Fit; SRMR =Standardized Root Mean Residual;RMAES=Root Mean Square Error of Approximation; CFI=Comparative Fit Inde,TLI=Tucker-Lewis Index

Source: An introduction to the use of structural equation modeling (SEM) in educational technology research (Teo, 2010)

5) Model Modification: Researcher will reach at this step when their fit of model is poor and not good. To adjust the model parameters, new paths are added or removed from the model or parameters are change from fixed to free and free to fixed (Teo, 2010). These must be done carefully since adjusting a model after initial testing increases the chance of making a Type I error. Any changes made to the parameter should be supported by theory (Teo, 2010). Lagrange Multiplier Index (LM) and the Wald Test are commonly used for model modification. The LM asks whether addition of free parameters increases model fitness and Wald test asks whether deletion of free parameters increases model fitness. LM should be applied before the Wald test. Most SEM software such as AMOS is capable of computing the modification indices (Teo, 2010).

6) Model Interpretation: Kline (2011) suggested model interpretation in different phase

6.1) Specification: Describe the theoretical framework that forms the basis for specification of your model. Explanation must be provided for using SEM to solve research problem identified from model and analysis.

6.2) Identification: Tally the number of observations and free parameters in your initial model. Indicate how latent variables are measured.

6.3) Data and measures: Describe the characteristics of your sample and check the evidence for score reliability and validity. Check and find out the values of the skew index and kurtosis index for all continuous outcome variables.

6.4) Estimation: Explain SEM computer tool used (and its version), for your final model. State the estimation method used, even if it is default ML estimation. Always report the model chi-square and its p value for all models tested. If the model fails the chi-square test, then explicitly state this result.

6.5) Tabulation: Report the parameter estimates for your final model. This includes the un-standardized estimates, their standard errors, and the standardized estimates.

6.6) Avoid Confirmation Bias: Describe your logical reason behind of choosing you final model as compared to other equivalent model or alternative models. Bottom Lines and Statistical Beauty: Explain the implication for the theory if the model is not retained. Explain the outcomes of your study if the model is retain

CHAPTER III

RESEARCH METHODOLOGY

This research used a causal relationship to develop and validate the causal relationship of participatory decision making and job satisfaction on teacher performance in Bhutan. This chapter is divided into five parts as follows: (3.1) research procedures, (3.2) sampling procedures, (3.3) data collection procedures, (3.4) instrumentation, and (3.5) data analysis. Following are the details explained:

3.1 Research Procedures

The study was adopted to develop and validate the causal relationship of participatory decision making and job satisfaction on teacher performance in Bhutan. The procedure for carrying out study is briefly explained below:

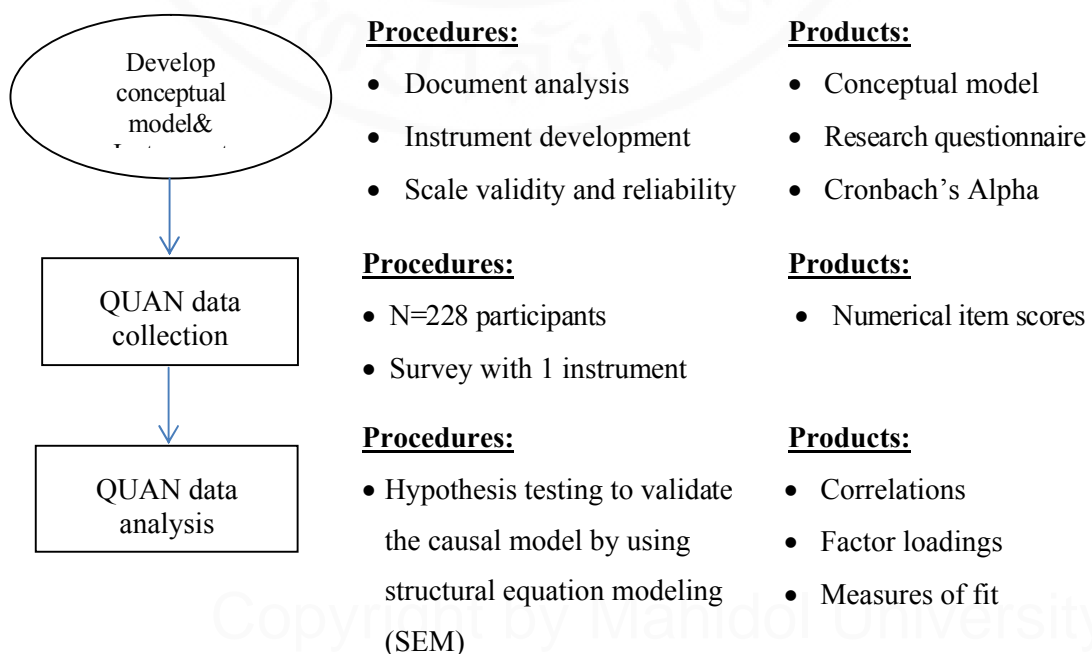


Figure 3.1 Visual Model for Research Procedures

3.2 Sampling Procedures

In this study, participants were sampled by using multi-stage sampling design. The details of sampling procedures are described into two parts, namely: (3.2.1) determination of sample size and (3.2.2) multi-stage sampling procedure.

3.2.1. Determination of the Sample Size

The present study applied structural equation modeling (SEM) to examine the causal relationship between participatory decision making, job satisfaction and teachers' performance in Bhutan. Hair et al. (1998) recommended that an appropriate sample size for SEM analysis should be in the range of 5 to 10 respondents for each parameter estimated. This study has approximately 24 parameters estimated. The appropriate number of respondents for parameter estimated above was in a range of 120 to 240 respondents. Furthermore, 20% of the sample size has been added in order to substitute for response rate. Therefore, a total of 288 teachers were adopted as sample size for this study.

3.2.2 Multi-stage sampling procedure.

The participants were recruited using multi-stage sampling based on the following three sampling units: region, district and school type.

Regions

The country is divided into 20 Dzongkhags (Districts) to facilitate equitable economic development and for administrative purposes. All the districts are located in five different regions viz. East, West, North, South and Central. With the simple random sampling technique, west and south region were selected for the study.

District

There are five districts in the west viz. Thimphu, Paro, WangdiPhodrang, Punakha and Haa and six districts in the south viz. Chukha, SamdrupJongkhar, Samtshu, Sarpang, Dagana and Tsirang. Using purposive sampling technique Thimphu and Paro from the West and Chukha from the south were selected for the study. The number of secondary schools distributed in these three districts was found high.

School type

The Bhutanese school system is categorized as primary school (Grade PP to VI), lower secondary school (Grade VII to VIII), middle secondary school (Grade IX

to X) and higher secondary school (Grade XI to XII). The data were collected from 9 secondary schools that have classes (Grade) ranging from VII to XII.

Table 3.1 Description of schools and teachers in nine secondary schools

Region	District	Number of Secondary school	Name of schools	Number of teacher	Number of sample
West	Thimphu	15	Yangchenphug	57	35
			Motithang	57	27
			Lungtenzampa	53	26
	Paro	10	Lango	47	30
			Shaba	24	20
			Shari	29	16
South	Chhukha	10	Phuntsholing	53	33
			Chhukha	36	31
			Chapcha	15	10
Total				371	228

Source: Annual Education Statistics (2012), Ministry of Education, Royal Government of Bhutan

The total number of teachers in nine secondary schools was 371. The questionnaires were distributed to all the teachers to minimize the bias and also to give opportunity to participate in this study.

3.3 Data Collection Procedures

Data was collected from the teachers of 9 secondary schools in Bhutan during the month of May and June 2013. The approval letter for the authenticity to conduct research was granted by the Faculty of Graduate Studies Mahidol University, Thailand. Then researcher obtained permission from the Director, Ministry of Education, Bhutan. After that, the packed questionnaires with approval letter from Ministry of education with covering letter for the purpose of the study and commitment letter of the ethical research was handed over to the principal of the target schools personally. Out of 288 of the targeted sample size, only 228 teacher-completed questionnaires were collected from all the target schools. The respondent rate was 95%

which was assumed to be good for data analysis. The data was analyzed by both the descriptive and inferential statistics.

3.4 Instrumentation

A questionnaire was divided into two parts (see Appendix C)

Part I

The first part of the questionnaire was used to obtain the participants background information (e.g. gender, age, educational level, teaching experience and marital status).

Part II

The second part of the questionnaire consists of 48 items. Scale responses were made on a 5-point Likert scale; 1 (*strongly disagree*), 2 (*disagree*), 3 (*don't know/neutral*), 4 (*agree*), and 5 (*strongly agree*).

- *Participatory decision making*

The following two subscales were administered, namely: Managerial (6 items) and Instructional (7 items). All items were adopted from *the Decision Making Analysis (DIA)* by Rice and Schneider (1994) with little modification to fit Bhutanese context.

- *Job satisfaction*

The following four subscales were administered, namely: Mentally challenge work (5 items), Equitable rewards (5 items), Supportive working conditions (4 items), and Supportive colleagues (4 items). All items were adopted from *the Teacher Job satisfaction Questionnaire (TJSQ)* by Lester (1987).

- *Teacher performance*

The following three subscales were administered, namely: job dedication (6 items), teacher effectiveness (6 items), and teacher-student interaction (5 items). Few items were adopted from the Teacher Job Performance by Wang (2010). However few items were modified and added to fit Bhutanese context.

The development and quality of the questionnaire

The quality of the instruments was examined as follows:

1) Content Validity

The instrument was designed to measure the variables of participatory decision making, job satisfaction and teacher performance in Bhutan. The participatory decision making questionnaires were adopted from the Decision Making Analysis (DIA) by Rice and Schneider (1994) with little modification to fit Bhutanese context. Teacher job satisfaction was adopted from Teacher Job satisfaction Questionnaire (TJSQ) by Lester (1987) with slight modification and teacher performance was adopted from Teacher Job Performance (TJP) by Wang (2010) by changing some terms and adding some items according to Bhutanese situation.

The instruments were checked by following three experts to confirm its content validity - item-objective congruence (IOC).

1.1) Dr. Sittipan Yotyodying

Division of Educational Psychology, Department of Psychology,
Faculty of Psychology and Sports Science Bielefeld University,
Germany.

1.2) Police Lieutenant Colonel Anoma Rojanaphong

Faculty of Social Sciences and General Studies,
Royal Police Cadet Academy, Sampran District, NakhonPathom
Province

1.3) Dr. Wireka Panchamanont

Bandon Sriserm School, Nan Primary Educational Service
Area Office 1.

