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An Exploration of Merit Pay, Teacher and Student Satisfaction, and Teacher Performance Evaluation from an Instructional Perspective

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AN EXPLORATION OF MERIT PAY, TEACHER AND STUDENT SATISFACTION, AND

TEACHER PERFORMANCE EVALUATION FROM AN INSTRUCTIONAL PERSPECTIVE

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Philosophy in Education with a special emphasis on
Leadership and Policy Studies at the University of Missouri, St. Louis

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II

Abstract

In higher education, teachers' teaching effectiveness in the classroom is an essential to improve the quality of higher education. However, teachers' teaching effectiveness comes from the personal motivation, perception, and satisfaction in the teachers' jobs. The merit incentive compensation system is directly linked to teachers' motivation and perception, which also directly or indirectly results in satisfaction with teachers' career and students' learning in the classroom. This study investigates the factors in teachers' performance evaluated in Chinese classrooms by students and teachers, and teachers' demographic characteristics (DC), which impact on teachers' merit pay, and teachers'/students' satisfaction. Study participants were Chinese students and teachers working in or enrolled in one of four different higher education systems from 2012 to 2013 semesters in Nanjing, China. Our sample contains 457 teachers and 9,017 students. The data was collected via online questionnaires.

Henschke's Modified Instructional Perspectives Inventory (MIPI) (Henschke, 1989) was used to evaluate teachers' performance in the classroom from instructional perspectives. The MIPI includes seven factors: Factor 1: Teacher Empathy with Students; Factor 2: Teacher Trust of Students; Factor 3: Planning and Delivery of Instruction; Factor 4: Accommodating Student Uniqueness; Factor 5: Teacher Insensitivity toward Students; Factor 6: Experience-Based Learning Techniques (Learner-Centered Learning Process); and Factor 7: Teacher-Centered Learning Process. The MIPI-s, an adaptation of the MIPI, was used to evaluate student's perceptions of teacher performance in the

classroom from an instructional perspective. Students and teachers reported satisfaction with learning and teaching using a *Likert-type scale* in a demographic questionnaire.

This study utilized a quantitative approach with standard multiple regression analysis. There were three dependent variables: teachers' merit pay, teachers' satisfaction, and students' satisfaction. The independent variables included DC factors related to teachers' motivation and perception, and seven factors of MIPI and MIPI-s with 45-items respectively. The results of regression analyses demonstrated significant relationships as a whole between teachers' merit pay and teachers'/students' satisfaction with teaching/learning, factors in teachers' demographic characteristics, and seven factors of MIPI/MIPI-S respectively.

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Chapter 1

Introduction

The title "teacher", in China, is a metaphor for "engineers of the human soul and spirit" as they provide the impetus for pursuing knowledge. Teachers have shared their knowledge throughout the ages. Since the career of teaching is of such great importance and admiration, research on how to attract and retain more excellent teachers is necessary.

According to Edvantia's (2007) study, "working conditions and personal satisfaction play a role in both novice and veteran teachers' decisions about whether to stay" (p. 65), teachers' working conditions usually refer to "teacher workload, compensation, school classifications, school safety, and student readiness to learn etc." (Riley, Robinson, & Forgione, 1996, p. 1). According to Cooke (1961) and Geisert (1988), and further supported by Maslow's (1954) "Hierarchy of Human Needs," teachers must possess morality and commitment in order to achieve a level of satisfaction with their careers. Despite these more developmental concerns, studies reveal that low pay has been regarded by teachers as one of the important factors of leaving the practice (Goodlad, 1984; Harris & Associates, 1995; Morice & Murray, 2003). Furthermore, another factor that is important to keeping teachers in the field is the degree of the teacher's satisfaction with the teaching career (Houchines, Shippen, & Cattret, 2004; Hughes, 2006; Protheroe, Lewis, & Paik, 2002; Shann, 1991; Stockard & Lehman, 2004). Kelley et al. (2000) and Morice & Murray (2003) also found that teachers not only

received satisfaction through students learning outcomes, but that they also respect compensation, i.e. "bonuses for meeting performance improvement targets" (p. 41). According to Springer & Gardner (2012), these bonuses could be awarded for "student performance, increased student attendance rates, graduation rates, dropout rates, classroom observations, and portfolio completion," as well as for other "measurable outcomes of [the teachers'] effectiveness in the classroom" (p.10).

However, teachers' compensation styles and working sections vary among different higher educational settings, for instance, merit pay or non-merit pay, public and private universities, colleges and universities, etc. Many studies reveal that teachers who work within these different settings have varying levels of satisfaction and outcomes (Baker & Dickerson, 2006; Bomotti et al., 1999; Burian-Fitzgerald et al., 2004; Cannata & Penaloza, 2012). Among the different styles for teacher compensation, merit pay (also called "pay for performance") is a remarkable notion, which was brought into a new era by governments. In the United States, President Barack Obama, in 2009, publicly advocated for new educational policies that expanded merit pay for teachers and allowed for more charter schools (Meckler, 2009). By the end of 2005, in the United States, 20 states already had a performance-based compensation system for K-12 schools, or were in the practice of employing one (Epstein et al., 2009; Johnson, 2006). In England, the Department for Education and Skills, and in Australia, former president Kevin Rudd, also issued corresponding legislations to support the idea of rewarding excellence in teaching with extra pay (Meng, 2011). In China, merit pay has also been instituted by the Chinese government for teachers in the public education system since 2009 (Meng, 2011).

Previous studies and policy makers indicate that merit is a good approach to attract and encourage excellent educators and scholars into the educational field (Epstein et al., 2009; Lin, 2008; Protsik, 1995). To date, most merit pay plans still have difficulties in regards to implementation, such as "evaluating personnel, teacher and union position, poor morale, staff dissension and competition, failure of plans to meet objectives, changes in school system philosophy or leadership, collective bargaining, and revenue shortfalls" (Morice & Murray, 2003, p.40).

According to Murnane and Cohen (1986), the difficulty in measuring a teacher's output is one reason why educational administrations failed to execute merit pay among teachers. Since we cannot decide teacher's compensation based on solely on how many students he or she teaches per day, measuring a teacher's performance is more complex than measuring the performance of personnel in other professions. In addition, depending on students' achievement scores to measure teacher success has limitations when "considering pay incentives system based on economic environment or established a fair evaluation system for teacher performance" (Murnane & Cohen, 1986, p.10). In order to ensure this "fair evaluation system," evaluations should be based on reports from the teachers, their students, and other members of the school (Springer & Gardner, 2010). Edvantia's (2007) reports further emphasized the importance of teachers evaluating themselves, saying that this would result in increased job satisfaction "if the school [administrations] offered [teachers] greater autonomy and administrative support at this point" (p. 65).

Due to their prominence in the literature, merit pay, teacher satisfaction, and student satisfaction have been selected for further discussion in this study. In order to assess how to maintain teachers' satisfaction in regards to their careers while also evaluating their teaching effectiveness, this study advocates for evaluations of teachers' in-class performance.

Although many studies from different perspectives (e.g., legislative, economic, and moral) have been conducted to advocate the implementation of merit pay since the 1980s (Bollou & Podgursky, 1983; Cohen & Murnae, 1986; Desander, 2000; Heneman & Ledford, 1998), none have focused on combining teachers' merit pay situations with teachers' satisfaction and students' satisfaction with classroom performance evaluations. Therefore, this study will fill this gap in knowledge with a rigorous study of the differences between teachers' performance evaluation and teachers' merit pay[1], teachers' satisfaction with teaching, and their students' satisfaction with their education. At the same time, this study intends to identify some predictive factors that impact merit pay and satisfaction. From the conclusions of this study, policymakers will have the research to focus their efforts on implementing proper teacher performance evaluation procedures that impact universities and teachers. That is, how to meet teachers' underlying needs while improving classroom teaching based on reports submitted by students and the teachers themselves.

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[1] In this study, a teacher's annual income is used to gauge his/her compensation based on merit pay, here, we just use 'merit pay'.

Background

In 1908, Newton, Massachusetts, was the first place in the United States to i merit pay. Along with a rise in economic growth and social evolution, the concept of merit pay regained interest with the 1983 work *A Nation at Risk*, which suggested that teacher compensation be "professionally competitive, market-sensitive, and performance-based" (Epstein et al., 2009, p. 2; Protsik, 1995). These debates regarding merit pay have never stopped, and other compensation styles have also been proposed in many studies. The merit pay supporters consider that merit pay will provoke teachers to work harder and will therefore yield better outcomes. At the same time, merit pay will offer "the incentive to attract younger, college-level graduates to educational careers" (Epstein et al., 2009, p.2). However, opponents contend that implementing merit pay would compromise collaboration between teachers due to competition (Bollou & Podgursky, 1983; Cohen & Murnae, 1986; Desander, 2000; Epstein et al., 2009). In addition, they claim that there are no reliable means to assess students' and their teachers' achievement and success (Bollou & Podgursky, 1983; Cohen & Murnae, 1986; Desander, 2000; Epstein et al., 2009), and that high-stakes testing (a component of merit pay systems) would lead to dishonesty (Epstein et al, 2009). From an administrative standpoint, it was found that merit pay plans have shown to be excessively arduous and time consuming for implementation (Desander, 2000). Speaking as a school board member, educator Blaine Cookie (1961) strongly disagreed saying that merit pay destroys teacher morale. In view of these above arguments, we can infer that merit pay is a good approach to retain and attract more able

educators, keeping in mind that all of the disagreements focus on one key point: the difficulty in measuring a teacher's performance.

It is time for us to explore how to relate teachers' in-class performance to student satisfaction and outcomes (Epstein et al., 2009). First of all, although historically merit pay was not found to provide teachers' high satisfaction with compensation reform, it should be considered as a critical plan to retain and recruit successful and excellent teachers (Epstein et al., 2009). In 1988, the Joint Committee on Standards for Educational Evaluation issued a notable exception, which presented pragmatic procedures on how to build up criterions for an extensive range of human resource assessments among public educational sections (Heneman & Ledford, 1998). Subsequently, Heneman and Ledford (1998) provided new philosophies for teacher compensation based on a competency pay practice among managers and workers in the business sector. Desander (2000) also considered the significance of merit pay; and, due to legal considerations and practical concerns, suggested it should rely on evaluations of teacher performance. A scholar from India employed an economics perspective and demonstrated the reliability and feasibility of studying teacher performance in relation to pay (Muralidharan & Sundaraman, 2011). From these studies, we can see that there have been tremendous efforts to create a model or standard in evaluating teachers' performance and to successfully implement teacher merit pay systems. Nevertheless, Geisert (1998), when summarizing merit pay and the Fairfax Country Plan, noted that notice of evaluation standards and expectations is fundamental to the evaluation process. Meanwhile, as mentioned previously, teachers' participation and support are critical factors to ensure the success of merit (Springer &

Gardner, 2010; Edvantia, 2007). Based on studies on merit pay and teacher's

performance evaluation procedures, it is clear that there is no uniform standard in teacher

evaluations, which remains the greatest difficult in implementing merit pay into

universities and schools.

   As we know, teachers and students are the most important groups to focus on

when researching education. During the past decade, however, educators increasingly

have come to realize that any meaningful improvement in the quality of education is

highly contingent on improvement in the quality of instruction (Anderson, 1991). To a

great extent, educational effectiveness is contingent on teacher effectiveness. Two

reasons can be given: funding support and teacher innovation. According to Anderson

(1991), teacher compensation represents a substantial of the total funds and educational

budget, between 75% and 95%, allocated to education in most counties, even in

developing. In order to substantially improve the quality of education that students

receive, we must explore what happens in classes in which the students receive their

learning (Anderson, 1991). Considering this point, finding suitable teacher performance

evaluation procedures is necessary for educational administrations to implement merit

pay among teachers in practice; and these assessments should be based areas such as

teacher behaviors, feelings, and beliefs in the classroom. Therefore, the Modified

Instructional Perspective Instrument (MIPI) and its adaption (MIPI – S) - an instrument

created by John Henschke in 1989 based on teacher beliefs, feelings, and behaviors - will

be used in this study.

The evolution of merit pay was in response to the public's demand for educational

reform (Butterfield et al., 1995; Desander, 2000; English, 1992; Firestone, 1991; Miller,

1996; Odden & Kelly, 1997; Sadowski & Miller, 1996). Similarly, in China before the

1980s, there was single-salary pay for more than 50 years due to a single public-owned

economy (Fang, 2009). Under this framework, there were no differences among teachers'

compensation in different settings. Teachers' enthusiasm in teaching had been inhibited

for a long time, and the quality of education also declined compared to the growth of the

Chinese economy. Few students in high school would go onto a normal university for

further study to become a teacher (Fang, 2009). Since the 1990s, with the rapid growth of

the Chinese economy, reform concerning teacher compensation was an agenda set by the

Chinese State Council. Since 2008, officials have agreed that the implementation of merit

pay among national, compulsory education systems is necessary (Lin, 2008). The

national reform is intended to attract and provoke excellent teachers and scholars into the

educational field, in order to improve the whole country's educational accomplishments

and quality (Lin, 2008). In 2009, the Jiangsu province advocated merit pay both in public

universities and in elementary schools in Nanjing (Department of Education in Jiangsu,

2009). While it is still in the Jiangsu province, there are a lot of private educational

institutions which follow traditional compensation systems, that is, singer salary pay. In

this study, in order to avoid location and sample selection bias, the researcher selected

four types of Chinese colleges and universities for study according to current higher

educational classification standards (Gu, 1984; Zhao, 2004), that is, public university,

private university, public vocational college, and private vocational college.

Problem Statement

According to the Expectancy Theory, compensation increases based on good performance results in positive outcomes and higher subsequent performance (Gerhart & Milkovich, 1992; Jenkins et al., 1998). The research supports the belief that merit pay is necessary for teachers in order to enhance teacher effectiveness in the classroom and then improve their quality of educational practices.

Teacher performance evaluation and a different evaluation procedure need to be taken into consideration among educational administration practitioners. It is believed that teachers are "economic men," which means that the teachers have their own motivation, perception, and satisfaction during their teaching. How do we execute the merit pay plans and examine their feasibility and validity? Undoubtedly, a standard teacher's performance evaluation procedure should be designed or employed to clarify this point. However, at the practical level, a teacher performance evaluation system is dissimilar with other organizations and corporations. For instance, we can evaluate a standard workers' performance based on how many products they produced or how they delivered their services in a specified time; however, we cannot execute these same standards among teachers. So, it is necessary to employ proper and accurate teachers' performance evaluation procedures, with teachers' participation and support, to ensure the success of merit pay systems. This research has the intention to adopt existing instruments to investigate whether they are suitable for assessing evaluation procedures based on teaching effectiveness such as teachers' behaviors, beliefs, and feelings in the classroom. In order to fulfill this study, the Modified Instructional Perspective Instrument

(MIPI), created by Henschke in 1989, is employed as a teacher performance evaluation procedure to assess teachers' teaching effectiveness and to support this study.

Instructional perspective "is comprehensively comprised of the teacher's personal and contextual identification, actions and competencies in the classroom, and philosophical beliefs for guiding practice" (Henschke, 1989, p. 81). Henschke's Modified Instructional Perspectives Inventory (MIPI) was mainly employed to appraise teacher/student-reported application of andragogical principles in a study of secondary language classrooms as well as other disciplines (Dawson, 1997; Drinkard, 2004; Linda, 2009; McManus, 2008; Rowbotham, 2007; Seward, 1998; Stanton, 2005; Stricker, 2006; Thomas, 1995; Vatcharasirisook, 2011). The MIPI includes seven subscales. They include:

- Teacher Empathy with Learners,

- Teacher Trust of Learners,

- Planning and Delivery of Instruction,

- Accommodating Learner Uniqueness,

- Teacher Insensitivity Toward Learners,

- Experience-Based Learning Techniques (Learner-Centered Learning Process), and

- Teacher-Centered Learning Process (Henschke, 1989, p. 81).

The MIPI-S, as a revision of the MIPI, is employed to present the students' evaluation results of their teachers' instructional perspective. After examining previous studies, it is clear that few have been conducted on merit pay and teacher performance

evaluation. Most of the studies listed previously illustrate the relationship between merit pay and teacher performance evaluation from policies, competencies, and performance perspectives. Studies also give some suggestions about design format and how to conduct merit pay and performance evaluation in education, but they do not investigate their feasibility and validity (Desander, 2000; Geisert, 1988; Tecker, 1984). There are even fewer studies comparing teachers' merit pay in different settings in higher education institutions, or investigating the teachers'/students' satisfaction with their teaching/learning and their compensation from an instructive viewpoint. Therefore, this study attempts to expand the research on teachers and their working conditions, especially their working settings and compensation, to reveal the differences in teacher satisfaction to teaching and merit pay, and student satisfaction to learning. At the same time, this study intends to use uniform standards for identifying the underlying predictors that impact teachers' merit pay, teachers' satisfaction and students' satisfaction.

Purpose of the Study

The purpose of this study is to investigate the primary factors that impact teachers' merit pay, teachers' satisfaction and students' satisfaction in different higher education settings. Factors in teachers' demographic characteristics such as ages, gender, titles, years of teaching, and workload (hours of teaching per week), and factors of teachers' effectiveness in the classroom evaluated by both teachers and students are considered to be the factors of this study. In investigating those factors, this study employs a uniform instrument called the MIPI, which is a teacher assessment procedure

based on instructive perspectives to investigate teachers teaching effectiveness in the classroom on a short-term basis. Further on, this study will seek to understand the reliability and feasibility of predicting teachers' merit pay with different compensation styles as well as teachers' satisfaction with their teaching and students' satisfaction with learning while expanding this instrument to be an assessment procedure for a different country. Second, this study has the intention to investigate the significant differences of teachers' merit pay, teachers' satisfaction and students' satisfaction among different groups who belong to different educational settings. Third, the research has the intention to understand whether the underlying factors relating to teachers' demographic characteristics are predictors to their satisfaction and teachers' merit pay.

Research Questions

In view of the above, the conceptual framework of this study is constructed as illustrated in Figure 1.

Figure 1: Conceptual Framework of the Study
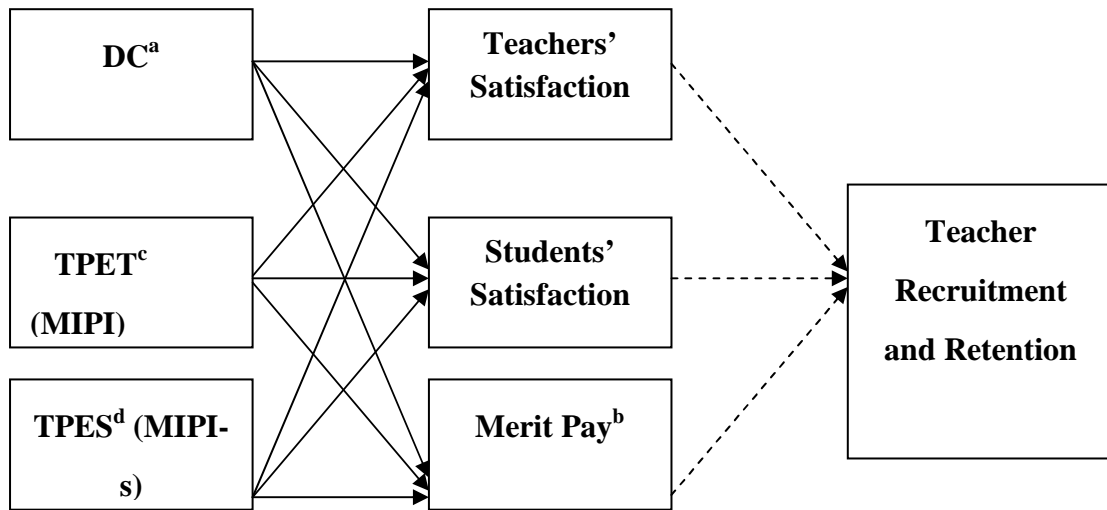
Note: [a] DC = Demographic Characteristics, which includes age, gender, type-of-school, degrees, title, years of teaching, hours of teaching, merit pay, degree of trust to school policy, comments on payment, times to receive performance pay; [b] Merit pay is gauged by teacher's annual income; [c] TPET is teacher performance evaluated by teachers, that is, MIPI; [d] TPES is teacher performance evaluated by students, that is, MIPI-s.

The study will explore the following research questions:

- Do teachers' demographic characteristics predict their merit pay, their satisfaction, and their students' satisfaction? Are there any differences among different types of schools?

- Does teacher performance/ teaching effectiveness in the classroom, evaluated by MIPI/MIPI-s, predict teachers' merit pay, their satisfaction and their students' satisfaction respectively?

Significance of the Study

The establishment of merit pay based on a teacher's performance evaluated by Chinese teachers and students is done in order to help higher educational administrations

recruit and retain highly qualified teachers for the future. In addition, this research will provide valuable information for educational administrative practitioners on how to identify potential impact factors existing among teachers' demographic characteristics and teachers' performance evaluated by teachers and students in the classrooms, which affect teachers' merit pay and satisfaction. As a leadership and policy study, this research provides significant guidance for policymakers in future legislation adjustment and stipulation for education policy in merit pay implementation and strategies to retain teachers in the future.

Measures including the demographic characteristics questionnaire, the Modified Instructional Perspective Inventory (MIPI), and the adapted Modified Instructional Perspective Inventory for students (MIPI-S) will offer an excellent practice opportunity for evaluating teachers' performance in the classroom through exploring their teaching effectiveness. The assessment instruments are more objective and practical, and are more focused on human development than other standards offered by many educational administrations. The MIPI and MIPI-S were used in many research studies in the U.S. and other countries, but not in China. Applying them to China will expand their usage into a new area. Combining their use with teachers' merit pay, this study makes a contribution to the study of leadership and policy study in education as it expands the evaluation process to human resource development as well.

Merit pay is a relatively new concept in China, advocated recently and in use since 2008. Therefore, the standards for evaluating teachers' performance are unshaped and more descriptive (Wang & Cheng, 2012). However, the key factor to examining the

validity and reliability of a merit pay policy is to determine the teachers' performance evaluation procedure within the different educational settings. This research has important practical and theoretical significance for improving merit pay among different education settings.

Hines et al. (1985) and Rai and Srivastava (2013) revealed in their studies that the differences between students and teachers would result in more motivation for teachers teaching in the workplace. In this study, teachers' satisfaction and students' satisfaction as well as their differences will be investigated to show the differences between teachers' teaching motivation in the different working settings. From this point, this study has important practical and theoretical significance for the educational administration practitioners on how to assess teachers' and students' satisfaction in the workplace.

In summary, this study employs a quantitative research design to identify the following factors which potentially predict teachers' merit pay and teachers' satisfaction as: a) teachers' demographic characteristics, and b) teachers' teaching effectiveness in the classroom evaluated by students and teachers. At the same time, this study intends to understand a) how merit pay differs among different educational settings, b) how teachers' satisfaction differs among different working settings, and c) how their students' satisfaction differs among different universities and colleges. From these analyses, this study intends to understand the underlying factors relating to teachers' teaching effectiveness in the classroom, and how these factors impact teachers' merit pay, satisfaction, and their students' satisfaction in different educational settings. In view of

this, this study offers insights for educational administrative practitioners on education leadership and policy implementation.

Delimitations, Limitations, and Assumptions

The scope of this study is limited to the investigation of teachers' performance as measured by the MIPI and MIPI-S, while some demographic information about the teachers and students such as teachers' degrees, income, learning experience, merit pay, and working settings (public or private) etc. will be examined in this study as well. The researcher inspects the relationship under the belief that both instruction from teachers' perspective and learning feedback from students' views are most directly related to teachers' performance in a teaching unit. This researcher did not scrutinize the whole institution policy, legislations, the whole teachers' performance evaluation process in these universities and colleges, or other factors such as the teachers' union, supervisors, and other stakeholders involved in merit pay and teachers' performance evaluation (Hawley, 1982; Schneider, 1983; Tecker, 1984).

This study is limited to the data collected, reviewed, and monitored by universities and colleges in the Nanjing area, which are located in the eastern area of China. Nanjing universities and colleges are governed and supervised by Jiangsu Provincial Department of Education and have long had a traditional advantage in education. Nanjing is a city with a long history and has more than 100 higher educational units. The higher educational sections' classifications are based on the current Chinese education systems. The author assumes the informants from the same area will enhance the data's integrity, reliability, and consistency. The study also assumes that teachers and

students in these universities and colleges answered the survey truthfully and to the best of their ability.

In addition, the study's reliability of teachers' performance evaluated by students is still in question. Although many studies have made substantial efforts to address this pending issue, there is still no standardized answer or generalized conclusion (Obenchain et al., 2001). The author will delineate this in literature review section and address the reliability of MIPI and MIPI-S in the following chapters. Finally, the results generated from the study can only be generalized to the similar study among higher education systems which have different compensation systems: merit pay and non-merit pay.

Definitions

The following names and terms used in this study are defined:

Economic Man — An economic man is a man that is rational. He is a narrowly self-interested actor who has the ability to make judgments toward his personal needs (Muchinsky, 2012).

Effective Teacher — An effective teacher refers to "one who quite consistently achieves goals which either directly or indirectly focuses on the learning of their students" (Anderson, 1990, p. 18).

Instructional Perspectives Inventory — Instructional Perspectives Inventory (IPI) was developed to "identify beliefs, feelings, and behaviors adult educators need to possess" (Henschke, 1989, p. 81). In 2005, the IPI was modified from a four-point Likert

scale to a five-point Likert scale and is referred to as

Modified Instructional Perspectives Inventory (MIPI).

Learning Satisfaction   Learning satisfaction refers to "student's feelings and

attitudes toward learning activities; a happy feeling or

positive attitude indicated satisfaction, while an unhappy

feeling or negative attitude revealed discontent" (Lee,

2008, p. 45) .

Merit Pay   Merit pay, also the same as pay for performance, "offers

financial incentives to individual teachers, groups of

teachers, or whole schools based on predetermined tasks

related to measurable student achievement outcomes.

Merit plans reward teachers for

measurable outcomes of their effectiveness" (Springer &

Gardner, 2010, p.10). Merit pay in China refers to " a

teacher's compensation is paid according to his/her post

technical content, post workloads, responsibilities, and

post climate etc., combing with the current organization's

economic effectiveness and the labor price, which

actually are classified into different positions decided by

their duties according to in addition, their outputs" (Li,

2010, p. 3). In China, the teacher's compensation is

component of two portions: basic salary and merit pay,

thereinto, merit pay includes bonus and rewards (Yang, 2009).

Motivation	Motivation is an inner driving force to arouse an organism to act towards a desired and sustains goal directed behaviors (Obamiro, 2013).
Perception	Perception refers to "the organization, identification, and interpretation of sensory information in order to represent and understand the environment" (Shacter, Gilbert, & Wegner, 2011, p. 340).
Compensation	Compensation refers to money transferring from the organization to a single person. The compensation is usually done as an exchange for the corresponding goods, services, or both, or to complete a legal obligation.
Performance Evaluation	Performance evaluation is an approach by which an employee's job performance is tested and evaluated.
Public University	A public university usually refers to a university mostly funded by public sources via different levels of governments.
Private University	A private university usually refers to a university not operated by governments. Though it is not funded by a government, it may also be subject to government regulation.

Organization of the Study

This dissertation will have five chapters. Chapter One is the introduction of the study, which includes the background of the study, purpose for this research, research questions, and significance of this study. Chapter Two is the review of literature, which reviews teacher motivation and perception in education settings, the history of the Chinese teacher compensation system, merit payment, and merit payment effects on teacher performance, teacher performance evaluation, and two critical inventories: MIPI and MIPI-S. Chapter Three discusses the methodology of this study, including the sample data and data collection, model building, statistical analysis process, and approaches. This study's results will be discussed in Chapter Four, followed by the conclusions and discussions in Chapter Five, after the data analysis.

Chapter 2

Literature Review

This chapter discusses the following issues as the relate to Chinese teachers in higher education: Merit pay; teachers' and students' satisfaction; teacher's demographic characteristics relating to teacher motivation and perception; teachers' performance effectiveness and performance evaluation; and linking merit pay, satisfaction, and teacher performance evaluation from an instructional perspective. Each section will include the definition and content of each topic and their relationship and link to this study.

Merit Pay

This section will give a brief history of merit pay, defines merit pay, gives a brief history and discusses the factors that impact teacher merit pay, its history, its influences on higher education and merit pay in China. In addition, arguments and constraints on merit pay made by previous researchers have been summarized in this section as well.