After the content validity of the items was discussed with three experts and four thesis committee members of Mahidol University, some ambiguous, repeated and redundant questions were rectified. As a result it was found out that the highest index of item –Objective Congruence (IOC) was 1.00 and lowest was 0.33. Item with the lowest validity of 0.33 was rephrased and replaced by some words to fit in Bhutanese context. It was not deleted because this item was found very important and also the number of items for measuring this variable was very less.

2) Reliability

Pilot study was conducted to test the reliability of the three instruments in one of the secondary schools under Thimphu district. The total of 30 teachers were selected randomly to response the survey questionnaires. Cronbach’s alpha coefficient (1920) was employed to assess the reliability of the instrument and value was computed using statistical analysis.

The reliability for participatory decision making was .88, job satisfaction was .80 and teacher performance was .62.

Table 3.2 Description of table of specification

Variables	Number of items	Weight(%)	Item	IOC	Reliability (α)
1. Participatory decision making					
1.1 Managerial	6	46.15	1-6	1.00, 1.00, 1.00, 1.00, 1.00, 1.00	
1.2 Instructional	7	53.85	7-13	1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00	
Total	13	100.00			.88
2. Job satisfaction					
2.1 Mentally challenge work	5	27.78	14-18	1.00, 1.00, 0.67, 1.00, 1.00	
2.2 Equitable reward	5	27.78	19-23	1.00, 1.00, 1.00, 1.00, 1.00	
2.3 Supportive working conditions	4	22.22	24-27	1.00, 0.33, 1.00, 1.00	
2.4 Supportive colleagues	4	22.22	28-31	1.00, 1.00, 1.00, 1.00	
Total	18	100.00			.80

Table 3.2 Description of table of specification (cont.)

Variables	Number of items	Weight(%)	Item	IOC	Reliability (α)
3. Teacher performance					
3.1 Job dedication	6	35.29	32-37	1.00, 1.00, 1.00, 1.00, 0.67, 1.00	
3.2 Teacher effectiveness	6	35.29	38-43	1.00, 1.00, 1.00, 1.00, 1.00, 1.00	
3.3 Teacher-student interaction	5	29.42	44-48	1.00, 1.00, 1.00, 1.00, 1.00	
Total	17	100.00			.62

The levels of teacher participatory decision making, job satisfaction and teacher performance are classified into five levels based on Best's criteria (1977).

Lowest level	represented a mean of 1.00 – 1.80
Low level	represented a mean of 1.81 – 2.60
Moderate level	represented a mean of 2.61 – 3.40
High level	represented a mean of 3.41 – 4.20
Highest level	represented a mean of 4.21 – 5.00

3.5 Data Analysis

The data was analyzed by using package program and LISREL. The analytical method in this study was divided into two parts as follows:

Part I The analysis of participants background information

1) To study the participants' background information by using frequency and percentage.

2) To study the variables' background information by using mean and standard deviation.

Part II The analysis for research question

1) To validate the causal relationship model of participatory decision making, job satisfaction and teacher performance in Bhutan through LISREL program.



CHAPTER IV

RESULTS

The main purpose of the study was to develop and validate the causal relationship between participatory decision-making, job satisfaction and teacher performance in Bhutan. This study explored three direct causal relationships between latent variables and one indirect causal relationship between participatory decision making and teacher performance by keeping job satisfaction as a mediator. The results are presented as follows; (4.1) Demographic of the samples and (4.2) Causal relationship of participatory decision making, job satisfaction and teacher performance in Bhutan.

4.1 Demographic Characteristics of the Sample

Table 4.1 presents the general characteristics of the sample. The sample was largely comprised of female teachers (56.58%). The result indicated that 44.74 % of the teachers were between the age of 31-40 and only 5.70 % of the teachers were in the category of age level 51-60. The findings also indicated that almost two-third of the teachers (75.88%) were married. More than half of the samples (54.39%) have qualification of Bachelor Degree in education which is actually mandatory qualification requirement for the teachers in Bhutan. Only 10.52% of the teachers have a qualification of Primary Teaching Certificate. However it was very encouraging to see good number of master teacher in secondary schools with total of 19.30 %. Findings also indicated that the majority of the teachers have a teaching experience of 1-5 years forming 31.58%. The result also found out that 19.74% of teachers have experience of above 16 years. All most all participants in this study were teachers comprising of 93.86%. Only 0.88% of the respondents were principal.

Table 4.1 Frequency and Percentage of Demographic Characteristics of the Sample (n = 228)

Variables	Frequency	Percentage
1. Gender		
• Male	99	43.42
• Female	129	56.58
Total	228	100.00
2. Age		
• 21-30	80	35.09
• 31-40	102	44.74
• 41-50	33	14.47
• 51-60	13	5.70
Total	228	100.00
3. Marital Status		
• Single	50	21.93
• Married	173	75.88
• Others	5	2.19
Total	228	100.00
4. Level of education		
• Primary Teacher Certificate (PTC)	24	10.52
• Bachelor of Education (B.Ed)	124	54.39
• Post Graduate Certificate of Diploma (PGCD)	36	15.79
• Master degree	44	19.30
Total	228	100.00
5. Work experience		
• 1-5 years	72	31.58
• 6-10 years	70	30.70

Table 4.1 Frequency and Percentage of Demographic Characteristics of the Sample (n = 228) (cont.)

Variables	Frequency	Percentage
• 11-15 years	41	17.98
• >16 years	45	19.74
Total	228	100.00
6. Position		
• Principal	2	0.88
• Vice principal	6	2.63
• Teacher	214	93.86
• Master Teacher	6	2.63
Total	228	100.00

4.2 Causal relationship between Participatory Decision Making, Job Satisfaction and Teacher Performance in Bhutan

This section focused on the study of causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan. The results are divided into three parts as follows; *Part I* Descriptive statistics of observed variables, *Part II* Correlation of observed variables and *Part III* Causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan.

The following abbreviations were used for the main research variables.

Participatory decision making (PARTICI)

MANAG Managerial

INSTRU Instructional

Job satisfaction (JOBSAT)

MENT Mentally challenge work

REWAR Equitable reward

SUPPW Supportive working conditions

SUUPC	Supportive colleagues
<i>Teacher performance (TEACHERP)</i>	
JOB D	Job dedication
EFFC	Teacher Effectiveness
TEAST	Teacher-Student Interaction

Part I Descriptive statistics of observed variables

The findings presented in table 4.2 display descriptive statistics of nine observed variables for describing the distribution of all observed variables. The descriptive statistics include mean (M) and standard deviation (SD). The researcher has assigned criteria for understanding the mean score into 5 levels; lowest level represented a mean of 1.00 – 1.80, low level represented a mean of 1.81 – 2.60, moderate level represented a mean of 2.61 – 3.40, high level represented a mean of 3.41 – 4.20 and highest level represented a mean of 4.21 – 5.00.

Teacher participatory decision making has two observed variables; Managerial and Instructional variable. The mean of managerial and instructional variable was at the high level with the mean score of (3.53 - 4.14).

In case of second latent variable, job satisfaction was composed of mentally challenge work variable, equitable reward variable, supportive working conditions and supportive colleagues. The mean of all four variables were at the high level ranging from (3.43 - 4.19).

The third latent variable which was teacher performance consisted of three observed variables namely job dedication, teacher effectiveness and teacher-student interaction. The mean of job dedication variable was at the highest level ($M=4.34$). The mean of teacher effectiveness variable was at the high level ($M=4.14$). The mean of teacher-student interaction variable was at the moderate level ($M=3.31$).

The overall mean of nine observed variables were moderate to highest level. One of the observed variables of teacher performance, job dedication was at the highest level ($M=4.34$). Seven other observed variable were at the high level; equitable reward ($M=3.43$), managerial ($M=3.53$), supportive working conditions ($M=3.69$), supportive colleagues ($M=4.01$), instructional ($M=4.14$), teacher effectiveness ($M=4.14$) and mentally challenge work ($M=4.19$). One of the observed

variables of teacher performance i.e. teacher-student interaction variable was at the moderate level ($M=3.31$).

Table 4.2 Descriptive statistics of observed variables

Variables	Mean	S.D	Level
Participatory decision making			
Managerial	3.53	0.87	High
Instructional	4.14	0.60	High
Job satisfaction			
Mentally challenge work	4.19	0.67	High
Equitable reward	3.43	0.70	High
Supportive working conditions	3.69	0.57	High
Supportive colleagues	4.01	0.58	High
Teacher performance			
Job dedication	4.34	0.57	Highest
Teacher effectiveness	4.14	0.52	High
Teacher-student interaction	3.31	0.48	Moderate

Score: Lowest = 1.00 – 1.80, low = 1.81 – 2.60, moderate = 2.61 – 3.40, high = 3.41 – 4.20, highest = 4.21 – 5.00.

Part II Inter correlations among the main research variables

This part of analysis used Pearson's correlation coefficients to describe the relationships among the main research variables. Participatory decision making has two dimensions, job satisfaction has four dimensions and teacher performance has three dimensions.

The significant correlations was found between the two dimensions of participatory decision making $r = 0.46$ ($p < 0.01$). Managerial has a positive correlation with instructional.

The significant correlations was found among the four dimensions of job satisfaction ranging from $r = 0.32$ ($p < 0.01$) to $r = 0.59$ ($p < 0.01$). Supportive colleagues has a highest positive correlation with supportive working conditions ($r = 0.59$).

The significant correlations was found among the three dimensions of teacher performance ranging from $r = 0.25$ ($p < 0.01$) to $r = 0.52$ ($p < 0.01$).Teacher effectiveness has a highest positive correlation with job dedication ($r = 0.52$).

Table 4.3 Correlation matrix of the main research variables (n= 228)

Research variable	MANAG	INSTRU	MENT	REWAR	SUPPW	SUUPC	JOBBD	EFFC	TEAST
1. MANAG	1.00								
2. INSTRU	0.46**	1.00							
3. MENT	0.46**	0.40**	1.00						
4. REWAR	0.38**	0.16*	0.54**	1.00					
5. SUPPW	0.42**	0.36**	0.39**	0.44**	1.00				
6. SUUPC	0.39**	0.38**	0.45**	0.32**	0.59**	1.00			
7. JOBBD	0.21**	0.46**	0.41**	0.09	0.23**	0.44**	1.00		
8. EFFC	0.31**	0.44**	0.39**	0.18**	0.28**	0.50**	0.52**	1.00	
9. TEAST	0.10	0.16*	0.16*	0.14*	0.06	0.15*	0.25**	0.37**	1.00
Mean	3.53	4.14	4.19	3.43	3.69	4.01	4.34	4.14	3.31
S.D.	0.87	0.60	0.67	0.70	0.57	0.58	0.57	0.52	0.48

Note. Two dimensions of participatory decision making (1–2).Job satisfaction (3–6).Teacher performance (7-9).