Merit Pay and Basic Concepts Relating to Merit Pay

In this study, merit pay has been selected as one of the motivational and perceptional factors for further investigation of teachers in education settings. Merit pay is a familiar concept to millions of people whose compensation is in some manner related to performance effectiveness (Tecker, 1984). As previously stated, merit pay is used to represent a variety of compensation programs, which include various incentive and extra awarding payment systems. Most are based on a measure of quality of performance,

quantity of performance, or difficulty of performance. According to Tecker's (1984) statement, four basic concepts constitute merit on which awards of merit pay are based:

- Longevity—the length of time an individual has held a position. The assumption is that time in a position increases experience and enhances expertise.

- Credentials—the amount of course works and/or other 'educational' experiences an individual was exposed to over time. The assumption is that satisfactory completion of course work and/or additional 'educational' experiences results in knowledge and expertise that enhances performance quality.

- Additional duties—extra work, harder work, or more important work. The premise, which stems from the labor tradition, is that more work, or special kinds of work, warrant additional compensation.

- Quality of performance—compensation should relate to judgments about how effectively position responsibilities and objectives are accomplished (p. 13).

Merit pay involves recognizing individual performance and paying teachers according to their effectiveness. This concept assumes that performance quality can be measured and that money can be an incentive for improving teacher performance and instructional quality (Tecker, 1984).

History of Merit Pay

In the 1920s, single-salary pay was the dominate compensation style to offer "both equity and objectivity to teacher pay" (Epstein et al., 2009, p. 4), and was introduced in Denver and Des Moines. Under this framework, a teacher's appropriate

compensation was determined by years of experience and degrees the teacher had earned, instead of by their race, gender, family, or teaching methods (Epstein et al., 2009; Protsik, 1995). At that time, single salary pay had its advantages such as encouraging the teacher to attain greater levels of education; and, the teacher unions had the chance of fairly and equally representing all members in collective bargaining agreements. Consequently, 97% of communities in American had adopted the single-salary pay plan (Epstein et al., 2009; Protsik, 1995).

Single-salary pay has its restrictions. First, it greatly restrains wealthier districts from attracting excellent teachers to meet their special needs in areas such as math, science, and special education. Second, it thwarts the enthusiasm of those who excel in teaching, who are young, or have lower levels of education and credentials by failing to provide an evaluation system that rewards criteria that lead to excellent (Epstein et al., 2009; Protsik, 1995).

As we know, there always are exceptional teachers who need to be rewarded for their extra and excellent effort and work. Coinciding with this belief, merit pay was introduced in 1908 in Newton, Massachusetts. In 1983, reports like *Action for Excellence* (1983) and *A Nation at Risk* (1983) brought teacher accountability and quality of instruction to the forefront of educational issues (Cohen & Murnane, 1986; Desander, 2000; Sadowski & Miller, 1996). *A Nation at Risk* explicitly suggested teachers' compensation be "professionally competitive, market-sensitive, and performance-based" in order to "[link] compensation more directly to classroom skill" (*A Nation At Risk: Recommendations*, 1983, p. 1).

Between the 1980s and 1990s, there were varying degrees of successes with merit pay systems across the nation. Many districts awarded bonuses determined by supervisors and/or peer reviews for excellent classroom performance, but some teachers thought the rewards were established on subjective and prejudiced assessments rather than on objective assessments (Epstein et al., 2009). A recent study revealed some problems coming from personnel, administration, mutual bargaining disputes, and financial deficits resulted in terminating or discontinuing the use of merit pay within six years (Epstein et al., 2009). In March, 2009, President Obama expanded merit pay for teachers in an extensive education vision, and called the states to raise standards for student achievements (Meckler, 2009). Thus, merit pay returned to the front of education revolution.

In China, teacher compensation has experienced four revolutions. The first occurred before 1980 when single-salary pay was a precedent for more than 50 years due to a single public-owned economy. Under this framework, there were no differences among teachers' compensation in different settings. This resulted in little enthusiasm for a career in teaching and caused a decline in the popularity of being a teacher in higher education despite a growth in Chinese economy. Few students in high school would go into a normal university for further study before 1980s (Fang, 2009). The second revolution began between 1980 and 1990, when small increased in compensation began to occur. These increases were based on their job titles and experience in teaching (Ding, 2010; Pan, 2009; Wang, 2010). From 1983 to 1988, high school graduates began to feel more positive toward the profession of teaching and enrollment rates increased in Normal

universities (Ding, 2010; Pan, 2009; Wang, 2010). The third revolution began after 1990, when teacher salaries began to increase again. These increases were due to the rapid growth of the Chinese economy, and the high inflation rate (Ding, 2010; Pan, 2009; Wang, 2010). From the 2000s to the present, the fourth revolution focusing on teacher compensation occurred. At this time, teacher compensation became part of the agenda of the Chinese State Council (CSC). In 2008, the CSC approved official legislation to implement merit pay among national compulsory education systems (Ding, 2010; Lin, 2008; Pan, 2009; Wang, 2010).

Merit pay among teachers is comprised of two categories which are divided into four categories: Basic compensation (paid by different titles, years of teaching, and different districts); wages (based on class hours); bonuses (based on excessively teaching hours the teacher has, research and administrative work); and reward (performance incentives) (Yang, 2009). Presented here is a figure showing the corresponding relationships of the compensation according to Yang's statement (2009):

Figure 3: The Components of Merit Pay in China
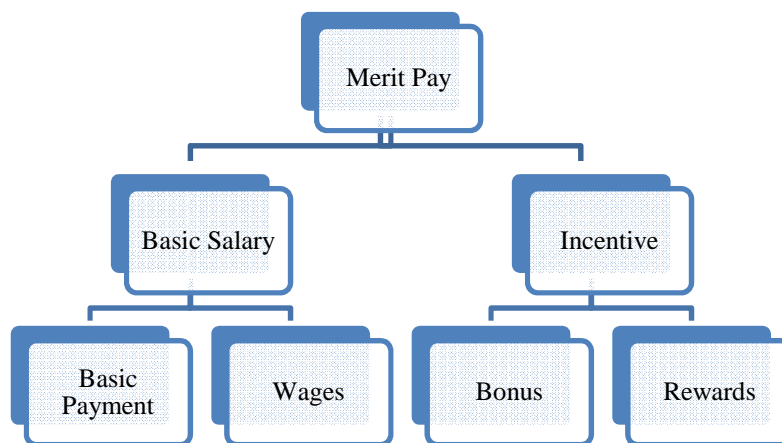
Merit pay is a relatively new topic in China, and has therefore been a subject of discussion among scholars. Yang (2009) doubted the range domains of merit pay in China, and made some comments on how to define the structure of merit pay based on descriptions of teacher work in higher education institutions. Ding (2010) pointed out the current deficiency of executing merit pay. For example, since the teacher performance evaluation procedure was very difficult to execute, when merit pay was developing into a general promotion among teachers, the power of administrations who evaluated teacher performance had been exaggerated. Wang (2010) summarized the systems of Chinese teacher merit pay flexibility and advantages, and gave her suggestions on how to make specific measures to cope with the merit pay revolution. Almost no scholars have advocated for different views on merit pay implementation among public schools since it was promoted on the national level, and studies on policy and benefits about merit pay interpretation have been supportive.

Arguments and Constraints of Merit Pay

As stated previously, education and its practitioners belong to a special group, which are different from the workers of industry. Most workers consider themselves to be outstanding at their jobs, and merit pay more or less threatens the self-esteem of the majority of employees. Often, teachers hold the belief that the satisfaction of the profession is ultimately more meaningful than are the financial rewards (Epstein et al., 2009; Geisert, 1988; Schneider, 1983). Arguments among researchers on the benefits of merit pay have continued over the years. Among these researchers, Schneider (1983) summarized the pros and cons of "merit pay as follows:

[Pros]:

- It is seen as economical;

- It attracts competitive people;

- It promotes good personnel administration;

- It has precedent and logic—Reward based on competition; and

- It meets public objection to inequity of automatic salary increases based on service, or college credits.

[Cons]:

- Merit pay plans have not worked in education,

- Evaluation of teaching is too inaccurate,

- Discriminative rewards produce undesirable relations in the schools, and

- Intrinsic rewards are more suitable in education" (p. 4).

Tecker (1984) discusses the constraints on merit pay for performance in higher education systems. For instance, he writes, "…there were no robust-designed performance evaluation procedures, no performance-related compensation systems, and there were problems of the effective administration of such programs" (p.15). He also pointed out that fair and correct evaluation and judgment made by administrations and schools for the educators are critical factors to conduct merit pay; meanwhile, school systems which have an investment in care, creativity, and rational decision making can preserve and institute performance related compensation programs that contribute to the assurance of staff member to strive for enhanced effectiveness (Tecker, 1984).

Merit Pay Studies in Higher Education

Although there are a few colleges and universities where collective bargaining has resulted in salary schedules according to faculty rank and longevity, most higher education institutions still use some kind of merit pay. In addition to monetary rewards, they also use such practical incentives as workload, assignments, and rank (Tecker, 1984).

Typically, preliminary salaries are well-known on an individual basis and annual increases result from institutional performance evaluations. Performance measures include number and type of publications, number and quality of professional activities and public service, activities within the institution, and student ratings of teacher performance (Tecker, 1984).

Another influencing factor is supply and demand in an academic area as well as offers made to an individual by another institution. While peer review is an integral part of the higher education compensation and reward systems, administrators and governing bodies usually retain the privilege to make the final decision (Tecker, 1984).

Like other compensation systems, the superficial success of performance-related compensation programs in higher education is not without its flaws and critics. For example, the emphasis placed on quantity rather than quality of activities is a debatable issue, as is the fact that the system can easily discriminate against senior faculty members because they started at lower salaries. Nevertheless, the system continues to be used because it affords institutions flexibility. Whether or not the system results in increased

teacher effectiveness, the methods and criteria of performance evaluation appear to have

some correlation to decisions about effectiveness (Tecker, 1984).

An important factor when designing and developing merit pay among teachers is

the necessity that the educational administration levels balance the interests of all

stakeholders (Springer & Gardner, 2010). In a merit pay study which involved multiple

stakeholders, "many schools chose to distribute relatively small awards across all school

personnel, regardless of individual performance" (Springer & Gardner, 2010, p. 14).

However, the relatively small incentive arrangement did not have any significant effects

on teacher efficiency (Springer & Gardner, 2010; Taylor & Springer, 2009).

Summary

The emergence of merit pay has its historic origin based in the inherent needs of

social and human development. Merit pay has been practiced for more than 100 years

despite many arguments and constraints still besetting this topic. Comparing the pros and

cons of merit pay, it can be inferred that for future scholars much effort should focus on

how to develop an effective way to evaluate teacher performance.

<div align="center">

Satisfaction in Educational Settings

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Research and studies on satisfaction originally come from a business and

management commitment; that is, to meet the consumers' satisfaction. In business

satisfaction research, satisfaction has been defined three ways: process, outcome, or a

synthesis of process and outcome (Ryan, 2010; Parker & Mathew, 2001; Tse, Nicosia, &

Wilton, 1990). In this study, teacher satisfaction will include their satisfaction with

teaching and students' learning outcomes and their satisfaction.

As for the importance of students' satisfaction, Thomas and Galambos (2004) mentioned that the characterization of students as consumers of higher education means that the satisfaction of students becomes extremely important to the success of the institution because the higher education institutions share the same intensely competitive and sensitive marketing environment. Elliott and Shin (2002) defined student satisfaction with educational experience as a synthesis of both the cognitive evaluation process and subjective outcomes of the educational experience in time. Rai and Srivastava (2013) mentioned that the differences between teacher satisfaction and student satisfaction will stimulate positive satisfactory outcomes for both teacher and student.

There are many approaches and instruments from different points of view, qualitative and quantitative, to investigate student satisfaction. The quantitative approach to assessing student satisfaction is to use a single item. A rating scale with one global satisfaction item may ask either a yes-or-no question about satisfaction or ask students to report their level of satisfaction using a designated scale (Elliott & Shin, 2002; Ryan, 2009). Qualitative methods represent another way to obtain data on satisfaction. Patterson et al. (1998) used interviews with 30 international students at an Australian university to identify determinants of student satisfaction. Wan (2001) also used interviews in a case study investigating the cross-cultural experiences of two students at an American university.

Factors Impacting Teachers' and Students' Satisfaction

Factors impacting teachers' and students' satisfaction include many facets: age (Cheng, 2000; Sauer, 2003), personality (Biner et al., 1997; Grayson, 2004; Logue,

Lounsbury, Gupta, & Leong, 2007; Lounsbury, Saudargas, Gibson, & Leong, 2005), culture and ethnicity (Cheng & Tam, 1997; Guy, 1999), educational experience (Knox et al., 1992), and expectations (Cook, 2004; Marsh, 1984; Patterson et al., 1998; Wyss, 2002; Zenhui, 1999). Furthermore, Hines, Cruickshank, and Kennedy (1985) reveal that student perception of a teacher clearly influences the student's degree of satisfaction with their educational experience.

On the other hand, teachers' satisfaction places a higher importance on their job and professional development, and the degree of a teacher's satisfaction with the teaching career has also been proven to be as a critical factor of teacher retention (Houchines, Shippen, & Cattret, 2004; Hughes, 2006; Protheroe, Lewis & Paik, 2002; Shann, 1991; Stockard & Lehman, 2004). Some scholars advocate that increasing job satisfaction is the best way to reinforce the teaching profession (Latham, 1998, Mertler, 2002). Nevertheless, teacher job satisfaction can also improve teachers' teaching (Hughes, 2006; Latham, 1998). Therefore, how to derive satisfaction from teaching and maintain teachers' satisfaction levels with instruction in schools are the prominent difficulties for education administration consideration (Houchins, Shippen & Cattret, 2004; Hughes, 2006; Protheroe, Lewis & Paik, 2002; Quaglia & Marion, 1991).

In light of the literature reviewed for this study, the following teacher characteristics are chosen for further discussions and examination: Gender, age, socio-economic status, bonus received recently from teaching, and educational experience (Moore, 1987; Tye & O'Brien, 2002), years of teaching, workload (hours spent on non-

teaching duties) (Bandura, 1977), and comments on institutional policy and working environment (Latham, 1998).

Teacher's Social Demographic Characteristics Relating to Motivation and Perception

In this section, teachers' motivation and perception are explored. At the same time, characteristics of teachers' demographic have been identified, which may impact teachers' motivation and perception.

Motivation

Incentives are used to motivate actions and to achieve desired outcomes. Most theories about motivations share two themes: a) Understanding what someone wants or does not want makes it easier to encourage that person to do what is wanted; and b) the promise of rewards and the threat of penalties (Tecker, 1984). In view of this point, when researching performance evaluation and merit pay, we have to identify the needs and wants as well as the driving forces hiding behind them.

There are various classical theories of business effectiveness employed to investigate workers' needs in their working environment (Argyris, 1964; Herzberg, 1966; Likert, 1967; Maslow, 1968; McGregor, 1967). For instance, Maslow suggested that "…general groups of human needs were arranged in the following hierarchical order beginning with the most basic human needs: Physical, security, love, self-esteem, and self-actualization" (Aktaruzzaman et al., 2011, p. 376). All of these theories are well-known and widely-accepted by scholars and researchers in the human resources management field. From these theories, we can recognize that needs existing inherently

among human beings are growth, achievement, responsibilities, and recognition (Lewis, 1973). Lewis (1973) defined their corresponding meaning in education. For example, growth refers to mental growth, achievement refers to the need for achievement by educators, and recognition refers to the recognition an educator earns (both material and mental) from an outstanding service or performance. Although no one theory can be supported over another, it is not difficult to conclude that teacher's needs can be classified into two main types: Psychological and material needs.

Furthermore, there are some scholars who advocate that teacher motivation has its specialties. Lewis (1973) summarized in his book *Appraising Teacher Performance*: "In addition to those needs such as growth, achievement, responsibilities, and recognition stated above, there is another prerequisite need for teacher motivation, that is maintenance needs, which includes economic, security, orientation, status, and social maintenance needs" (p. 14). These maintenance needs are fundamental requirements for teachers. Tecker (1984) also highlighted the same points as Lewis when explaining the reasons for performance incentives. The motivation of teacher performance effectiveness comes from their various needs including both psychological and material needs.

Perception

In addition to motivation, perception is also an extremely vital factor in understanding human effectiveness and organizational behavior since teachers, students, and administrators execute their behaviors on the basis of what they think (perception) (Lewis, 1973). If teachers act on their perceptions and different educators perceive things differently, the students and administers may not know what to expect. From this point of

view, the perception of teachers is another guarantee to ensure that teachers reach the objective of performance evaluation. Lewis (1973) also listed some factors determining a human being's perception: needs, stress, group pressure, role, reference group, position, and reward system. Each perception comes from different sources such as family, institution, and society and has different impact on teachers' effectiveness. When referring to reward systems Lewis (1973) explains:

> The impact of a system of rewards on a school organization is very noticeable. At least two different effects are evident. First, there are some rewards which are directly related to the new idea development. The educator does not necessarily have to utilize the idea–only produce it. The second noticeable impact is a production incentive. Here the educator regards the outcome of his actions in a more restricted way. Under the production incentive system, educators will more likely be concerned with the consequences of their actions (p. 189).

Factors of Teacher's Demographic Characteristics

Teachers' demographic characteristics in this study include the teacher's gender, age, titles, degrees, experience, and workloads. These demographic characteristics have a major impact on their motivation and perceptions.

Teachers' motivation is derived from these characteristics which include the following aspects: Psychological and material needs, to be more specific, factors such as teachers' economic status, security, orientation, and social needs. These are necessities of teacher's motivation to improve their teaching and impact their satisfaction.

Similarly, factors such as stress, group pressure, their role in the school, their position, and the type of reward system they experience create their perceptions which impact their teaching and effectiveness as teachers.

Summary

In this section, teachers' motivation and perception are discussed. According to the definitions, the teachers' demographic characteristics such as age, gender, title, workload, and year of teaching, are the factors directly related to teachers' motivation and perception in their classroom.

Teacher Performance Effectiveness and Performance Evaluation Procedure

Anderson (1991) writes that "effective teachers are those who achieve the goals they set for themselves or have set for them by others (e.g., school administrators, ministries of education)" (p. 17). In addition, he makes the following assumptions:

- "Effective teachers tend to be aware of and actively pursue goals;

- The vast majority of teachers' goals are or should be concerned either directly or indirectly with the learning of their students; and

- No teacher is effective all the time" (Anderson, 1991, p. 17).

That is to say, then, an effective teacher could also be defined to be as "one who quite consistently achieves goals which either directly or indirectly focuses on the learning of [their] students*"* (Anderson, 1991, p. 18). In fact, identifying factors which "are related or contribute to teacher effectiveness is far more difficult" (Anderson, 1991, p. 18). There are some predominant factors delineated by Anderson (1991, p. 19): a) Goals from different perspectives (teacher per se, students and administrators); b) the

knowledge, skills, aptitudes, and values both student and teacher possess when they enter

the school or the classroom; and c) different characters in teachers. Thus, when we

explore and try to understand teacher effectiveness, we should take into consideration the

following: a) where the students are going (as determined, in part, by the goals of the

teacher), and b) where they have been (as determined in part by their genetic

composition, their home backgrounds, and their prior school experiences etc.).

Performance Evaluation

Generally speaking, in industry, performance evaluation is "a systematic and

periodic process that assesses an individual employee's job performance and productivity

in relation to certain pre-established criteria and organizational objectives" (Abu-Doleh &

Weir, 2007, p.75). Tecker (1984) defined teacher performance evaluation in almost the

same way, as: "[the process of] identifying, collecting, interpreting, and providing

information for the purpose of judging effectiveness" (p. 19). It can be inferred from the

definitions that the subsequent characteristics of an effective performance evaluation are:

- Periodicity: Performance evaluation is a consistent and continuous work, but the

  time schedule should fall within a specified period, which helps to analyze, track,

  appraise and give feedback to the evaluation results and improve the performance

  management level.

- Process: As a process, performance evaluation is more than a form to be filled and

  filed, which needs the administration's constant attention on enhancing the

  organizational objectives. In education settings, schools should be a place where

  the people purposefully consider: a) What they want to accomplish; b) how well

they are doing it; and c) what can be done better (Tecker, 1984). As such, schools

are committed to continuous human growth as reflected in staff and student

behavior as well as the institutional philosophy and policy written in their

statements.

- Information: A sound evaluation procedure should be based on accurate,

relevant, timely, and useful information, while inaccurate, irrelevant and overdue

information may result in flawed and indefensible assessments that may not be in

the best interest of students and teachers.

- Judging: There is no fixed and existing checklist, rating scale, model, system or

technological device to fully remove human judgment from evaluation of a

professional's performance, and there is no guarantee that evaluation judgments

are always perfect. Therefore, an effective evaluation approach should

dramatically increase the probability that judgments will be good by ensuring the

quality of the information on which decisions are based. The suitable policy

question is whether an evaluation approach is better rather than whether it is

perfect (Tecker, 1984).

Complaints about Teacher Evaluation, and the Reliability of Students Evaluation of Teachers Teaching Effectiveness

Referring to teacher evaluations, Hawley (1982) states, "perhaps there is no other

topic in education today that is as universally regarded with distaste, hostility, and

resigned frustration" (p. 1). Teacher performance evaluation is thought by many to be a

time-wasting activity. Teachers complain about fairness and transparency, and

administrators usually complain that it is too time-consuming. The literature regarding

the use of merit pay in educational settings is full of criticism and practical concerns

(Ballou & Podgursky, 1993; Desander, 2000; Firestone, 1991; Mohrman, Mohrman, &

Odden, 1996), which include: a) Adequate funding problems; b) teacher support of the

system; and c) teacher participant in the development and application of the system.

Nonetheless, we are in the era of accountability, and teacher evaluation is the only way to

improve the lives of students, teachers, and the education's quality for the public

(Hawley, 1982).

The main objective of teacher performance evaluation is to improve the teachers'

instructional quality delivered to students. In addition, teacher performance evaluation is

also the process of "identifying, collecting, interpreting, and providing information for

the intention of measuring the teacher effectiveness" (Tecker, 1984, p. 17). Accordingly,

the procedures of the evaluation usually vary by university and school. Due to the

relationships between quality instruction and positive student outcomes, it is

understandable that student assessments of teacher effectiveness are also employed in

"dispensing merit-based salary increases and can create a competitive climate among

teachers" (Obenchain, Abernathy, &Wiest, 2010, p.100). Although it was found in many

previous studies that students offer reliable assessments of teachers' ability (Marsh, 1987;

Marsh & Bailey, 1993; Obenchain, Abernathy, & Wiest, 20o1; Seldin, 1984), it is still a

controversial issue. From this point of view, Obenchain, Abernathy, and Wiest (2001)

investigated the reliability of students' ratings of teacher effectiveness and found that the

results supported and endorsed the previous findings. They further revealed that there

was a significant difference in the reliability of students' evaluation on teachers in different courses (Obenchain, Abernathy, & Wiest, 2001).

Summary

In this section, teacher performance evaluation is defined as the process of "identifying, collecting, interpreting, and providing information for the intention of evaluation teacher effectiveness in classroom" (Tecker, 1984, p. 17). Some characteristics and concepts in relation to teacher performance evaluation have been elaborated upon. For example, accurate, consistent, flexible, and widely-enacted and accepted teacher performance evaluation procedures will improve and enhance teacher effectiveness, therefore having a direct influence on merit pay plans. Teacher performance evaluation accompanied by merit pay has many facets, and the reliability of students' evaluation of teacher effectiveness was investigated and thought to be significant.

Linking Merit Pay, Satisfaction and Teacher Performance Evaluation from an Instructive Perspective

A popular belief is that merit pay can motivate employees to improve job performance (Schneider, 1983). Based on previous statements in this chapter, the effect of merit pay is closely associated with a proper, accurate, and well-designed performance evaluation procedure.

In *The American School Board Journal* (September, 1983) national poll of United States teachers, a prominent majority of responding teachers (62.7%) agreed that teachers' merit pay should be based on how well they performed in the classroom (Tecker, 1984). Most educational organizations and units will pay for good work, and

these organizations would like to pay more to enhance teacher effectiveness in the classroom and attract more excellent teachers to work in educational organizations. Tecker (1984) highlighted the relationship between performance evaluation, merit pay, and the public expectation in *Merit, Measurement, and Money*:

Performance evaluation, as it related to the effectiveness of teacher interaction with students, is what the public wants ……..The public believes that evaluation related to compensation will be effective only when there is a reward for competent performance and a consequence for incompetence or lack of commitment. Performance evaluation and performance-related compensation are understood by the public----by all workers, regardless of their role in the work force, whose income is related in some way to the effectiveness of their individual performance or the common effectiveness of the larger group of which they are apart (p. 12).

According to this statement, performance-related compensation is positively correlated to teachers' performance and what the public (students, parents, district, and government) desires, which implies that excellent work should result in more pay. In universities and colleges, with their mission of delivering teaching services to students, an accurate procedure of assessing an effective performance for teachers must focus on their interaction with students in the classroom.

During the past decade, however, educators gradually have come to recognize that any meaningful development in educational quality that students received is highly associated with the quality of the instruction that teachers delivered (Anderson, 1991).

While the teacher is "a critical element" (Apps, 1981, p. 66) in any instruction and learning activity (Ryan, 2009), the effectiveness evaluations of teachers are of great importance.

As we know, there are a lot of factors affecting students' satisfaction. Students' satisfaction is treated by many previous researchers as both a dependent and an independent variable (Tessema, Ready & Yu, 2012). Studies also revealed that 'Quality of instruction' (Aman, 2009), 'educational experience' (Elliott, & Healy, 2001; Peters, 1988; Bullups, 2008), 'variety of course'(e. g., Banks & Faul, 2007; Heiman, 2008; Begiri, et al., 2010), and 'academic advising' (e.g., Corts et all., 2000; Elliott, 2003; Olson, 2008) are factors to predict students' satisfaction. These variables already have been investigated by Tessema, Ready, and Yu (2012) to prove that they have a moderate to high positive correlation with the other factors and overall students' satisfaction with evidence from nine years of data with college students. Henschke's MIPI and MIPI-s are good representatives to assess teaching quality in the classroom, a variety of teaching methods, and academic advising. In this study, items of the MIPI and MIPI-s represent how teachers perform their teaching in the classroom as evaluated by students. Thus, the researcher holds the belief that factors of the MIPI and MIPI-s are possible predictors to students' satisfaction.

Teachers' satisfaction includes teacher satisfaction with their teaching, working conditions, and student outcomes. Furthermore, student outcomes and teaching are tightly correlated with teacher effectiveness in the classroom and interaction with their students. Singh and Rawat (2010) pointed out, in order to delve into teachers' satisfaction, it would

be very useful to understand that "they pertain to perceived job characteristics, such as conditions of work, roles and responsibilities and classroom practices" (p. 191). The MIPI and MIPI-s have the ability to assess teachers' behaviors, beliefs, and feelings in the classroom. In this study, the researcher also has the belief teachers' roles and responsibilities and classroom practices are possible predictors to teacher satisfactions.

Summary

This chapter summarizes the literature and begins with the historical background of merit pay, defines "merit pay" as used in the literature, analyzes the advantages and disadvantage of merit pay, and lists ways merit pay is implemented in higher education. Teachers' and students' satisfaction were discussed and factors relating to teacher social demographic characteristics and impacting their satisfactions were elaborated. In addition, teachers' motivations during teaching and importance of their perception of their teaching are investigated. Under the motivation and perception section, factors which impact teachers' motivation and perception as they relate to their effectiveness were identified. Next, teachers' performance evaluation procedures and standards for those performance evaluations are explained. Finally, the researcher presents and explains the possibility of combining merit pay, satisfaction, and teacher performance as evaluated by teachers and students.