* $p < 0.05$.** $p < 0.01$.

Part III Causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan

This part aimed to validate the casual relationship between participatory decision making, job satisfaction and teacher performance in Bhutan.

The causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan composed of two endogenous latent variables - job satisfaction and teacher performance and one exogenous latent variables- participatory decision making. Teacher performance was measured from three observed variables; job dedication, teacher effectiveness and teacher-student interaction. Job satisfaction was measured from four observed variables; mentally challenge work variable, equitable reward variable, supportive working conditions and supportive colleagues. Participatory decision making was measured from two observed variables; managerial and instructional variable.

The causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan fitted with the empirical data well, indicated by excellent fit indices Chi-square= 13.87, $df= 10$, $p = 0.18$, GFI = 0.99, AGFI = 0.94, RMR = 0.01, RMSEA = 0.04. The variables in the model explained 66.40% and 36.30% of job satisfaction and teacher performance respectively.

Factor loading of nine observed variables were statistically significant at ($p < .01$). The exogenous latent variable (participatory decision making) was measured from two observed variables; managerial and instructional variable and factor loading was 0.59 and 0.42 respectively. The endogenous latent variable (job satisfaction) was measured from four observed variables; mentally challenge work, equitable reward, supportive working conditions and supportive colleagues and factor loading was 0.44, 0.28, 0.33 and 0.40 respectively. The endogenous latent variable (teacher performance) was measured from three observed variables; job dedication, teacher effectiveness and teacher-student interaction and factor loading was 0.36, 0.47 and 0.17 respectively.

The causal relationship between participatory decision making, job satisfaction and teacher performance consisted of two endogenous latent variables - job satisfaction and teacher performance and one exogenous latent variables- participatory decision making. Participatory decision making was measured from two observed variables; managerial variable and instructional variable. The Findings from fig.4.1 confirmed that the factor loading of managerial was higher than the instructional which was 0.59 and 0.42 respectively. Therefore, managerial variable was found to be best indicator for participatory decision making.

Job satisfaction was measured from four observed variables; mentally challenge work, equitable reward, supportive working conditions and supportive colleagues. The factor loading of mentally challenge work was 0.44 which was higher than other three observed variables and lowest was equitable reward with factor loading of 0.28. Finding of this study revealed that mentally challenge work was best indicator for job satisfaction as compared to other facets of job satisfaction.

Teacher performance was measured from three observed variables such as job dedication, teacher effectiveness and teacher-student interaction. The factor loading of teacher effectiveness was 0.47 which was higher than other two observed

variables job dedication and teacher-student interaction with factor loading of 0.36 and 0.17 respectively. Teacher effectiveness was found to be best indicator for teacher performance. Over all path coefficient between all pairs of constructs and factor loadings between constructs and observed variables were statistically significant

Figure 4.1 also show the path coefficient between each pair of the constructs. However, statistics presents only the coefficient of direct effect between the constructs. In fact, participatory decision making has both direct and indirect effect on teacher performance. Table 4.4 presents the direct effect, and indirect effects of three constructs. Furthermore, correlation matrix of three constructs is presented. Regarding the effect on teacher performance, participatory decision making and job satisfaction has positive direct effect on the construct (0.82 and 0.10). However, job satisfaction has higher effect on teacher performance. Additionally, participatory decision making has a positive indirect effect on teacher performance (0.42).

Table 4.4 Validation of causal relationship between Participatory Decision Making, Job Satisfaction and Teacher Performance in Bhutan

Variables	R ²	Factor Loading	SE	t
Participatory decision making				
Managerial	0.45	0.59**	0.07	8.62
Instructional	0.49	0.42**	0.05	8.74
Job satisfaction				
Mentally challenge work	0.42	0.44**	-	-
Equitable reward	0.16	0.28**	0.05	5.34
Supportive working conditions	0.36	0.33**	0.07	5.13
Supportive colleagues	0.47	0.40**	0.08	5.30

Table 4.4 Validation of causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan (cont.)

Variables	R ²	Factor Loading	SE	t
Teacher performance				
Job dedication	0.41	0.36**	-	-
Teacher effectiveness	0.84	0.47**	0.10	4.66
Teacher-student interaction	0.12	0.17**	0.07	2.52

* $p < .05$; ** $p < .01$ **Table 4.5** Effect size from cause variables to effect variables

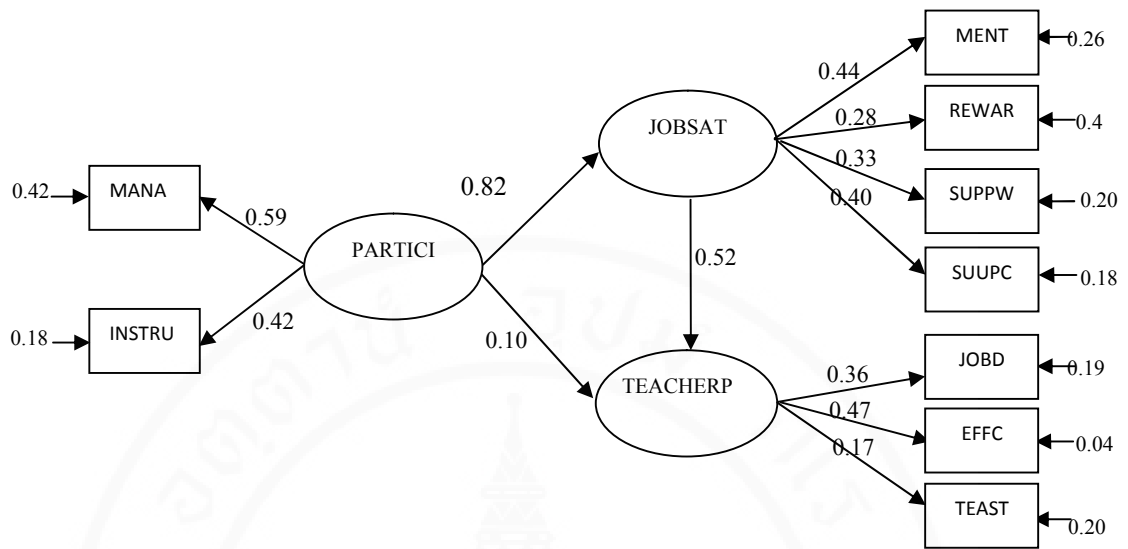
effect variable cause variables	Job satisfaction (R ² = 0.664)			Teacher performance (R ² = 0.363)		
	Total effect	Indirect effect	Direct effect	Total effect	Indirect effect	Direct effect
1. Participatory decision making factor	0.82** (0.16)	-	0.82** (0.16)	0.52** (0.13)	0.42** (0.21)	0.10
2. Job satisfaction	-	-	-	0.52** (0.24)	-	0.52** (0.24)

Chi-square= 13.87, df= 10, p = 0.18, GFI = 0.99, AGFI = 0.94, RMR = 0.01, RMSEA = 0.04

* $p < .05$; ** $p < .01$ **Table 4.6** Correlation matrix of latent variables

	JOBSAT	TEACHERP	PARTICI
JOBSAT	1.00		
TEACHERP	0.60	1.00	
PARTICI	0.82	0.52	1.00

* $p < .05$; ** $p < .01$



Chi-square= 13.87, $df= 10$, $p = 0.18$, GFI = 0.99, AGFI = 0.94, RMR = 0.01, RMSEA = 0.04

Figure 4.1 Causal relationships between Participatory Decision Making, Job Satisfaction and Teacher Performance in Bhutan.

CHAPTER V

DISCUSSION

This chapter discusses the main research findings of the study. The next section explains the main findings and reveals the answer to the research question of this study.

Research Question:

How does the causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan fit with the empirical data?

5.1 Factors affecting Teacher Performance

The findings confirmed that there are two categories of factors affecting the teacher performance. The first category is teacher participatory decision making which was composed of managerial and instructional variable. The second category is job satisfaction which was composed of mentally challenge work, equitable reward, supportive working conditions and supportive colleagues' variables. The teachers who have high performance were un-deprived from participatory decision making and job satisfaction.

5.2 Direct effect

The findings confirmed that teacher performance had been affected significantly by the direct effect of participatory decision making and job satisfaction. The most significant variable of participatory decision making was managerial than instructional variable. This finding confirmed to the previous studies like Cheng Chi (2008) whose study revealed that teachers had greater desire to be involved in

instructional decision and managerial decision making domain. Kueng (2008) findings also stated that decision deprivation was greater in the managerial domains than in the pedagogical domain. Teachers felt that they were insufficiently involved in the managerial decisions that involved human resources, finance and setting administrative structure. Kipkoech and Chesire (2011) reported that deprivation of teacher participating in decision making had led to inefficiency of school management in secondary schools. However, according to Conley (1991) and Smylie (1992) teachers tended to express more desire for participation in decision that related to classroom instruction than for participation in school level administrative and management decision. Samkange (2012) noted that teacher's involvement in decision making areas like curricular, lesson planning, preparation and presentation, syllabus interpretation and organizing school functions bring better performance.

For job satisfaction, the most significant variable was mentally challenge work, followed by supportive colleagues, supportive working conditions and equitable reward. Teacher performance had been directly affected by job satisfaction which was found higher than the affect of participatory decision making. Therefore, it could be understood that job satisfaction is the most significant variable affected teacher performance. Amongst all the variables under job satisfaction, it was found that mentally challenge work was more predominant than other three variables. The teachers who had the high performance should be a mentally challenge work person. Robbin's (2003) study agreed by stating that employees always prefer to work where they could exhibit and use their skills and abilities. They also prefer to work where there is variety of task, freedom, and feedback of their work given by manger time to time as per their performance. Thus employees grow professionally. These features made work mentally challenging. Most of the employee experience pleasure and satisfaction under normal work challenge. Shah et al. (2012) found work itself has positive effects on the job satisfaction. Hussain, Khan Sadozai and Malik (2011) also noted that job satisfaction has a strong positive relation with teaching performance.

5.3 Indirect effect

Empirical results of this study confirmed that teacher performance had been affected indirectly by the effect of participatory decision making through job satisfaction. Thus, job satisfaction is mediating in overall causal relationship. Between two variables under participatory decision making, the managerial was higher than instructional. It can be concluded that the participatory decision making which was composed of managerial and instructional had an effect on teacher performance. The teachers who had high performance had participated in participatory decision making both managerial and instructional domain.