Chapter 3

Methodology

The purpose of this study was to investigate the primary factors that impact teachers' merit pay, teachers' satisfaction and students' satisfaction in different higher education settings. Factors in teachers' demographic characteristics such as ages, gender, titles, years of teaching, and workload (hours of teaching per week), and factors of teachers' effectiveness in the classroom evaluated by both teachers and students are considered to be the factors of this study. In investigating those factors, this study will employ a uniform instrument (MIPI) as a teacher assessment procedure based on instructional perspective to investigate teacher's effectiveness in the classroom on a short-term basis. Further, this study ought to understand the reliability and feasibility of predicting teachers' merit pay with different compensation styles as well as teachers' satisfaction with their teaching and students' satisfaction with learning while expanding this instrument to be an assessment procedure for a different country. Second, the researcher wanted to investigate the significant differences in teachers' merit pay, teachers' satisfaction and students' satisfaction among different groups who belong to different educational settings. Third, the researcher wanted to understand whether the underlying factors relating to teachers' demographic characteristics are predictors to their satisfaction and teachers' merit pay.

The study will explore the following research questions:

- Do teachers' demographic characteristics predict their merit pay, their satisfaction, and their students' satisfaction? Are there any differences among different types of schools?

- Does teacher performance/ teaching effectiveness in the classroom, evaluated by MIPI/MIPI-s, predict teachers' merit pay, their satisfaction and their students' satisfaction respectively?

Design

In this section, the research setting's demographic and economic information is described. Basic information about teachers in higher educational settings also was briefly discussed in this paragraph.

Context

Jiangsu province is a big economic development state in China with GDP of RMB 48,604 billion Yuan in 2011 (Government Report of Jiangsu Province, 2012). According to Jiangsu Education Development Statistics Report in January, 2012, there were a total of 163 higher education universities, institutions, and vocational colleges with a total of 161,062 faculty and staff members. Among them, 138 were public universities and schools, while 25 were private universities. Public universities and schools usually receive more funding supports from governments, their teachers are hired by governments, and their pay is higher than in public institutions. In China, private universities are termed dependent universities, that is, they have a dependent budget finance system and teachers in this education system will not get merit pay as those who work at a public education system do. In the Jiangsu province, there are also many

private educational organizations and vocational colleges which are part of the main stream educational system of the Jiangsu educational system with more than 2,160,400 full- and part-time students; teachers who work at these organizations usually receive incentives rather than the merit pay compensation system offered by local governments (Department of Education in Jiangsu, 2012).

Nanjing is also the fourth largest scientific research educational group of cities in China, which located in the eastern part of China (See Figure 3). It is the capital of Jiangsu Province with a population of over 7.4 million. Nanjing has 41 general higher educational institutions (excluding military schools) with more than 600,000 students (Nanjing Government Report, 2012).

As for its economics, Nanjing has 13 districts and counties, with the total GDP of renmingbi 6,140 billion yuan in 2011 (Nanjing Government Report, 2012). Since 2009, merit pay was a focus among public universities, colleges, and the compulsory educational system in Nanjing too. All state-employed faculties' salaries are commonly determined by teachers' years of teaching, titles, positions, etc., with minor adjustments on their assignment locations; and, in the end of each year, some bonuses will be paid based on annual assessment of performance. The average monthly salary of a teacher includes merit pay and is calculated by the teacher's level of education (2012 to 2014). It is around renmingbi 5,000 yuan per month (US$ $1 \approx 6.21$ RMB Yuan). The average of the total annual income including benefits and incentives is more than renmingbi 6,000 yuan per month. The payroll funding depends on the annual budget from local state departments of finance. There is a very small increase compared to the previous year due

to a higher inflation rate. In most universities, benefits, and incentives usually depend on

the university's external funding from non-governmental support or donation. For

example, institutions will own and manage hotels and restaurants in order to raise funds.

Based on Nanjing's economical, educational, population, and geographical

advantages as stated above, it was chosen by the researcher to be the study focus area.

Figure 3: Nanjing Location; Nanjing Map.

In this study, the researcher selected the participants' four kinds of settings in the

Nanjing area with the help of one officer who works at the Department of Education in

Jiangsu Province. These areas were supervised by different levels of government

education administrations because they came from different settings as delineated in the

previous chapter. The fieldwork was done from May to December, 2013. Data related to

this study was collected by online designated questionnaires concerning the teachers and

students demographic characteristics and teacher performance evaluation procedures. The

questionnaire had been used in many previous studies (Dawson, 1997; Drinkard, 2004; McManus, 2008; Ryan, 2009; Rowbotham, 2007; Seward, 1998; Stanton, 2005; Stricker, 2006; Thomas, 1995; Vatcharasirisook, 2011).

As for the groups, the research classified the teachers and students according to their affiliate administrative and control categorizations into the following:

- Group 1: A public university in Nanjing that is an affiliate to the Department of Education in Jiangsu Province which has already employed a merit pay policy for their teachers; 132 teachers had been invited by the researcher to take part in this research. Also 2,431 students voluntarily responded after being invited by both the researcher and their teachers via online survey in class or after class.

- Group 2: A private university in Nanjing that is an affiliate to the Department of Education in Jiangsu Province which did not employ merit pay policy for their teachers; 129 teachers had been invited by the researcher to take part in this research. Also, 2,350 students voluntarily responded after being invited by both the researcher and their teachers' online survey.

- Group 3: A public vocational college in Nanjing that is an affiliate to the Department of Education in Nanjing which employed a merit pay policy for their teachers; 114 teachers had been invited by the researcher to take part in this research. Also, 2,273 students voluntarily responded after being invited by both the researcher and their teachers' online survey.

- Group 4: A private vocational college in Nanjing is an affiliate to the Department of Education in Nanjing which has not employed merit pay policy for their

teachers. One hundred and three teachers had been invited by the researcher to

take part in this research; accordingly, 1,914 students voluntarily responded after

being invited by both the researcher and their teachers' online survey.

Standard Multiple Regression Analyses Model

In this study, factors of teacher demographical characteristics, and the MIPI and

MIPI-s as independent variables, are predictors of teachers' satisfaction, teachers' merit

pay based on teachers' annual income they reported, and students' satisfaction as the

dependent variable. A general model for standard multiple regression analyses had been

set up before analyzing:

$$y_{dependent\ variables}$$

$$= a + b_{Independent\ factors\ Beta\ coefficient} x_{independent\ variale\ factors}.$$

Here, a) "*y*" is the value of the different dependent variables, that is, what is
being explained;

b) "*a*" is the constant,

c) each "*b*" is the independent variable's beta coefficient for corresponding x ,
and

d) "*x*" represents the different independent variable that is explaining the
variance in y.

Sampling

According to *the Sixth National Population Census* report in 2010 made by the

National Bureau of Statistics of China (NBSC, 2011), in Nanjing, there were 706,100

undergraduate and 65,900 graduate students distributed among different universities and

other higher education systems. This study sampling selection is an advantage. The

population for this study included all adult learners, that is, students age 18 or older

enrolling in a credit course and teachers of those courses who studied or teach in the

different settings of schools and universities during the 2012-2013 academic years in

Nanjing, the eastern area of China.

In order to generalize and collect reliable data in a convenient and efficient way,

the data was divided into different groups, as mentioned previously, based on their work

settings, compensation style, and affiliate attributions. Four different groups with

different settings from more than 40 universities and schools, which have a long history

of offering a variety of degrees and training programs and have merit pay or non-merit

pay system, was identified as a sample collection setting.

Under this framework, more than 450 teachers and corresponding thousands of

students in their classes during the 2012-2013 academic years was selected from these

universities and colleges. The rationale for choosing four of the typical universities and

colleges for sample selection was that these facilitating organizations are largely identical

but with minor differences. They offered different degrees and certifications which

actually do not affect this study's results and sampling selection because they have totally

different teacher compensation systems. According to the Krejcie and Morgan (1970)

study on how to determine sample size for research activities, the random sample sizes

required for population representation, utilizing more than 383 samples for students and

teachers respectively, will be sufficient to meet this study's requirement since the

population size is 1,000,000. Finally, it was critical for the study that these organizations

and participants were willing to participate in the study because the design of the

research, including the demographic questionnaire and two instruments evaluated by

teachers and students, took 15 to 20 minutes to fill in and complete.

Measures

Three measures were used in collecting data in this study. The demographic

questionnaire was used to collect teachers' demographic characteristics, annual income

(merit pay) and satisfaction data on teachers and students. The MIPI was employed to

assess teachers' performance in classrooms with the MIPI-s reflecting students'

evaluation their teachers' performance in the classrooms.

Demographic Characteristics, Merit Pay and Satisfaction

Each teacher and student was asked to complete a two-part corresponding

demographic information form: PART A was for both the teacher and student, while

PART B was only for the teachers (see Appendix D). Since it was an online study, when

integrating the demographic questionnaire into web pages, the program automatically

identified the correct questionnaire parts based on the status of the participant.

In PART A, the teachers and students was asked to provide information about

gender, age, school settings, highest diploma or degree they had, and their degree of

satisfaction with teaching and learning. PART B was only for teachers and includes

number of years teaching as their working experience, merit pay based on teachers'

annual income, compensation styles, and workload such as how many hours they need to

teach per week, and titles and some topics. Teacher merit pay was represented by

teachers' annual income. The demographic scales were designed in a closed form except

one variable, age. Teachers, as participants, answered some questions about their

attitudes toward performance pay and expectations from the administrations (Kelly, 1997; Kelley et al., 2000; Kelly, Heneman, & Milanowski, 2002; Milanowski, 2007):

- Do you like or want to be paid by your performance evaluated by yourself or by students (for instance, very much, high, moderate, low, dislike)?

- Do you trust in the school system about performance pay (for instance, totally, pretty much, some, a little, never)?

- Do you like the design and implementation of the pay system (for instance, fair and transparent, pretty fair and transparent, a little fair and transparent, I do not believe)?

- Did you receive performance pay in the last three years (more than 3 times, 3 times, 2 times, 1 times, never)?

Teachers' and Students' Satisfaction

In this quantitative study, the researcher considered Ray's research (2009) at an American community college. In the present study students/teachers who enrolled/taught for the 2012-2013 academic years were asked to investigate some factors impacting their perception and motivation, and, at the same time, identify their level of satisfaction with their corresponding learning experience in class. Students/teachers were asked to rate their general experience with teaching and study, past and present, on a continuum between *totally unsatisfactory* and *totally satisfactory (i.e.no satisfaction* and *highest possible satisfaction).* Two global Likert-scale items were included in a demographic questionnaire (see Appendix D): the first one was to circle the number of 0 (*No satisfaction*) to 10 (*Highest possible satisfaction*) which *best indicates your level of*

satisfaction with your personal learning in this course; subsequently, students were asked

to respond to the question: *How would you rate your general experience with your study,*

past and present? Using a scale of 0 (*No satisfaction*) to 10 (*Highest possible*

satisfaction).

Modified Instructive Perspective Inventory

The Modified Instructive Perspective Inventory (MIPI), as a teacher performance

evaluation procedure, was the main instrument to evaluate teacher effectiveness in the

classroom. Its contents are elaborately described in this section.

Objectives of Teacher Evaluation Program

When referring to the objectives of an effective teacher evaluation program,

Tecker (1984) claimed that it should meet three objectives:

- "Improves the quality of instruction delivered to students,

- Provides information that teachers can employ to improve or enhance their

  performance, and

- Provides information that can serve as the basis of thorough and defensible

  employment decisions" (p. 17).

Concerning above mentioned objectives, Tecker (1984) emphasized that all

objectives should be met at the same time, and that there is no hierarchy among them.

Although improving the quality of instruction is the key factor of improving teacher

performance, the same kind of information is required to achieve each objective. In order

to meet these objectives, all of the relevant people, including teachers, evaluators, the

board, and students should have a clear and common understanding of the purpose,

criteria, and procedures involved in the evaluation process (Tecker, 1984). In summary, the objectives of teacher evaluation ensure and improve the overall quality of education and enhance teacher effectiveness in the future.

Applying the Modified Instructive Perspective Inventory (MIPI) as a Teacher Performance Evaluation Procedure

According to Henschke (1989), instructional perspective is comprised of "the teacher's personal and contextual identification, actions and competencies in the classroom, and philosophical beliefs for guiding practice" (p. 81). Instructional perspective informs educational practice and shapes teacher effectiveness in the classroom (Ryan, 2009). In this study, the researcher maintains that the instructional perspective clarifies "the beliefs, feelings and behaviors" (Henschke, 1989, p. 81) that teachers may hold or present during teaching at a specified point in time (Ryan, 2009).

The Modified Instructional Perspectives Inventory (MIPI) originated from the Instructional Perspectives Inventory (IPI). As stated previously, the objective of Henschke (1989) in developing the IPI was to provide a better understanding of "the beliefs, feelings, and behaviors adult [instructors] need to possess to practice in the emerging field of adult education" (p. 83). In addition, the IPI is intended to assess "the teacher's personal and contextual identification, actions [in the classroom], competencies in the classroom, and philosophical beliefs for guiding practice" (Henchke, 1989, p. 81).

The IPI was intended to be used as "a critical reflection or self-evaluation and self-diagnostic instrument--providing clues for improvement" (Stanton, 2005, p. 110). This instrument was used with educators, educators in preparation, graduate students,

health care providers, nursing educators and students, mathematics faculty, school

administrators, business, and University Extension workers (Dawson, 1997; Drinkard,

2004; Henschke, 1994; McManus, 2008; Ryan, 2009; Rowbotham, 2007; Seward, 1998;

Stanton, 2005; Stricker, 2006; Thomas, 1995; Vatcharasirisook, 2011).

There are seven composite scores for each IPI factor based on different items. The

IPI composite score represents the degree of the teachers' report to the use of instructive

principles; that is, high scores show a more student-centered instructive perspective; low

scores show a more teacher-centered instructive perspective. The score only reflects a

teacher's instructional perspective taken at one particular period, and, as Henschke notes,

the score does not represent "a constant, absolute attribute" (Stanton, 2005, p. 111).

Based on the previous statements, the Modified Instructive Perspective Inventory

(MIPI), regardless of its objectives, procedures, and factors, can be employed to test

teacher effectiveness in the classroom as a complete and formative teacher performance

evaluation procedure. In addition, after reviewing many previous studies in relation to

MIPI and comparing the procedures standards as advocated by Tecker (1984), the

researcher considers the MIPI to meet the basic characteristics which a standard teacher

performance evaluation procedure should have:

- Objectivity: MIPI's intention is to improve the understanding of teachers'
  behaviors, and beliefs in the classroom which delivered to their students;

- Periodicity: Instructional perspective is a constantly evolving attribute, and the
  MIPI tests teacher performance at a particular moment in time instead of
  representing a constant, absolute attribute;

- Process: As a process, MIPI is more than a form to be filled and filed, which needs the administration's constant attention on enhancing the organizational objectives. There are a lot of "what" and "how" questions (e.g. what they want to accomplish; how well they are doing it; what can be done better) needed to investigate teacher beliefs, feelings and behaviors in class;

- Information: The MIPI offers correct, relevant, and timely information to students and teachers in order to examine their teaching and learning in class; and

- Judging: The MIPI offers an effective evaluation approach which dramatically increases the probability that judgments will be good by ensuring the quality of information on which decisions are based (Dawson, 1997; Drinkard, 2004; Henschke, 1994; McManus, 2008; Ryan, 2009; Rowbotham, 2007; Seward, 1998; Stanton, 2005; Stricker, 2006; Tecker, 1984; Thomas, 1995; Vatcharasirisook, 2011).

Studies on IPI and the MIPI

The IPI and MIPI have been used in many studies prior to this study (Dawson, 1997; Drinkard, 2004; Ryan, 2009; McManus, 2008; Rowbotham, 2007; Seward, 1998; Stanton, 2005; Stricker, 2006; Thomas, 1995; Vatcharasirisook, 2011). For instance, the IPI and MIPI have been used to assess the instructional perspective of teachers, teachers in preparation, graduate students, health care providers and instructors, school administrators, and University Extension workers (Henschke, 1994; Ryan, 2009). In this study, the MIPI will be used for the first time to evaluate teacher performance and effectiveness in China.

In the last decade, Thomas (1995) used the IPI to study the instructional perspective of adult instructors teaching parents. The results indicate that teachers developed a more andragogical instructional perspective the longer they taught adults. Thomas also found that full-time teachers were more likely than part-time teachers to include parents in the process of planning and implementing instruction in regards to the factor Planning and Delivery of Instruction.

Seward (1998) also scrutinized the instructional perspectives of parent teachers (i.e., adult educators teaching parents) by using the IPI. She found that teachers' age had an effect on positive identification with their teaching method, specifically on the subscales *Teacher Trust of Students* and *Teacher Planning and Delivery of Instruction*. In addition, she stated that the number of in-service hours of training and the parent teacher's length of service had a positive correlation with one factor, *Teacher Empathy for Students*.

Dawson (1997) investigated the instructional perspective of nursing teachers. This study determined that four IPI subscales (i.e., *Teacher Empathy with Students, Teacher Trust of Students, Teacher-centered Learning Process, and Experience-based Learning Techniques*) were affected by the highest educational degree held by nurse educators. Three subscales (i.e., *Teacher Empathy with Students, Teacher Trust of Students, and Teacher Insensitivity toward Students*) were influenced by the amount of their teaching experience.

Drinkard (2004) employed the IPI with nurse teachers teaching in distance learning settings. Drinkard found that increased teaching experience was associated with

a more andragogical approach to teaching and learning, as did the teachers' level of education. Therefore, according to Drinkard, nursing educators with doctorates in fields other than nursing showed more trust in students than did educators with nursing doctorates.

Stanton (2005) established the construct validity of the IPI. Stanton's study established that the overall reliability of the IPI is .8768 by using Cronbach's alpha. Factors 1 through 6 were found to be interconnected with the *Self-Directed Learning Readiness Scale (SDLRS)*; Factor 7: Teacher-centered Learning Process was not significantly correlated with the SDLRS. Stanton (2005) also recommended three changes to the IPI according to his findings: a) an increased degree of variance in the IPI response scale (the number of possible responses to each item in the modified IPI should be increased from four to five); b) a re-wording of IPI descriptors for the expanded response scale (Stanton also modified the following five possible responses for each item in MIPI: *A – Almost Never, B – Not Often, C – Sometimes, D – Usually, and E – Almost Always*; and c) the use of reverse scoring on items in the two IPI subscales representing teacher-centeredness, Factor 5: Teacher Insensitivity towards Students and Factor 7: Teacher-centered Learning Process. The suggested modifications (Stanton, 2005) improve the instrument in two ways: a) increasing the response scale's degree of variance and the necessary re-wording of descriptors provide for more subtle distinctions in survey responses; and b) using reverse scoring for participants' scores in Factors 5 and 7 provides a consistency of direction in scores across all subscales (Ryan, 2009). After incorporating the recommended reverse scoring on Factors 5 and 7, high scores in all

subscales represent student-centeredness (i.e., high use of andragogical principles); low scores represent teacher-centeredness (i.e., low use of andragogical principles) (Ryan, 2009; Stanton, 2005). Stanton (2005) also refined the understanding of IPI scores by grouping teacher scores into category levels representing higher or lower degrees of andragogical perspective: *High Above Average, Above Average, Average, Below Average, and Low Below Average*. These categories provided descriptors for use of andragogical principles in future studies using the IPI (Ryan, 2009). However, Henschke advises that the score should only be considered an indication of the teacher's place on that continuum at a particular moment in time, and that the score does not represent a constant, absolute attribute (Stanton, 2005).

Stricker (2006) used the IPI to assess the instructional perspective of principals-as-facilitators-of-teacher-learning and evaluate the perceptions of teachers-as-students with regards to the instructional perspective of their principals. Stricker found that there was a gap between principals' reported instructional perspectives and teachers' perceptions of principals' instructional perspectives. Based on the gap he found, Stricker concluded that principals, as learning leaders, have not learned how to create conditions conducive for learning and have not learned how to teach adults effectively.

Ryan (2009) used MIPI to investigate the satisfaction of adult learning from an instructional perspective in foreign language classrooms conducted in a local community college. She found that the MIPI score for Factors 1 through 6 had significant positive relationships with adult language learning satisfaction. Among these factors, it was

Factor 1 that was tested to be to strongest significant factors of adult learning satisfaction, while Factor 7 was a negative factor of learning satisfaction.

Vatcharasirisook (2011) employed the MIPI to investigate the relationship between supervisors and subordinates. She intended to extend this inventory to the business field and wanted to figure out a way "not only help subordinates learn, but techniques to increase employee's job satisfaction and intention to remain in the company" (p. 90). She found that three key factors (Supervisor empathy with subordinates, Supervisor trust of subordinates, and Supervisor insensitivity toward subordinates) "had either direct or indirect effect on an employee's intention to remain in the company" (p. 92).

Two more recent studies have used the modified IPI to examine nursing education (Rowbotham, 2007) and mathematics faculty (McManus, 2008). Rowbotham (2007) investigated the relationship between the instructional perspective of nursing educators, using MIPI, and student perceptions of the learning climate, using the Adult Classroom Environment Scale (ACES). Her analysis of teachers' IPI scores found that three subscales were highly correlated with the scores: *Teacher Empathy with Students, Teacher Trust of Students, and Accommodating Student Uniqueness*. McManus (2008) also determined that the demographic characteristics of age and highest degree attained were the most significant teacher characteristics associated with the use of their teaching principles.

Explanation of Seven Factors of the MIPI

The IPI evaluates seven factors related to teacher performance in the classroom. Those factors are: *Teacher Empathy with Students, Teacher Trust of Students, Planning and Delivery of Instruction, Accommodating Student Uniqueness, Teacher Insensitivity toward Students, Experience-based Learning Techniques (Student-centered Learning Process,* and *Teacher-centered Learning Process*.

Factor 1 is Teacher Empathy with Students. This subscale is comprised of five questions. It assesses the extent to which the teacher exhibits a connection to and understanding of the student by noticing student changes, acknowledging and appreciating student participation, and supporting the development of positive self-esteem. Factor 1 also assesses the attitude of teachers toward creating a balance in the classroom between individual student motivations to learn and acquisition of content knowledge. The teacher acknowledges that both students' motivations to learn and their need to acquire content knowledge should be taken into consideration in the classroom (Ryan, 2009).

Table 1: Factor 1, Teacher Empathy with Students

	Item #	How frequently do you…
	4	feel fully prepared to teach?
	12	notice and acknowledge to students positive changes in them?
Factor 1	19	balance your efforts between learner content acquisition and motivation?
	22	promote positive self-esteem in students?
	26	express appreciation to students who actively participate?

Note. Cronbach's alpha for IPI Factor 1 = .63 (Stanton, 2005)

The items and questions for Factor 1 are found in Table 1. Five choices (*Not Often, Sometimes, Usually, Almost Always*) have been offered for participants to select.

Factor 2 is Teacher Trust of Students. Factor 2 is inclusive of 11 questions. The teacher who answers these questions positively sees students as unique and worthy of having the power to make choices and decisions about what they need. Students are seen as possessing dignity and integrity and as able to express their own learning needs and participating in the evaluation of their learning.

Table 2: Factor 2, Teacher Trust of Students

	Item #	How frequently do you…
Factor 2	7	purposefully communicate to students that each is uniquely important?
	8	express confidence that students will develop the skills they need?
	16	trust students to know what their own goals, dreams, and realities are like?
	28	prize the student's ability to learn what is needed?
	29	feel students need to be aware of and communicate their thoughts and feelings?
	30	enable students to evaluate their own progress in learning?
	31	hear what students indicate their learning needs are?
	39	engage students in clarifying their own aspirations?
	43	develop supportive relationships with your students?
	44	experience unconditional positive regard for students?
	45	respect the dignity and integrity of the students?

Note. Cronbach's alpha for IPI Factor 1 = .81 (Stanton, 2005)

In Factor 2, teachers report items that help students become aware of their feelings and communicate their goals, dreams, and realities. Teachers' interactions with students show confidence in the students, as well as respect and regard for them (Ryan, 2009). The items and questions for Factor 2 are found in Table 2. Five choices (*Not Often, Sometimes, Usually, Almost Always*) have been offered for participants to select.

Factor 3 is Planning and Delivery of Instruction. Factor 3 is comprised of five questions, mainly focusing on teacher learning objectives, teaching techniques, and the use of instructional media in the classroom. The teacher who identifies with this factor chooses techniques which are integrated with content knowledge, and understands that there is more than one way to approach instruction. Furthermore, the teacher is interested in creatively improving ways to plan and deliver instruction (Ryan, 2009).

The items and questions for Factor 3 are found in Table 3. Five choices (Not *Often, Sometimes, Usually, Almost Always*) have been offered for participants to select.

Table 3: Factor 3, Planning and Delivery of Instruction

	Item #	How frequently do you…
Factor 3	1	use a variety of teaching techniques?
	9	search for or create new teaching techniques?
	22	establish instructional objectives?
	23	use a variety of instructional media? (Internet, distance, interactive video, videos, etc.) ?
	42	integrate teaching techniques with subject matter content?

Note. Cronbach's alpha for IPI Factor 3 = .72 (Stanton, 2005)

Factor 4 is Accommodating Student Uniqueness. Factor 4 is made up of seven questions. The teacher who responds to Factor 4 questions acknowledges the diversity of students' abilities, ways of learning, and application of knowledge. The teacher listens to students and engages students in the discovery of their individual abilities and also anticipates and accepts that frustration is part of the learning process. In addition, the teacher recognizes that students can learn from one another and that students have something meaningful to contribute to the learning process. All students in the classroom have the ability to provide learning help to one another. This approach encourages collaborative learning (Ryan, 2009).

The items and questions for Factor 4 are found in Table 4. Five choices (*Not Often, Sometimes, Usually, Almost Always*) have been offered for participants to select.

Table 4: Factor 4, Accommodating Student Uniqueness

	Item #	How frequently do you…
Factor 4	6	expect and accept student frustration as they grapple with problems?
	14	believe that students vary in the way they acquire, process, and apply subject matter knowledge?
	15	really listen to what students have to say?
	17	encourage students to solicit assistance from other students?
	37	individualize the pace of learning for each student?
	38	help students explore their own abilities?
	40	ask the students how they would approach a learning task?

Note. Cronbach's alpha for IPI Factor 4 = .71 (Stanton, 2005)

Factor 5 is Teacher Insensitivity toward Students. Factor 5 is comprised of seven

questions. The insensitive teacher does not understand the reasons for student behaviors

such as asking numerous questions or needing an extended period of time to understand

what is being learned, and, therefore, has feelings of intolerance and frustration with

perceived student attitudes and needs. Furthermore, the insensitive teacher cannot realize

that the student might have different ways of understanding content and communications,

and may, therefore, interpret certain student behaviors as inattentive, apathetic, or boring

(Ryan, 2009). Factor 5 is reverse-scored as suggested by Stanton (2005).

The items and questions for Factor 5 are found in Table 5. Five choices (Not

Often, Sometimes, Usually, Almost Always) have been offered for participants to select.

Table 5: Factor 5, Teacher Insensitivity toward Students

	Item #	How frequently do you…
Factor 5	5	have difficulty understanding student point-of-views?
	13	have difficulty getting your point across to students?
	18	feel impatient with students' progress?
	27	experience frustration with student apathy?
	32	have difficulty with the amount of time students need to grasp various concepts?
	36	get bored with the many questions students ask?
	41	feel irritation at student inattentiveness in the learning setting?

Note. Cronbach's alpha for IPI Factor 5 = .7787 (Stanton, 2005)

Factor 6 is Experience-based Learning Techniques (Student-centered Learning

Process). Factor 6 is comprised of five questions focusing on interactive learning. In this

factor, the teacher recognizes learning as an activity which can take place productively

within a group or community of students, and the teacher believes in the importance of

making learning relevant to the real life of students (Ryan, 2009).

The items and questions for Factor 6 are found in Table 6. Five choices (Not

Often, Sometimes, Usually, Almost Always) have been offered for participants to select.

Table 6: Factor 6, Experience-based Learning Techniques (Student- centered Learning Process)

	Item #	How frequently do you…
Factor 6	2	use buzz groups (students placed in groups to discuss information from lectures)?
	10	teach through simulations of real-life?
	21	conduct group discussions?
	24	use listening teams (students grouped together to listen for a specific purpose) during lectures?
	35	conduct role plays?

Note. Cronbach's alpha for IPI Factor 6 = .72 (Stanton, 2005)

Factor 7 is Teacher-centered Learning Process. Factor 7 has five questions. The

teacher who reports a teacher-centered learning approach holds the belief that the student

should receive the amount and kind of information which the teacher considers

appropriate. Therefore, the teacher's role is to determine the studying that is necessary

and appropriate to a learning situation, and students are passive recipients of information.