5.4 Causal relationship between Participatory Decision Making, Job Satisfaction and Teacher Performance in Bhutan

The relationship between participatory decision making and job satisfaction was statistically significant. This result was similar to the findings of Sarafidou and Chatziioannidis (2013) and Muindi (2011) which stated that teacher participation in decision making teacher issues increase the levels of job satisfaction, and promote a sense of responsibility and commitment. Cheng (2008) argued that teacher participation in decision making has many advantages for teacher and schools such as high level of job satisfaction and greater responsibility. Furthermore, the present research findings support and are consistent with Abahumna (2010); Samkange (2012) and Khan, Ahmad, Aleem, and Hamed (2011). These researchers argued about the positive effect of teacher participation in school decision making on teachers' job satisfaction with their teaching profession. However it was cautioned that many teachers were deprived from participatory decision making in the schools which may lead to job dissatisfaction and absenteeism Robbins (2003) and Luthans (2005).

The relationship between participatory decision making and teacher performance was found statically significant. The current study confirmed other researchers like Saad's (2012); Sukirno and Siengthai's (2011); Mawoli and Babandako's (2011); David & Maiyo's (2010) and Mualuko, Mukasa and Judy's (2009), which concluded that teacher's involvement in school decision making process

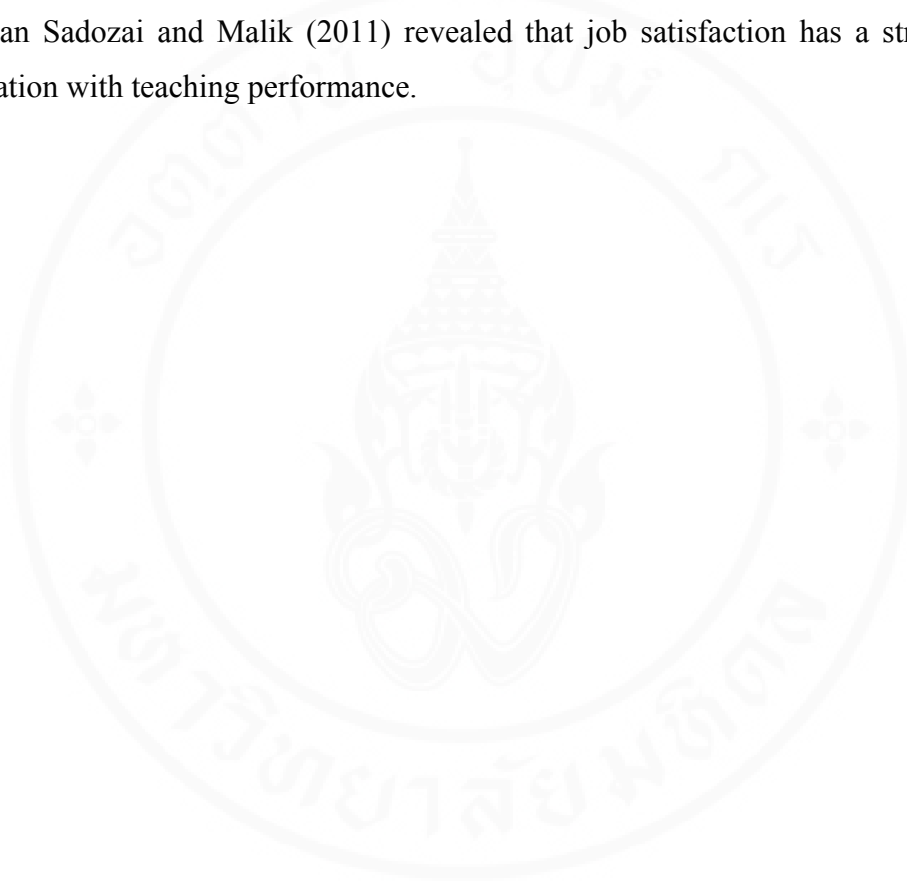
in school decision making related issue such as school operations and management, students' school experiences, teachers' work life and control over classroom instruction increased the performance of the teachers. Samkange (2012) reported that teachers' involvement only in curricula decision making areas and depriving from managerial decision making domain would affect the performance and commitment of the teachers. Mualuko et al. (2009) found that teachers had high desire to participate in school decision making. Therefore, involving teachers in school decision making will enhance the quality of decisions and their morale in their performance of duty will be higher. Providing teachers a space for participating in school decision making has positive impact on teacher performance in teacher effectiveness, job dedication and teacher-student interaction,

The relationship between job satisfaction and teacher performance was also statistically significant. These findings were similar to most of the previous studies of Abu Taleb (2013); Knox and Anfara Jr (2013); Singh (2012); Hussain, Khan Sadozai, and Malik (2011); Durecki-Elkins (1996) and Grady (1984). All researchers noted that job satisfaction had significant affect on teacher performance and productivity. Brumback (1986) findings exposed that students taught by a teacher with higher job satisfaction score higher grades in examination.

Similarly, the present research findings strongly support with Justine (2011) and Adeyemi (2011)'s studies, which concluded that career advancement, good and supportive working conditions, personal relationship with friends and children, the intellectual challenges of teachers and autonomy contributed better job satisfaction which led to better job performance. In addition, the finding was consistent with Amzat and Idris (2012) who reported conclusively on relationship between the work condition, salary, achievement colleagues and work itself and research conducted by Karthik and Venkatesh (2011) in terms of reward and recognition, supervision and work.

In addition to the above similarities the current study findings supported Nguyen, Taylor and Bradley (2003) findings which confirmed that the level of Job satisfaction is determined by factors like job security, promotion prospects, fringe benefits and the importance attached to the job. Balasundaram and Valeriu (2010) study also concluded that the employee job satisfaction due to above facets (i.e. high

level of fair promotion, reasonable pay system, appropriate work itself and good working condition) would led to high level job performance. Chen (2010) concluded that teachers were moderately satisfied with working conditions, leadership and opportunities for collaboration, but dissatisfied with their income workload and stress. These factors have contributed teachers to leave or move the teaching job. Hussain, Khan Sadozai and Malik (2011) revealed that job satisfaction has a strong positive relation with teaching performance.



CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this research was to examine the causal relationship between participatory decision-making, job satisfaction and teacher performance in Bhutan. This causal relationship consisted of two endogenous latent variables- job satisfaction and teacher performance and one exogenous latent variable- participatory decision making.

The survey data were collected by using questionnaires developed by researcher. Participatory decision making was measured from two observed variables; managerial and instructional. These variables were adopted from Mohrman, Cook and Mohrman (1978). Job satisfaction was measured from four observed variables; mentally challenge work, equitable reward, supportive working conditions and supportive colleagues. All these variables were adopted from Robbins (2003). Teacher performance was measured from three observed variables; job dedication, teacher effectiveness and teacher-students interaction. These variables were adopted from Cai and Lin (2006).

The sample consisted of 371 participants who were teachers in Thimphu, Paro and Chukha district, Bhutan. The researcher selected participants by using multi-stage sampling based on the following three sampling units: region, district and school type.

The data was analyzed by using package program and LISREL. The analytical methods in this study was divided into two parts as follows; *Part I: The analysis of participants background information* aim to study the participants' background information by using frequency and percentage and to study the variables' background information by using mean and standard deviation. *Part II: The analysis for research questionnaire* to analyze the relationships among observed variables by Pearson correlation analysis and to validate the causal relationship of participatory

decision making, job satisfaction and teacher performance in Bhutan through LISREL program.

6.1 Conclusions

6.1.1 Demographic Characteristics of the Sample

The study found that the gender was largely comprised of female teachers. The majority of teachers' age was between 31 to 40 years and followed by 21 to 30 years old range. The most of the teachers' were married. In case of level of education, the majority of teachers' had B.Ed qualification. The work experience had an approximately equal number of teachers between 1 to 5 years and 6 to 10 years.

6.1.2 Descriptive statistics of observed variables

The research finding revealed that the mean of nine observed variables were moderate to highest level. One observed variable of teacher performance; job dedication was at the highest level. Seven other observed variables were at the high level such as equitable reward, managerial, supportive working conditions, supportive colleagues, instructional, teacher effectiveness and mentally challenge work. One observed variable of teacher performance; teacher-student interaction was at the moderate level.

6.1.3 Inter-correlations among the main research variables

The findings discovered that there were inter-correlations among the main research variables. There are 36 correlations among the main research variables that ranges from $r = 0.06$ to $r = 0.59$. The significant correlation ($p < 0.01$) among the main research variables was 28 and the significant correlation ($p < 0.05$) among the main research variables was 5.

6.1.4 The Causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan

The finding confirmed that the causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan fitted with the empirical data well indicated by Chi-square= 13.87, $df = 10$, $p = 0.18$, GFI = 0.99,

AGFI = 0.94, RMR = 0.01, RMSEA = 0.04. The variables in the model explained 66.40% and 36.30% of job satisfaction and teacher performance respectively.

Teacher performance had been affected directly by the effect of job satisfaction and participatory decision making. Moreover, teacher performance had been affected indirectly by the effect of participatory decision making through job satisfaction.

6.2 Recommendations

This section focused on recommendation based on research findings. The details of the recommendations are explained as follows;

6.2.1 Recommendations from the current research

1) Teacher effectiveness was found to be best indicator for teacher performance. The ministry of education and district education should explore certain intervention to facilitate in imparting skills to teachers in the field of teaching pedagogy, teaching technique, lesson planning and organizing students' activities by conducting workshops and training.

2) The present study finding revealed that mentally challenge work under job satisfaction had high significant affect on teacher performance. Therefore, school principal should coordinate teachers to participate in mentally challenge work like assigning varieties of task, allowing teachers' freedom and autonomy, and providing constant feedback and reinforcement of their work.

3) The finding of the study discovered that teacher performance had been affected indirectly by participatory decision making through job satisfaction. As such, school principal should involve teachers in managerial and instructional decision making domains; such as while allocating duties and responsibilities for teachers, evaluation of teachers, determining students' right and welfare and revisiting school goals

4) In addition to above recommendations, school principal should consistently monitor teacher effectiveness like class observation by subject monitors and peer class observation.

6.2.2 Recommendation for further studies

1) Findings of this study confirmed that teacher participatory decision making and job satisfaction were the two factors which had affected teacher performance. Job satisfaction had affected teacher performance directly while participatory decision making had affected teacher performance indirectly through job satisfaction. As such, it would be interesting to study the mediation effect between the two latent variables.

2) The present study finding revealed that variables in the model explained 66.40% and 36.30% of job satisfaction and teacher performance respectively. Therefore, the causal relationship between participatory decision-making, job satisfaction and teacher performance in the present study should develop and validate further. This is because it may have other variables which affect job satisfaction and teacher performance. It would be interesting to review more details from concepts, theories and related researches to study the causal relationship model between participatory decision-making, job satisfaction and teacher performance.

3) In the present study, the researcher used only quantitative method to develop and validate the causal relationship between participatory decision-making, job satisfaction and teacher performance in Bhutan. It would be interesting to use mixed methods approach for the in-depth study; both quantitative and qualitative.

4) In the current study, the participants were restricted only to secondary schools having classes ranging from seven to ten. These schools were mostly located in urban and semi-urban town whereby they were not deprived from modern amenities. It would be interesting to collect data in different school sizes and school levels to study causal relationship model of these variables.

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APPENDIX A
PERMISSION

To
The Principal,

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Subject: Permission

Sir/ Madam,

As a part of partial fulfillment of master thesis program, I am conducting a research on causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan. I am very much please to inform you that your school has been included in my sampled school list. Therefore, I would like to request you to kindly allow me to collect data from your school. The information collected from your school will remain anonymous and confidential in my summary findings. A copy of intend of study send by course Director, Mahidol University, Thailand Approved letter from the Director, Ministry of Education, Bhutanand research questionnaires are attached here for your kind reference.

Thanking you

Sincerely Yours

Dorji Tshering
M.Ed student
Mahidol University
Thailand

To
The Director,
Ministry of Education,
Thimphu: Bhutan.

Subject: Requesting for Permission

Respected sir,

I am Dorji Tshering, principal of Nganglam Higher Secondary School. I am currently pursuing my master program in Educational Management at Mahidol University, Thailand. Right now I am here in Bhutan to collect data for my study which is part of my master thesis program.

The purpose of my study is to find out the causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan. The specific focus of the study is to determine how participatory decision making and job satisfaction really affects the teacher performance in Bhutan.

I know that by the mid of academic session, school must be very busy preparing for the mid-term examination and other academic and non-academic activities. However, I will make sure that my data gathering assignment do not disturb the smooth functioning of the school. Teachers will be given enough time to response to the questionnaire after working hours.. I would like to apologize that I could not adjust other time to collect data for my study, since I was given only one month (May-June) duration to collect data from nine secondary schools under three Districts. The list of schools is attached here for your kind reference. Therefore, your kind support and permission will immensely benefit my study to complete on time.

I am hopeful that this study will bring some benefits in our education system especially in the field of teacher participation in school decision making process and their job satisfaction and performance. Upon completion of my course I will submit my summary findings to your good office for your kind reference. All the respondents will remain anonymous and will remain strictly confidential in the summary findings.

A copy of intend of study send by course director, Mahidol University, Thailand and questionnaires is attached here for your kind reference. This is submitted for your kind permission.

Thanking you for your continued support

Yours sincerely,

Dorji Tshering

M.Ed Student

Mahidol University, Thailand.



འབྲུག་རྒྱལ་ཁབ་ཀྱི་འགྲུལ་གཞི་རྒྱུ་ལྷན་ཁག།
Royal Government of Bhutan
Ministry of Education
Department of School Education



Ref: MoE/DSE/01/2013 / 2464

24 May 2013

To Whom It May Concern

Mr. Dorji Tshering is undertaking a research on the topic "Causal relationship between participatory decision making, job satisfaction and teacher performance in Bhutan". This research is conducted as a partial fulfilment of his master program in Educational Management at Mahidol University, Thailand and it requires the involvement of teachers under Thimphu, Paro and Chukha Dzongkhag.

Therefore, all the concerned school heads and teachers are requested to facilitate Mr. Dorji Tshering's work as deemed appropriate.


(Karma Yonzon)
DIRECTOR

Permission

Dorji Tshering <guptsikla@gmail.com>

Sun, Apr 7, 2013 at 9:27 PM

To: permissions@sagepub.com

Respected sir,

I am Dorji Tshering doing my master program in Educational Management at Mahidol University, Thailand. I am studying on teacher job satisfaction and Teacher performance in my country, Bhutan. It is a great privilege to find and read great articles published by SAGE. However, the Development and Factor Analysis of the Teacher Job Satisfaction Questionnaire (TJSQ), Lister (1987) has been found very relevant to my research topic. Therefore, I would like to request your good office to kindly allow me to use the instrument of Teacher Job Satisfaction Questionnaire (TJSQ) for my upcoming research.

Your kind support will immensely benefit in doing my research.

Thanking you for your continued support

Anticipating for your permission

Sincerely Yours

Dorji Tshering

Binur, Michelle <Michelle.Binur@sagepub.com>

Fri, Apr 12, 2013 at 5:59 AM

To: Dorji Tshering <guptsikla@gmail.com>

Dear Dorji,

Thank you for your request. Please consider this e-mail as permission to use the material as detailed below in your upcoming research. Please note that this permission does not cover any 3rd party material that may be found within the work. We do ask that you credit the original source, SAGE Publications. Please contact us for any further usage.

Good luck with your research,

Michelle Binur

Permission

Tshering la <guptsikla@gmail.com>

Fri, Apr 26, 2013 at 8:47 PM

To: "Binur, Michelle" <Michelle.Binur@sagepub.com>

Sir,

Thank you so much for your permission granted on my first request. I hope my second request may not disturb you. Again, I am in need of another set of instrument for my third variable that is "Participatory Decision Making". I found an article **Participation in Decision Making: A Multidimensional Perspective by Allan M. Mohrman, JR, Robert A. Cooke and Susan Albers Mohrman in SAGE publication.** The items developed by Mohrman, Cooke and Mohrman were found very relevant to my topic. Therefore, once again I would like to request your good-self to kindly allow me to use your instrument for my upcoming research.

Thanking you for your continued support.

Sincerely yours

Dorji Tshering

M.ed student

Mahidol University

Thailand.

Binur, Michelle <Michelle.Binur@sagepub.com> Fri, Apr 26, 2013 at 11:17 PM

To: Tshering la <guptsikla@gmail.com>

Dear Dorji,

After looking into it, once again, you can consider this e-mail as permission to reprint the material as detailed below in your upcoming research. Please note that this permission does not cover any 3rd party material that may be found within the work. We do ask that you credit the original source, SAGE Publications. Please contact us for any further usage.

Best regards,

Michelle Binur

APPENDIX B

ITEM-OBJECTIVE CONGRUENCE (IOC) EXPERT

 Faculty of Graduate Studies
Mahidol University
Wisdom of the Land

2525 Graduate Studies Building, Sakya, Phuttamonthon
Nakhonpathom 73170, Thailand Tel./Fax +66(0) 2441 0177
<http://www.grad.mahidol.ac.th> E-mail: deangr@mahidol.ac.th

No.0517.02 (SL) **0383**

May **21**, 2013

Dear Police Lieutenant Colonel Anema Rojanaphong :

MR. DORJI TSHERING, student ID no. 5537834 SHEMUM, a M.Ed. student in Educational Management (International Program), Faculty of Social Science and Humanities, to study on the thesis entitled "THE CAUSAL RELATIONSHIP BETWEEN PARTICIPATORY DECISION MAKING, JOBSATISFACTION AN TEACHER PERFORMANCE IN BHUTAN" Lect. Dr. Siwaporn Poopon is his Major Advisor.

Recognizing your expertise in this field, we would like to request your kind assistance in assessing and adjusting the research instruments of DORJI TSHERING in order to ensure their accuracy and relevance to the research objectives. Your kind assistance will enable his to accomplish his academic plan, thus contributing to his educational success.

The purpose of the assessment of the research instruments is to validate the items (IOC).

Yours kind assistance would be much appreciated.

Yours sincerely,


(Asst. Prof. Dr. Auemphorn Mutchimong)
Acting Dean,
Faculty of Graduate Studies, Mahidol University.

Copyright by Mahidol University



Faculty of Graduate Studies

Mahidol University*Wisdom of the Land*

25/25 Graduate Studies Building, Salaya, Phuratmonthon

Nakhonpathom 73170, Thailand Tel./Fax +66(0) 2441 0177

<http://www.grad.mahidol.ac.th> E-mail: dsngr@mahidol.ac.thNo.0517.02 (SL) **0384**May **21**, 2013

Dear Dr. Sitipan Yotyodying :

MR. DORJI TSHERING, student ID no. 5537834 SHEM/M, a M.Ed. student in Educational Management (International Program), Faculty of Social Science and Humanities, to study on the thesis entitled "THE CAUSAL RELATIONSHIP BETWEEN PARTICIPATORY DECISION MAKING, JOBSATISFACTION AN TEACHER PERFORMANCE IN BIJUTAN" Lect. Dr. Siwaporn Poopan is his Major Advisor.

Recognizing your expertise in this field, we would like to request your kind assistance in assessing and adjusting the research instruments of DORJI TSHERING in order to ensure their accuracy and relevance to the research objectives. Your kind assistance will enable his to accomplish his academic plan, thus contributing to his educational success.

The purpose of the assessment of the research instruments is to validate the items (IOC).

Yours kind assistance would be much appreciated.

Yours sincerely,

(Asst. Prof. Dr. Auemphorn Mutchinwoong)

Acting Dean,

Faculty of Graduate Studies, Mahidol University.



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No.0517.02 (SL) **0385**

May **21**, 2013

Dear Dr.Wireka Panchamanont :

MR. DORJI TSHERING, student ID no. 5537834 SHEM/M, a M.Ed. student in Educational Management (International Program), Faculty of Social Science and Humanities, to study on the thesis entitled "THE CAUSAL RELATIONSHIP BETWEEN PARTICIPATORY DECISION MAKING, JOBSATISFACTION AND TEACHER PERFORMANCE IN BHUTAN" Lect. Dr. Siwaporn Poopan is his Major Advisor.

Recognizing your expertise in this field, we would like to request your kind assistance in assessing and adjusting the research instruments of DORJI TSHERING in order to ensure their accuracy and relevance to the research objectives. Your kind assistance will enable his to accomplish his academic plan, thus contributing to his educational success.

The purpose of the assessment of the research instruments is to validate the items (IOC).

Your kind assistance would be much appreciated.

Yours sincerely,

(Asst. Prof. Dr. Auemphorn Mutchimwong)

Acting Dean,

Faculty of Graduate Studies, Mahidol University.