The teacher is focused on providing students with as much information as possible, as

efficiently as possible; at the same time, the teacher chooses the most appropriate

instructional plan for the students (Ryan, 2009).Factor 7 is reverse-scored as suggested by

Stanton (2005).

The items and questions for Factor 7 are found in Table 7. Five choices (*Not Often, Sometimes, Usually, Almost Always*) have been offered for participants to select.

Table 7: Factor 7, Teacher-centered Learning Process

	Item #	How frequently do you…
Factor 7	3	believe that your primary goal is to provide students with as much information as possible?
	11	teach exactly what and how you have planned?
	20	try to make your presentations clear enough to forestall all student questions?
	25	believe that your teaching skills are as refined as they can be?
	34	require students to follow the precise learning experiences which you provide them?

Note. Cronbach's alpha for IPI Factor 7 = .57 (Stanton, 2005)

The scores for each factor in the IPI are combined to provide one summative score (see Appendix G). This score places the teacher on a continuum between High, Above Average performance in class and Low, Below Average performance in class (see Appendix G). Henschke has noted, however, that the factor scores and summative score derived from this instrument only represent the teacher's instructional perspective at a particular point in time (cited in Stanton, 2005).

Data Collection

A pilot study of the instruments was conducted prior to data collection. Study instruments surveys (MIPI/MIPI-S), demographic questionnaire, protection of human subjects' paper (Appendix A), consent informed paper (Appendix C) were prepared both in Chinese and in English. After examining the feedback from the peer review, the final

forms of the instruments, MIPI and MIPI-S, and demographic questionnaire, were integrated, designed and loaded onto web pages. Once getting approval from university and allowance from the field universities and schools, research packets designed online were open to the target population in May, 2013. Teachers and students were randomly selected from different groups for answering the online questionnaires. Those selected received a specified number (ID number) for teacher (#001, #002, #003………) associated with corresponding passwords assigned by the researcher. To ensure anonymity of the participants no one had access to the password identifiers but the researcher to ensure anonymity of the participants.

Translation Issues

The data collection was conducted in both Chinese and English, and the researcher translated the instruments, demographic questionnaire, and letters by following these steps: a) All letters, informed consent, instruments, questionnaire were prepared in English (the original version); b) The researcher translated verbatim from English to Chinese (the Chinese version); and c) a 'back translation' strategy as a check on the researcher's translation, that is, a bilingual person was invited and asked to translate the Chinese version back into the original language (the translated version) (Merriam, 2009). The closer the back-translated version comes to the original, the more reliable is the translation. In this study, the researcher and the translators had a through comparison between the translated versions and the original versions of the measures, found the ninety five percent of them were matching, and there were no obscure words in

the Chinese version, that is, easier for them to understand. After comparing different

versions, the research reliability as a bilingual study was satisfied.

Online Survey Design and Contents

Online survey embedded in Internet technology has increasingly been used as a

useful research tool, which has obvious advantages over conventional paper- and pencil-

mailed questionnaires: a) postal costs are eliminated, b) missing data was reduced, and c)

no data entry is needed, that is, reducing errors (Gall, Gall, & Borg, 2007).

In this study, the online research packets include:

- Protection of Human Rights (IRB) (Appendix A),

- Instructions for Participants (Appendix B),

- Informed Consent (Appendix C),

- Demographic Information for Participants (Appendix D),

- MIPI or MIPI-S (Appendix E & F), and

- Contact Information & Gift Information (Appendix G).

Some distinguishing features of the online research design for data collection

include the following:

- To avoid having any inappropriate person provide data, teachers logged onto the

  survey website with a designated ID (#001, #002, #003………) and password. By

  logging on with the same ID and password but different ENTER option buttons

  (Teachers or Students), they also recorded their consent to participate in the study.

- Teachers responded to Likert-scale items of MIPI, and closed-form items in

  demographic questionnaire by clicking 'radio buttons' (a kind of web-page

feature). They responded to rank-order items by entering a number (i.e, 'Age,' 'Annual income') and to open-form items (also, 'Other Issues') by typing a response. While students responded to Liker-scale items of MIPI-S by clicking 'radio buttons' (a kind of web-page features).

- After completing the survey, each participant was invited (but was not required) to fill in their personal contact information for a participant incentive, and then clicked a SUBMIT button, which transmitted the data to the webserver. If the participants clicked this item without having completed the entire questionnaire, the web software informed them of which items still required completion.

- The data was secured on the researcher's web server, so they would be available only to the researcher and the web server programmer.

- The raw data were in electronic form and were easily imported into a statistical software program EXCEL for analysis (Carbonaro & Bainbridge, 2000; Gall, Gall, & Borg, 2007).

Pilot Test

The purpose of pilot test is to determine whether there are problems of interpretation, for instance, wording, misunderstanding, frequently found in online survey items, and the participants in the sample have sufficient knowledge and understanding to express a meaningful opinion about MIPI and MIPI-S (Gall, Gall, & Borg, 2007). A pilot test of the online survey including questionnaire and instruments was conducted in a computer science classroom prior to use in this study. The researcher chose students of the authorized universities to take the tests with computers as a convenience. Feedback

and comments about the online survey design were also collected in the class and the
pilot test was completed in 15 minutes. There were not any problems of the measures'
interpretation, wording, misunderstanding, and the pilot testers showed they had
sufficient knowledge and understanding to express a meaningful opinion about MIPI and
MIPI-s.

Increase Response Rate: Site Selection, Pre-contacting the Sample, and Incentive
Approaches

In order to conduct this study, the researcher successfully applied for funding
support from Department of Jiangsu Province. Also, one of the deans who was working
at Department of Education in Jiangsu Province many years was contacted. He helped the
researcher get into the target universities and schools and contacted the heads of human
resources management department in these education systems.

In order to increase the rate of response, a pre-contact was done via a telephone
call to those selected including the teachers and students. A pre-contact was an initial
message in which the researchers identify themselves, discuss the purpose of the study,
and request cooperation. Telephone contacts were the most effective way for the
researcher to do that (Gall, Gall, & Borg, 2007; Linsky, 1975). As an online survey
design, the teachers ID numbers and password for corresponding IDs were given to the
participants, especially to the teachers, through a pre-contact. Teachers were also asked to
encourage their students to participate, which enhanced the study consistency during data
collection as well.

As an incentive to participate in this study, all participants who completed the

online survey were invited to leave their personal contact information (see Appendix H):

email address, home address, and available contact telephone number, so that they were

eligible to win a renmingbi 50 yuan *Suguo* supermarket gift card. Basing on the web

system which automatically generated a five-digit lucky number and after drawing with

corresponding information they supplied online, finally, 200 of them accepted a

renmingbi 50 yuan *Suguo* supermarket gift card respectively.

Protection of Human Rights

The student participants were anonymous throughout data collection and analysis

process unless they contacted the researcher requesting to be informed of the study

results. Those who contacted the researcher and requested to be informed of the study's

results would be sent an abstract and information about accessing the study. Once the

research was completed, all information would be deleted.

<div align="center">

Data Analysis

</div>

Data collected from the field was automatically formed into files with EXCEL.

The statistical package used to conduct this analysis was SPSS in English. The variables

were exported from EXCEL and loaded into SPSS for further analysis. Data coding was

done before importing the data into SPSS for analysis. According to the Instructor's

Perspective Inventory Factors guidance (see Appendix G), each score in MIPI (45 items)

and MIPI-s (45 items) were correctly itemized and calculated into seven factors with new

variable names (e.g., Factor_1, Factor_2, Factor_3……., and, Factor_s_1, Factor_s_2,

Factor_s_3……) in SPSS. Finally, statistical analysis methods with SPSS were employed to answer the research questions.

Prior to analysis, all variables included in data such as age, gender, title, MIPI and MIPI-S scores, etc., were examined for accuracy of data entry, missing values, and fit between their distributions and the assumptions of regression analyses. Due to data collected via online programs, in this study, there was no missing value because the program could not be submitted to the server successfully once the participants missed a value during taking the online surveys. Descriptive and summative analyses were completed and discussed in later chapters.

In order to answer the initial questions, standard multiple regression analyses were employed by the researcher as main analyses procedures according to the general model set up in the previous section of this chapter. The independent variables and dependent variables were measured respectively as shown below:

Satisfaction of Teachers and Students as the Dependent Variables

The satisfaction in this study includes two parts: (a) teachers' satisfaction with their job, teaching, and students' learning, and (b) students' satisfaction with their learning and teachers' teaching. The level of satisfaction was assessed using two questions designated by Likert-scale on a continuum between *no satisfaction* and *highest possible satisfaction*: in completing the first question, the participant would circle the desired number from 0 (*No satisfaction*) to 10 (*Highest possible satisfaction*) which *best indicates your level of satisfaction with your personal learning/teaching in this course*; subsequently, students are asked to respond to the question *How would you rate your*

general experience with your study/career, past and present? Using a scale of 0 (*No satisfaction*) to 10 (*Highest possible satisfaction*).

Merit Pay as the Dependent Variables

The main topic of this study is teacher merit pay. Teacher merit pay is gauged by teachers' annual income, that is, depending on how much the teachers get paid annually. In this study, teacher merit pay and compensation style would be ascertained by two different questions: *Are you in a merit pay system*? (*yes* or *no*) and *What is your annual income now after you involved in this educational organization*? (Interval numbers show how much they receive, e.g. renmingbi 20,000~40,000 yuan, which represents the local teacher incomes levels in Nanjing area). These questions were included in the demographic questionnaire (Appendix B).

Factors of MIPI, MIPI-s, Teachers' Demographical Characteristics as the Independent Variables

Independent variables in this study were factors of teacher performance evaluation results: teacher self-assessment (MIPI) and student assessment (MIPI-s). Seven common factors were investigated via 45 items: *Teacher Empathy with Students, Teacher Trust of Students, Planning and Delivery of Instruction, Accommodating Student Uniqueness, Teacher Insensitivity toward Students, Experience-based Learning Techniques (Student-centered Learning Process), and Teacher-centered Learning Process*.

In addition, factors highly relevant for teacher merit pay, satisfaction, motivation, and perceptions (e.g., age, gender, title, and educational experience) (Lewis, 1973; Moor, 1987; Tecker, 1985) were added as teachers' demographic characteristics in the statistical analyses. Information about teachers' age, work settings, degrees gained before teaching, titles, years of teaching experience, working hours, concerns with performance evaluation, concerns with merit pay, and opinions about the merit pay system were collected as predictive independent variables. Questions about titles and concerns with performance evaluation were classified into categories such as teaching assistant, instructor, assistant professor, associate professor, and professors etc. according to current popular Chinese government classifications stipulated by the *Ministry of Education* in China.

The framework of data analyses procedures

The framework of data analyses procedure between dependent variables and independent variables is illustrated as the blow (Figure 4):

Figure 4: Data Analysis Processes

Independent   **Dependent**

| Factors of DC |

| MIPI (Seven Factors) |

| MIPI-s (Seven Factors) |

| Overall Satisfaction of Teacher |

| Merit Pay |

| Overall Satisfaction of Students |
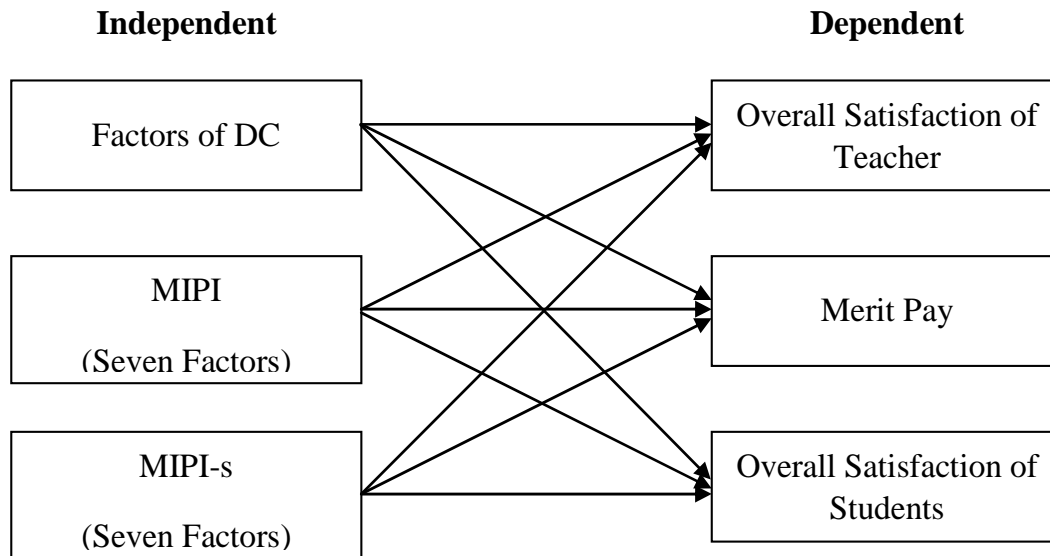
From the above Figures, different data analyses approaches have been conducted as the following steps:

a) Standard multiple regression analyses to teachers' merit pay as the dependent variable, and factors of MIPI, MIPI-s and teachers' demographic characteristics respectively as the independent variables;

b) Standard multiple regression analyses to teachers' satisfaction as the dependent variable, and factors of MIPI, MIPI-s and teachers' demographic characteristics respectively as the independent variables; and

c) Standard multiple regression analyses to as students' satisfaction the dependent variable, and factors of MIPI, MIPI-s and teachers' demographic characteristics respectively as the independent variables.

Multiple regression analysis models with dummy variables also were employed to assess the effects of teachers' merit pay, teachers' satisfaction and students' satisfaction across the subgroups of participants (Group 1, Group 2, Group 3, and Group 4), and teachers' titles (Teaching Assistant, Instructor, Assistant Professor, Associate Professor, and Professor). A multiple regression model was run on the total sample data, with teachers' merit pay, teachers' satisfaction, and students' satisfaction as dependent measures respectively. The type of Schools was first represented as three dummy variables with merit-pay and public university as the reference group, at the same time, the teachers' title was then represented as four dummy variables with teacher assistants as the reference group, finally, and a set of continuous predictor variables in DC (e.g., age, degrees, years of teaching etc.) were entered in the model for further analyses.

Summary

This chapter began with a summary of the purpose of this study and research questions. Research design, measures, and measures' reliabilities in this study were summarized. Data collection procedure were presented, and data analyses procedure with standard multiple regression analyses were concluded in the end.