Index of Item – Objective Congruence (IOC) of questionnaire

No	Item	Exp1	Exp 2	Exp 3	IOC
1.	I participate in developing in-service programmes for teachers in my school	1	1	1	1.00
2.	I participate while allocating duties and responsibilities to teachers in my school.	1	1	1	1.00
3.	I participate in determining students' right and welfare in my school.	1	1	1	1.00
4.	I participate in setting and revising the goals of my school	1	1	1	1.00
5.	I participate when determining the procedures to be used for the evaluation of teachers.	1	1	1	1.00
6.	I participate in allocating materials and equipments to subject departments	1	1	1	1.00
7.	I participate in evaluating how well my subject department is operating	1	1	1	1.00
8.	I participate in specifying the learning objectives for each unit of instruction.	1	1	1	1.00
9.	I participate in determining teaching techniques and methodologies	1	1	1	1.00
10.	I participate in determining teaching content	1	1	1	1.00
11.	I participate in selecting text booking and teaching aids	1	1	1	1.00
12.	I participate in developing procedures for reporting students progress to parents	1	1	1	1.00
13.	I participate in determining grading procedures for evaluating the progress of my students.	1	1	1	1.00
14.	Teaching is a very interesting work to me.	1	1	1	1.00
15.	Teaching encourage me to be creative	1	1	1	1.00

No	Item	Exp1	Exp2	Exp3	IOC
16.	Teaching provides me the chance to develop new methods.	1	0	1	0.67
17.	Teaching provides an opportunity to use a variety of skills	1	1	1	1.00
18.	The work of a teacher is always pleasant.	1	1	1	1.00
19.	I am well paid in proportion to my ability	1	1	1	1.00
20.	I receive full recognition for my successful teaching.	1	1	1	1.00
21.	I have been told I am a good teacher	1	1	1	1.00
22.	Teaching provides an opportunity for promotion	1	1	1	1.00
23.	Teaching provides me an opportunity to advance professionally.	1	1	1	1.00
24.	Working conditions in my school are good.	1	1	1	1.00
25.	Physical surroundings in my school does not clearly define its policies	0	1	0	0.33
26.	The administration in my school communicates its policies well.	1	1	1	1.00
27.	Working conditions in my school could be improved	1	1	1	1.00
28.	I like the people whom I am working with	1	1	1	1.00
29.	I get along with my colleagues	1	1	1	1.00
30.	My colleagues push me to do better work	1	1	1	1.00
31.	My colleagues give me some feedback or suggestion about my teaching	1	1	1	1.00
32.	I put extra efforts to accomplish my work on time	1	1	1	1.00
33.	I am aware of quality concepts while performing my duties.	1	1	1	1.00
34.	I have a high degree of loyalty to my school.	1	1	1	1.00

No	Item	Exp1	Exp 2	Exp 3	IOC
35.	I have clear achievable goals and standard for my positions.	1	1	1	1.00
36.	I stay few hours after class to finish my work	1	0	1	0.67
37.	I offer help to my students beside class room teaching.	1	1	1	1.00
38.	I plan my lesson plan every day for teaching.	1	1	1	1.00
39.	I use teaching aids for teaching	1	1	1	1.00
40.	I often observe my friend's class teaching	1	1	1	1.00
41.	I provide instant feedbacks to my students	1	1	1	1.00
42.	I focus on how well students are learning	1	1	1	1.00
43.	I spent time in discussing with friends on teaching techniques to be used in my class.	1	1	1	1.00
44.	I am always friendly with my students	1	1	1	1.00
45.	I interact with students with decent manner	1	1	1	1.00
46.	Students hardly ask questions to me	1	1	1	1.00
47.	I spent extra time after class discussing students' doubts.	1	1	1	1.00
48.	I talk with students only in my class	1	1	1	1.00

APPENDIX C

RESEARCH QUESTIONNAIRE

Direction: This survey questionnaire consists of two parts. A and B. Part A is for your background information and Part B is your opinion of the statement. Please tick [√] the number that best represents your feeling about the statement. All answers are kept confidential

Part I: Background Information

- | | | | |
|-------------------------|---|--|------------------------------------|
| 1. Gender | <input type="checkbox"/> 1) Male | <input type="checkbox"/> 2) Female | |
| 2. Age | <input type="checkbox"/> 1) 21-30 | <input type="checkbox"/> 2) 31-40 | |
| | <input type="checkbox"/> 3) 41-50 | <input type="checkbox"/> 4) 51-60 | |
| 3. Marital status | <input type="checkbox"/> 1) Single | <input type="checkbox"/> 2) Married | <input type="checkbox"/> 3) others |
| 4. Level of Education | <input type="checkbox"/> 1) PTC | <input type="checkbox"/> 2) B.Ed | |
| | <input type="checkbox"/> 3) PGDE | <input type="checkbox"/> 4) Master degree | |
| 5. Teaching experiences | <input type="checkbox"/> 1) 1 – 5 yrs | <input type="checkbox"/> 2) 6 – 10 yrs | |
| | <input type="checkbox"/> 3) 11 – 15 yrs | <input type="checkbox"/> 4) > 16 yrs | |
| 6. Position | <input type="checkbox"/> 1) Principal | <input type="checkbox"/> 2) Vice-Principal | |
| | <input type="checkbox"/> 3) Teacher | <input type="checkbox"/> 4) Master Teacher | |

Part 2: Teacher Performance

Please rate the following statements in your opinion by ticking (✓) in the appropriate box.

1= strongly disagree, 2= disagree, 3= I don't know, 4= agree and 5= strongly agree

Sl.No	Statements	Level of agreement				
		1	2	3	4	5
1	I participate in developing in-service programmes for teachers in my school					
2	I participate while allocating duties and responsibilities to teachers in my school.					
3	I participate in determining students' right and welfare in my school.					
4	I participate in setting and revising the goals of my school					
5	I participate when determining the procedures to be used for the evaluation of teachers.					
6	I participate in allocating materials and equipments to subject departments					
7	I participate in evaluating how well my subject department is operating					
8	I participate in specifying the learning objectives for each unit of instruction.					
9	I participate in determining teaching techniques and methodologies					
10	I participate in determining teaching content					
11	I participate in selecting text booking and teaching aids					
12	I participate in developing procedures for reporting students progress to parents					
13	I participate in determining grading procedures for evaluating the progress of my students.					
14	Teaching is a very interesting work to me.					

Sl.No	Statements	Level of agreement				
15	Teaching encourage me to be creative					
16	Teaching provides me the chance to develop new methods.					
17	Teaching provides an opportunity to use a variety of skills					
18	The work of a teacher is always pleasant.					
19	I am well paid in proportion to my ability					
20	I receive full recognition for my successful teaching.					
21	I have been told I am a good teacher					
22	Teaching provides an opportunity for promotion					
23	Teaching provides me an opportunity to advance professionally.					
24	Working conditions in my school are good.					
25	Physical surroundings in my school does not clearly define its policies					
26	The administration in my school communicates its policies well.					
27	Working conditions in my school could be improved					
28	I like the people whom I am working with					
29	I get along with my colleagues					
30	My colleagues push me to do better work					
31	My colleagues give me some feedback or suggestion about my teaching					
32	I put extra efforts to accomplish my work on time					
33	I am aware of quality concepts while performing my duties.					
34	I have a high degree of loyalty to my school.					
35	I have clear achievable goals and standard for my positions.					
36	I stay few hours after class to finish my work					
37	I offer help to my students beside class room teaching.					
38	I plan my lesson plan every day for teaching.					
39	I use teaching aids for teaching					

Sl.No	Statements	Level of agreement				
40	I often observe my friend's class teaching					
41	I provide instant feedbacks to my students					
42	I focus on how well students are learning					
43	I spent time in discussing with friends on teaching techniques to be used in my class.					
44	I am always friendly with my students					
45	I interact with students with decent manner					
46	Students hardly ask questions to me					
47	I spent extra time after class discussing students' doubts.					
48	I talk with students only in my class					

Thank you very much.

Your valuable opinions will help to improve the quality of education.

APPENDIX D

LISREL

DATE: 8/26/2013
 TIME: 9:50

L I S R E L 9.10 (STUDENT)

BY

Karl G. Jöreskog & Dag Sörbom

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The following lines were read from file C:\Documents and Settings\Miki\Desktop\Teacher
 performance Aug 26.spl:

```

PATH ANALYSI FOR TEACHER PERFORMNACE
DA NI=9 NO=228 MA=CM
LA
MENT REWAR SUPPW SUUPC JOBD EFFC TEAST MANAG INSTRU
KM
1.00
.538 1.00
.386 .437 1.00
.452 .316 .594 1.00
.405 .090 .225 .436 1.00
.387 .182 .275 .572 .521 1.00
.160 .140 .057 .154 .246 .371 1.00
.460 .377 .422 .388 .213 .307 .098 1.00
.400 .164 .361 .382 .456 .439 .158 .464 1.00
ME
4.19 3.43 3.69 4.01 4.34 4.14 3.21 3.53 4.14
SD
.67 .70 .56 .58 .57 .52 .48 .87 .60
MO NY=7 NX=2 NE=2 NK=1 C
LX=FU,FI LY=FU,FI BE=FU,FI GA=FU,FI PH=SY,FR TE=sy TD=sy
FR LX 1 1 LX 2 1
FR TE 4 3 TE 2 1 TE 6 5 TE 6 4 TE 5 4 TE 7 6
FR TH 2 5 TH 2 6 TH 1 3 TE 5 1 TE 3 2 TH 2 1 TH 1 1 TH 1 2
frly 1 1 ly 2 1 ly 3 1 ly 4 1
frly 5 2 ly 6 2 ly 7 2
frga 1 1 ga 2 1
fr be 2 1
LE
JOBSAT TEACHERP
LK
PARTICI
PD
OU SE TV EF SS MI RS FS ND=3 AD=OFF
    
```

PATH ANALYSI FOR TEACHER PERFORMNACE

Number of Input Variables 9
 Number of Y - Variables 7
 Number of X - Variables 2
 Number of ETA - Variables 2

Number of KSI - Variables 1
 Number of Observations 228

PATH ANALYSI FOR TEACHER PERFORMNACE

Covariance Matrix

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	0.449					
REWAR	0.252	0.490				
SUPPW	0.145	0.171	0.314			
SUUPC	0.176	0.128	0.193	0.336		
JOB	0.155	0.036	0.072	0.144	0.325	
EFFC	0.135	0.066	0.080	0.173	0.154	0.270
TEAST	0.051	0.047	0.015	0.043	0.067	0.093
MANAG	0.268	0.230	0.206	0.196	0.106	0.139
INSTRU	0.161	0.069	0.121	0.133	0.156	0.137

Covariance Matrix

	TEAST	MANAG	INSTRU
TEAST	0.230		
MANAG	0.041	0.757	
INSTRU	0.046	0.242	0.360

Total Variance = 3.532 Generalized Variance = 0.601381D-05

Largest Eigenvalue = 1.574 Smallest Eigenvalue = 0.085

Condition Number = 4.311

PATH ANALYSI FOR TEACHER PERFORMNACE

Parameter Specifications

LAMBDA-Y

	JOBSAT	TEACHERP
MENT	0	0
REWAR	1	0
SUPPW	2	0
SUUPC	3	0
JOB	0	0
EFFC	0	4
TEAST	0	5

LAMBDA-X

PARTICI

MANAG	6
INSTRU	7

BETA

	JOBSAT	TEACHERP
JOBSAT	0	0
TEACHERP	8	0

GAMMA

PARTICI

JOBSAT	9
TEACHERP	10

PSI

	JOBSAT	TEACHERP
	11	12

THETA-EPS

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	13					
REWAR	14	15				
SUPPW	0	16	17			
SUUPC	0	0	18	19		
JOB	20	0	0	21	22	
EFFC	0	0	0	23	24	25
TEAST	0	0	0	0	0	26

THETA-EPS

	TEAST
TEAST	27

THETA-DELTA-EPS

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MANAG	28	29	30	0	0	0
INSTRU	32	0	0	0	33	34

THETA-DELTA-EPS

	TEAST
MANAG	0
INSTRU	0

THETA-DELTA

	MANAG	INSTRU
	31	35

PATH ANALYSI FOR TEACHER PERFORMNACE

Number of Iterations = 18

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y

	JOBSAT	TEACHERP
MENT	0.438	- -
REWAR	0.281 (0.053) 5.340	- -
SUPPW	0.332 (0.065) 5.126	- -
SUUPC	0.397 (0.075) 5.302	- -
JOB	- -	0.362
EFFC	- -	0.474 (0.102) 4.659
TEAST	- -	0.168 (0.067) 2.522

LAMBDA-X

PARTICI

```

MANAG      0.586
           (0.068)
           8.617

INSTRU     0.420
           (0.048)
           8.738
    
```

BETA

```

           JOBSAT  TEACHERP
           -----
JOBSAT    - -      - -
TEACHERP  0.517    - -
           (0.236)
           2.192
    
```

GAMMA

```

           PARTICI
           -----
JOBSAT    0.815
           (0.155)
           5.254

TEACHERP  0.102
           (0.222)
           0.458
    
```

Covariance Matrix of ETA and KSI

```

           JOBSAT  TEACHERP  PARTICI
           -----
JOBSAT    1.000
TEACHERP  0.599      1.000
PARTICI   0.815      0.523      1.000
    
```

PHI

```

           PARTICI
           -----
           1.000
    
```

PSI

Note: This matrix is diagonal.

```

           JOBSAT  TEACHERP
           -----
           0.336      0.637
           (0.140)    (0.330)
           2.406      1.932
    
```

Squared Multiple Correlations for Structural Equations

```

           JOBSAT  TEACHERP
           -----
           0.664      0.363
    
```

NOTE: R_{adj} for Structural Equations are Hayduk's (2006) Blocked-Error R_{adj}

Reduced Form

```

           PARTICI
           -----
JOBSAT    0.815
           (0.155)
           5.242

TEACHERP  0.523
           (0.128)
           4.076
    
```

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Squared Multiple Correlations for Reduced Form

	JOBSAT	TEACHERP				
	0.664	0.273				
THETA-EPS						
	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	0.263 (0.041) 6.390					
REWAR	0.137 (0.030) 4.616	0.412 (0.043) 9.672				
SUPPW	--	0.070 (0.019) 3.756	0.200 (0.027) 7.359			
SUUPC	--	--	0.059 (0.021) 2.774	0.180 (0.031) 5.803		
JOB	0.065 (0.019) 3.317	--	--	0.058 (0.017) 3.365	0.191 (0.050) 3.800	
EFFC	--	--	--	0.062 (0.016) 3.751	-0.023 (0.054) -0.420	0.044 (0.086) 0.511
TEAST	--	--	--	--	--	0.008 (0.024) 0.321
THETA-EPS						
	TEAST					
TEAST	0.202 (0.023) 8.935					

Squared Multiple Correlations for Y - Variables

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
	0.422	0.161	0.355	0.467	0.408	0.836

Squared Multiple Correlations for Y - Variables

	TEAST
	0.123

THETA-DELTA-EPS

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MANAG	0.062 (0.042) 1.470	0.102 (0.037) 2.724	0.042 (0.023) 1.789	--	--	--
INSTRU	0.018 (0.025) 0.744	--	--	--	0.076 (0.020) 3.720	0.032 (0.017) 1.937

THETA-DELTA-EPS

	TEAST

MANAG - -
 INSTRU - -

THETA-DELTA

MANAG	INSTRU
0.415	0.183
(0.066)	(0.033)
6.269	5.559

Squared Multiple Correlations for X - Variables

MANAG	INSTRU
0.453	0.490

Log-likelihood Values

	Estimated Model	Saturated Model
Number of free parameters (t)	35	45
-2ln(L)	-675.023	-688.891
AIC (Akaike, 1974)*	-605.023	-598.891
BIC (Schwarz, 1978)*	-484.995	-444.570

*LISREL uses $AIC = 2t - 2\ln(L)$ and $BIC = t\ln(N) - 2\ln(L)$

Goodness of Fit Statistics

Degrees of Freedom for (C1)-(C2)	10
Maximum Likelihood Ratio Chi-Square (C1)	13.868 (P = 0.1791)
Browne's (1984) ADF Chi-Square (C2 NT)	13.542 (P = 0.1949)
Estimated Non-centrality Parameter (NCP)	3.868
90 Percent Confidence Interval for NCP	(0.0 ; 17.853)
Minimum Fit Function Value	0.0608
Population Discrepancy Function Value (F0)	0.0170
90 Percent Confidence Interval for F0	(0.0 ; 0.0783)
Root Mean Square Error of Approximation (RMSEA)	0.0412
90 Percent Confidence Interval for RMSEA	(0.0 ; 0.0885)
P-Value for Test of Close Fit (RMSEA < 0.05)	0.563
Expected Cross-Validation Index (ECVI)	0.368
90 Percent Confidence Interval for ECVI	(0.351 ; 0.429)
ECVI for Saturated Model	0.395
ECVI for Independence Model	4.841
Chi-Square for Independence Model (36 df)	1085.816
Normed Fit Index (NFI)	0.987
Non-Normed Fit Index (NNFI)	0.987
Parsimony Normed Fit Index (PNFI)	0.274
Comparative Fit Index (CFI)	0.996
Incremental Fit Index (IFI)	0.996
Relative Fit Index (RFI)	0.954
Critical N (CN)	380.907
Root Mean Square Residual (RMR)	0.00911
Standardized RMR	0.0254
Goodness of Fit Index (GFI)	0.987
Adjusted Goodness of Fit Index (AGFI)	0.941
Parsimony Goodness of Fit Index (PGFI)	0.219

PATH ANALYSI FOR TEACHER PERFORMNACE

Fitted Covariance Matrix

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	0.454					
REWAR	0.260	0.491				

SUPPW	0.145	0.163	0.310			
SUUPC	0.174	0.112	0.191	0.337		
JOB	0.160	0.061	0.072	0.144	0.322	
EFFC	0.124	0.080	0.094	0.174	0.149	0.269
TEAST	0.044	0.028	0.033	0.040	0.061	0.088
MANAG	0.271	0.237	0.200	0.190	0.111	0.145
INSTRU	0.168	0.096	0.113	0.136	0.155	0.136

Fitted Covariance Matrix

	TEAST	MANAG	INSTRU
TEAST	0.230		
MANAG	0.052	0.759	
INSTRU	0.037	0.246	0.359

Fitted Residuals

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	-0.005					
REWAR	-0.008	-0.001				
SUPPW	0.000	0.008	0.004			
SUUPC	0.002	0.017	0.002	-0.001		
JOB	-0.005	-0.025	0.000	0.000	0.003	
EFFC	0.011	-0.014	-0.014	-0.002	0.006	0.002
TEAST	0.007	0.019	-0.018	0.003	0.006	0.005
MANAG	-0.003	-0.007	0.005	0.006	-0.005	-0.006
INSTRU	-0.007	-0.027	0.008	-0.003	0.001	0.001

Fitted Residuals

	TEAST	MANAG	INSTRU
TEAST	0.000		
MANAG	-0.011	-0.002	
INSTRU	0.009	-0.004	0.001

Summary Statistics for Fitted Residuals

Smallest Fitted Residual = -0.027
 Median Fitted Residual = 0.000
 Largest Fitted Residual = 0.019

Stemleaf Plot

```

- 2|75
- 2|
- 1|8
- 1|441
- 0|8776555
- 0|43322110000
0|111222334
0|556667889
1|1
1|79
    
```

Standardized Residuals

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	-1.170					
REWAR	-1.179	-0.169				
SUPPW	-0.041	1.482	1.620			
SUUPC	0.400	1.809	0.786	-0.286		
JOB	-0.711	-1.364	-0.017	-0.033	1.325	
EFFC	1.948	-0.982	-2.347	-0.581	2.048	0.686
TEAST	0.566	0.991	-1.506	0.276	1.303	1.209
MANAG	-0.565	-1.266	1.653	1.251	-0.387	-1.069
INSTRU	-1.472	-1.921	0.925	-0.476	0.203	0.215

Standardized Residuals

	TEAST	MANAG	INSTRU
TEAST	0.000		
MANAG	-0.563	-0.411	
INSTRU	0.698	-0.690	0.285

Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -2.347
 Median Standardized Residual = -0.017
 Largest Standardized Residual = 2.048

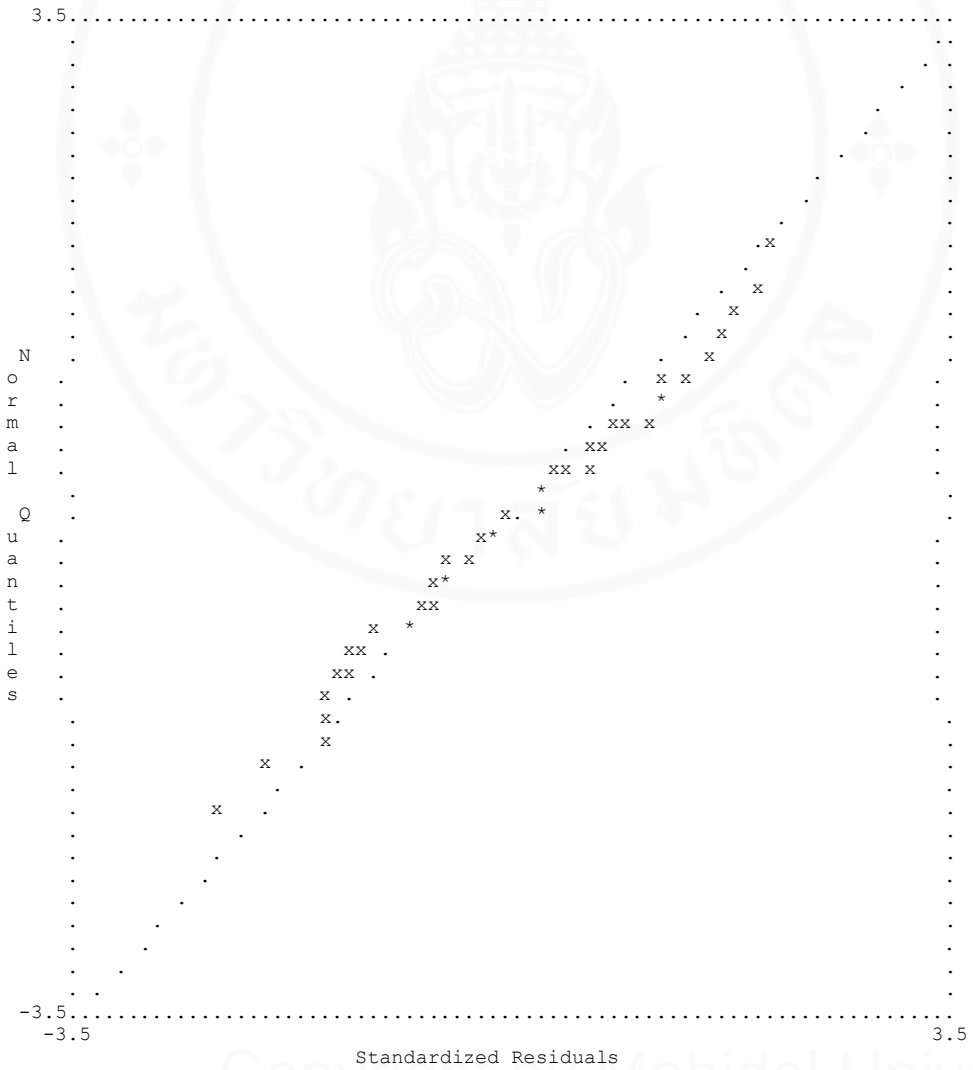
Stemleaf Plot

```

- 2|3
- 1|955
- 1|432210
- 0|776665
- 0|44320000
  0|22334
  0|67789
  1|02333
  1|56789
  2|0
    
```

PATH ANALYSI FOR TEACHER PERFORMNACE

Qplot of Standardized Residuals



PATH ANALYSI FOR TEACHER PERFORMNACE

Modification Indices and Expected Change

Modification Indices for LAMBDA-Y

	JOBSAT	TEACHERP
MENT	- -	5.449
REWAR	- -	1.850
SUPPW	- -	2.335
SUUPC	- -	0.638
JOB	0.001	- -
EFFC	0.001	- -
TEAST	0.001	- -

Expected Change for LAMBDA-Y

	JOBSAT	TEACHERP
MENT	- -	0.188
REWAR	- -	-0.067
SUPPW	- -	-0.106
SUUPC	- -	0.105
JOB	-0.016	- -
EFFC	0.015	- -
TEAST	-0.014	- -

Standardized Expected Change for LAMBDA-Y

	JOBSAT	TEACHERP
MENT	- -	0.188
REWAR	- -	-0.067
SUPPW	- -	-0.106
SUUPC	- -	0.105
JOB	-0.016	- -
EFFC	0.015	- -
TEAST	-0.014	- -

No Non-Zero Modification Indices for LAMBDA-X

No Non-Zero Modification Indices for BETA

No Non-Zero Modification Indices for GAMMA

No Non-Zero Modification Indices for PHI

No Non-Zero Modification Indices for PSI

Modification Indices for THETA-EPS

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	- -	- -	- -	- -	- -	- -
REWAR	- -	- -	- -	- -	- -	- -
SUPPW	0.057	- -	- -	- -	- -	- -
SUUPC	1.747	5.538	- -	- -	- -	- -
JOB	- -	1.171	0.612	- -	- -	- -
EFFC	5.529	1.516	1.385	- -	- -	- -
TEAST	0.345	3.528	2.531	0.793	- -	- -

Modification Indices for THETA-EPS

TEAST	
TEAST	- -

Expected Change for THETA-EPS

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MENT	- -	- -	- -	- -	- -	- -
REWAR	- -	- -	- -	- -	- -	- -
SUPPW	-0.006	- -	- -	- -	- -	- -
SUUPC	-0.029	0.052	- -	- -	- -	- -
JOB	- -	-0.021	0.014	- -	- -	- -
EFFC	0.051	-0.018	-0.021	- -	- -	- -
TEAST	-0.009	0.031	-0.021	0.013	- -	- -

Expected Change for THETA-EPS

TEAST	
TEAST	- -

TEAST - -

Modification Indices for THETA-DELTA-EPS

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MANAG	- -	- -	- -	0.601	0.005	0.009
INSTRU	- -	1.533	1.672	0.827	- -	- -

Modification Indices for THETA-DELTA-EPS

	TEAST
MANAG	0.464
INSTRU	0.659

Expected Change for THETA-DELTA-EPS

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
MANAG	- -	- -	- -	0.064	0.002	-0.003
INSTRU	- -	-0.031	0.022	-0.020	- -	- -

Expected Change for THETA-DELTA-EPS

	TEAST
MANAG	-0.015
INSTRU	0.014

Maximum Modification Index is 5.54 for Element (4, 2) of THETA-EPS

PATH ANALYSI FOR TEACHER PERFORMNACE

Factor Scores Regressions

ETA

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
JOBSAT	0.493	-0.056	0.314	0.499	-0.194	0.248
TEACHERP	0.071	-0.036	0.388	-0.669	0.580	1.820

ETA

	TEAST	MANAG	INSTRU
JOBSAT	0.092	0.127	0.342
TEACHERP	-0.043	0.122	-0.302

KSI

	MENT	REWAR	SUPPW	SUUPC	JOB	EFFC
PARTICI	0.214	-0.078	0.103	0.340	-0.224	0.117

KSI

	TEAST	MANAG	INSTRU
PARTICI	0.092	0.382	0.709

PATH ANALYSI FOR TEACHER PERFORMNACE

Standardized Solution

LAMBDA-Y

	JOBSAT	TEACHERP
MENT	0.438	- -
REWAR	0.281	- -
SUPPW	0.332	- -
SUUPC	0.397	- -
JOB	- -	0.362
EFFC	- -	0.474
TEAST	- -	0.168

LAMBDA-X

	PARTICI
MANAG	0.586
INSTRU	0.420

BETA

	JOBSAT	TEACHERP
JOBSAT	- -	- -
TEACHERP	0.517	- -

GAMMA

	PARTICI
JOBSAT	0.815
TEACHERP	0.102

Correlation Matrix of ETA and KSI

	JOBSAT	TEACHERP	PARTICI
JOBSAT	1.000		
TEACHERP	0.599	1.000	
PARTICI	0.815	0.523	1.000

PSI

Note: This matrix is diagonal.

	JOBSAT	TEACHERP
	0.336	0.637

Regression Matrix ETA on KSI (Standardized)

	PARTICI
JOBSAT	0.815
TEACHERP	0.523

PATH ANALYSI FOR TEACHER PERFORMNACE

Total and Indirect Effects

Total Effects of KSI on ETA

	PARTICI
JOBSAT	0.815 (0.155) 5.254
TEACHERP	0.523 (0.128) 4.085

Indirect Effects of KSI on ETA

	PARTICI
JOBSAT	- -
TEACHERP	0.421 (0.210) 2.001

Total Effects of ETA on ETA

	JOBSAT	TEACHERP
JOBSAT	- -	- -
TEACHERP	0.517	- -

(0.236)
2.192

Largest Eigenvalue of B*B' (Stability Index) is 0.267

Total Effects of ETA on Y

	JOBSAT	TEACHERP
	-----	-----
MENT	0.438	- -
REWAR	0.281 (0.053) 5.340	- -
SUPPW	0.332 (0.065) 5.126	- -
SUUPC	0.397 (0.075) 5.302	- -
JOB	0.187 (0.085) 2.192	0.362
EFFC	0.245 (0.104) 2.364	0.474 (0.102) 4.659
TEAST	0.087 (0.048) 1.828	0.168 (0.067) 2.522

Indirect Effects of ETA on Y

	JOBSAT	TEACHERP
	-----	-----
MENT	- -	- -
REWAR	- -	- -
SUPPW	- -	- -
SUUPC	- -	- -
JOB	0.187 (0.085) 2.192	- -
EFFC	0.245 (0.104) 2.364	- -
TEAST	0.087 (0.048) 1.828	- -

Total Effects of KSI on Y

	PARTICI

MENT	0.357 (0.068) 5.254
REWAR	0.229 (0.054) 4.232
SUPPW	0.270 (0.042) 6.437

SUUPC	0.323 (0.043) 7.515
JOB	0.189 (0.046) 4.085
EFFC	0.248 (0.043) 5.752
TEAST	0.088 (0.033) 2.654

PATH ANALYSI FOR TEACHER PERFORMNACE

Standardized Total and Indirect Effects

Standardized Total Effects of KSI on ETA

	PARTICI
JOB	0.815
TEACHERP	0.523

Standardized Indirect Effects of KSI on ETA

	PARTICI
JOB	- -
TEACHERP	0.421

Standardized Total Effects of ETA on ETA

	JOB	TEACHERP
JOB	- -	- -
TEACHERP	0.517	- -

Standardized Total Effects of ETA on Y

	JOB	TEACHERP
MENT	0.438	- -
REWAR	0.281	- -
SUPPW	0.332	- -
SUUPC	0.397	- -
JOB	0.187	0.362
EFFC	0.245	0.474
TEAST	0.087	0.168

Standardized Indirect Effects of ETA on Y

	JOB	TEACHERP
MENT	- -	- -
REWAR	- -	- -
SUPPW	- -	- -
SUUPC	- -	- -
JOB	0.187	- -
EFFC	0.245	- -
TEAST	0.087	- -

Standardized Total Effects of KSI on Y

	PARTICI
MENT	0.357
REWAR	0.229
SUPPW	0.270
SUUPC	0.323
JOB	0.189
EFFC	0.248
TEAST	0.088

Time used 0.031 seconds

BIOGRAPHY

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