Chapter 4

Results

As stated in Chapter 1, the study reported here explored in detail the factors

potentially impacting teachers' merit pay based on teachers' annual income, teachers'

satisfaction, and students' satisfaction. These factors are supposed to exist among

teachers' performance as evaluated by MIPI and MIPI-s which represented teachers'

behaviors, feelings and beliefs in the classroom as delineated by Henschke (1989). In

addition, this study also presented the differences in teachers' merit pay, satisfaction and

students' satisfaction among different four different groups who were teaching and

studying at different higher education institutional settings (e.g. Groups 1, 2, 3 and 4 as

described in Chapter 3). Generally, the data results are presented and followed by

statement of the research questions as stated in previous chapters, and the format of this

chapter follows the following paradigm: first, the demographic data of the participants –

teachers and students is reported; second, data about teachers' and students' satisfaction

are described; third, MIPI and MIPI-s, including their reliabilities, are presented and

statistically examined; finally, proposed research questions are presented and statistically

investigated employing standard regression analysis via SPSS software.

Description of Demographic Characteristics (DC) of the Participants

Participants who enrolled in academic 2012- 2014 years at universities and

vocational colleges in the Nanjing, China, were asked to complete the questionnaires

online: a total of 457 teachers and 9,017 students were involved in this study. Each

teacher averaged more than 19 students (9,017/457) who responded to this research. A frequency analysis to these participants' demographic information was conducted and the results appear in Table 8.

Table 8 reveals that among the 457 teachers, 47.5% of the teachers were male and 52.5% were female. Their ages ranged from 26 to 61 years of age with a mean of 41 years. One-hundred seventeen teachers (25.6%) were working for public universities in the Nanjing area, while 116 of them (25.4%) served at private university. In addition, 122 participants (26.7%) worked at public vocational college while 102 teachers (22.3%) came from private vocational college.

As for their degrees, 240 of the teachers (52.5%) held masters or doctoral degrees, and 217 participants (47.5%) asserted they had only a bachelor's degree. Three hundred and forty three teachers (75%) were starting at a lower title than associate professors and 202 teachers (44.2%) had at least six years of teaching experience. Two hundred and fifty seven participants (40.3%) reported they had an annual income between renmingbi 70,000 and 99,999 yuan, which was much higher than the average salaries (approximate renmingbi 5,000 yuan per month as previously cited) in the Nanjing area. Only 9.6% of the teachers (44) declared they had an annual income higher than renmingbi 100,000 yuan. Interestingly, 316 teachers (69.1%) involved in this study reported they taught more than five hours per week at their working units.

The teachers' students were invited by their teachers and the researcher to participate in the online survey and 9,017 students participated. The responding students

Table 8: Descriptive Analysis of Demographic Characteristics (DC) of the Participants

Characteristics	Frequency	Percentage (%)	Mean	Standard Deviation
<u>**Teachers**</u>	**457**			
<u>Gender</u>				
Male	217	47.5		
Female	240	52.5		
<u>Ages</u>			41	9.08
<u>Type of Schools</u>				
Public University	117	25.6		
Private University	116	25.4		
Public Vocational college	122	26.7		
Private Vocational college	102	22.3		
<u>Highest Degree</u>				
Undergraduate	217	47.5		
Masters	164	35.9		
Doctor	76	16.6		
<u>Title</u>				
Teaching Assistant	14	3.1		
Instructor	100	21.9		
Assistant Professor	216	47.3		
Associate Professor	98	21.4		
Professor	29	6.3		
<u>Years of Teaching</u>				
2 years	1	.2		
3 years	21	4.6		
4 years	123	26.9		
5 years	110	24.1		

More than 5 Years	202	44.2		
Hours of Working per Week				
2 hours	17	3.7		
3 hours	33	7.2		
4 hours	91	19.9		
5 hours	172	37.6		
6 hours	112	24.5		
6 hours more	32	7.0		
Annual Income (RMB)				
10,000~29,999	2	.4		
30,000~49,999	85	18.6		
50,000~69,999	142	31.1		
70,000~99,999	184	40.3		
Higher than 100,000	44	9.6		
Students	**9,017**			
Age			19	1.877
Gender				
Male	4,726	52.4		
Female	4,291	47.6		
Type of Schools				
Public University	2,071	23		
Private University	2,691	29.8		
Public Vocational college	2,844	31.5		
Private Vocational college	1,411	15.6		
Highest Degree				
High School	7,820	86.7		
Undergraduate	1,197	13.3		

had a mean age of 19 years and 1,197 of them (13.3%) reported they already had the

bachelor's degree. Most of the students (N = 7,820, 86.7%) were undergraduate students

with only a high school diploma. Among these student participants, 2,071 students (23%)

were studying at public universities in the Nanjing area, but 2,691 students (29.8%) were

enrolled at private universities. In addition, 2,844 student participants (31.5%) involved

in this study were enrolled at public vocational colleges, while 1,411students (15.6%)

were enrolled at private vocational colleges, as indicated in Table 8.

Description of Merit Pay

There were some factors of demographic characteristics (DC) relating to this study

as delineated in Chapters 1 and 2, which also revealed some issues about teachers'

opinions on their compensation and compensation policy. During data collection, the

researcher also integrated these DC factors into demographic questionnaires, and the

collected data were analyzed in a simple descriptive analysis as shown in Table 9.

In this study, among the 457 teachers, 239 teachers were included in a merit pay

system by the local government in the Jiangsu Province, while 218 worked for private

and non-merit system educational organizations. Nevertheless, 285 participants (62.4%)

reported he or she had accepted at least one annual income bonus in the past three years.

In addition, 294 teachers (64.3%) 'highly agreed' to receive compensation based on

performance evaluated by students. Very few of the teachers (36) indicated 'dislike' or

'extreme dislike' to this evaluation system. Interestingly, 41 teachers responded 'do not

care' to any evaluation system at all. At the same time, when asked to

Table 9: Descriptive Analysis of Teachers Merit Pay

Issues	Frequency	Percentage (%)
Compensation Styles	457	
Merit	239	52.3
Non-merit	218	47.7
Degree of Agreement on Performance Evaluated by Students		
Very much	75	16.4
High	219	47.9
Moderate	86	18.8
I do not care	41	9.0
Dislike	27	5.9
Dislike very much	9	2.0
Degree of Trust in School Compensation System		
Totally	43	9.4
Pretty much	245	53.6
Some	97	21.2
A little	6	1.3
I do not care	66	14.4
Comments on the Design and Implementation of Compensation System		
Fair and transparent	221	48.4
Somewhat fair and transparent	101	22.1
A little fair and transparent	122	26.7
I do not care and believe	13	2.8
Times to Get Merit Paid in Recent 3 Years		
0	172	37.6
1 time	61	13.3
2 times	172	37.6
3 times	30	6.6
More than 3 times	22	4.8

indicate their degree of trust in the school system's performance pay, 245 teachers

(53.6%) responded that they trusted in school compensation system 'pretty much', and

some of them (14.4%) 'did not care at all'. What is more, 322 teacher participants

(70.5%) held the belief that the design and implementation of the pay system in their

school was 'fair and transparent' or 'somewhat fair and transparent'.

Descriptions, Reliabilities, and Validity of MIPI and MIPI-S

After categorizing and itemizing the 45 items into seven different factors according

to Henschke's handbook (Appendix G), their means, standard deviations and ranges are

reported in Table 10.

Table 10: Descriptive Analyses of Seven Factors on MIPI and MIPI- s

FACTORS	TOTAL MEANS	SD	MINIMUM	MAXIMUM
Teachers				
Teacher empathy with students.	19.14	3.13	8	25
Teacher trust of students.	40.91	5.22	25	51
Planning and delivery of instruction.	18.21	2.78	14	31
Accommodating student uniqueness.	23.99	2.86	15	32
Teacher insensitivity toward students	24.09	3.45	10	34
Experience based learning Techniques (student-centered learning process).	16.41	2.60	6	21
Teacher-centered learning process.	10.93	3.24	7	25
Students				
Teacher empathy with students.	17.50	2.98	5	25
Teacher trust of students.	37.80	5.54	11	55
Planning and delivery of instruction.	17.03	2.70	6	25
Accommodating student uniqueness.	23.87	3.28	11	35
Teacher insensitivity toward students	20.11	4.018	7	34
Experience based learning Techniques (student-centered learning process).	17.35	2.86	7	25
Teacher-centered learning process.	12.62	2.92	5	24

All of the factors' ranges fell in the regular range values as proposed by

Henschke (1989, see Appendix G). After comparing the means of the factors for MIPI

and MIPI-s, some of the means of teacher factors like *Teacher Empathy with Students* (*M*

= 19.14, *SD* = 3.13), *Teacher Trust of Students* (*M* = 40.91, *SD* = 5.22), *Teacher*

Insensitivity Toward Students (*M* = 24.09, *SD* = 3.45) were higher than students: *Teacher*

Empathy with Students (*M* = 17.50, *SD* = 2.98), *Teacher Trust of Students* (*M* = 37.80,

SD = 5.54), *Teacher Insensitivity Toward Students* (*M* = 17.35, *SD* = 2.86). There were some factors influencing the means of the students such as *Teacher-Centered Learning Process* (*M* = 12.62, *SD* = 2.92), and *Experience Based Learning Techniques* (*M* = 17.35, *SD* = 2.86) that were higher than teachers' *Teacher-Centered Learning Process* (*M* = 10.93, *SD* = 3.24), and *Experience Based Learning Techniques* (*M* = 16.41, *SD* = 2.60). As for the factor of *Accommodating Student Uniqueness,* the means were nearly identical.

Reliability and Validity of the MIPI and MIPI-s

The Cronbach's alpha and a factor analysis were conducted to assure the reliability and validity of the instrument. Cronbach's alpha, as the internal consistency coefficient, determines internal consistency of the instrument in order to test its reliability (Santos, 1999). The factor analysis was to confirm the validity of the instrument. In this study, the criteria accepted for the each factor was a Cronbach's alpha of .70, as suggested by Nunnally (1978). The factor loading was accepted when it was higher than .30 showing the results are moderately high, while the items should be ignored when the results of their factor loadings are less than .30 (Kline, 1994).

As presented in Table 11, the Cronbach's alpha coefficient of factors 1 to 7 on MIPI ranged from .42 to .67. Similarly, the Cronbach's alpha coefficient of factors 1 to 7 on MIPI for students ranged from .31 to .66.

Table 11: The Cronbach's Alpha for the Seven Factors on MIPI and MIPI for Student

	Cronbach's Alpha [a]	Cronbach's Alpha [b]
Teacher empathy with students	.59	.43
Teacher trust of students	.67	.66
Planning and delivery of instruction	.42	.31
Accommodating student uniqueness	.58	.35
Teacher insensitivity toward students	.42	.51
Experience based learning Techniques (student-centered learning process)	.53	.37
Teacher — centered Learning Process	.62	.47

Note. [a] evaluated by using sample of teachers, and [b] evaluated by using sample of students.

Each item's factor loading of MIPI and MIPI for students is presented following:

Teacher Empathy with Students

There are five items measured in this subscale on MIPI and MIPI for student. The factor analysis confirmed one factor with an eigenvalue of 1.92, which explained 38.35% of the variance. Items' factor loadings (see Table 12), except MIPI number 33 (*Factor Loading* = .22), met the criterion of the factor loading with a range of .34 to .48. Regarding items on MIPI for students, the factor analysis confirmed one factor with an eigenvalue of 1.54, which explained 30.86% of the variance. Items' factor loadings except MIPI for students number 26 (*Factor Loading* = .18) met the criterion of the factor loading with a range of .30 to .38.

Table 12: Factor Loading for Teacher Empathy with Students

on MIPI and MIPI for Student

	Factor Loading [a]	Factor Loading [b]
MIPI 4	.46	.38
MIPI 12	.41	.32
MIPI 19	.34	.30
MIPI 26	.48	.18
MIPI 33	.22	.36

Note. [a] evaluated by using sample of teachers, and

[b] evaluated by using sample of students.

Teacher Trust of Students

There are eleven items measured in this subscale on MIPI and MIPI for student.

The factor analysis confirmed one factor with an eigenvalue of 2.63, which explained

23.90%   of the variance.

Table 13: Factor Loading for Teacher Trust of Students on MIPI

and MIPI for Student

	Factor Loading [a]	Factor Loading [b]
MIPI 7	.65	.77
MIPI 8	.22	.52
MIPI 16	.54	.66
MIPI 28	.40	.34
MIPI 29	.37	.32
MIPI 30	.39	.34
MIPI 31	.52	.66
MIPI 39	.55	.47
MIPI 43	.32	.50
MIPI 44	.53	.57
MIPI 45	.44	.69

Note. [a] evaluated by using sample of teachers, and

[b] evaluated by using sample of students.

Items' factor loadings (see Table 13), except MIPI number 8 (*Factor Loading* = .22), met the criterion of the factor loading with a range of .32 to .65. Regarding items on MIPI for students, the factor analysis confirmed one factor with an eigenvalue of 2.57, which explained 23.32% of the variance. Items' factor loadings all met the criterion of the factor loading with a range of .32 to .77.

Planning and Delivery of Instruction

There are five items measured in this subscale on MIPI and MIPI for student. The factor analysis confirmed one factor with an eigenvalue of 1.55, which explained 30.97% of the variance. Items' factor loadings (see Table 14) met the criterion of the factor loading with a range of .40 to .80. Regarding items on MIPI for students, the factor analysis confirmed one factor with an eigenvalue of 1.34, which explained 26.73% of the variance. Items' factor loadings met the criterion of the factor loading with a range of .30 to .82.

Table 14: Factor Loading for Planning and Delivery of Instruction
on MIPI and MIPI for student

	Factor Loading [a]	Factor Loading [b]
MIPI 1	.40	.30
MIPI 9	.40	.82
MIPI 22	.52	.42
MIPI 23	.43	.57
MIPI 42	.80	.30

. *Note.* [a] evaluated by using sample of teachers, and

[b] evaluated by using sample of students.

Accommodating Student Uniqueness

There are seven items measured in this subscale on MIPI and MIPI for student. The factor analysis confirmed one factor with an eigenvalue of 1.51, which explained 21.58% of the variance. Items factor loadings (see Table 15), except MIPI number 38 (*Factor Loading* = .24) and 40 (*Factor Loading* = .26), met the criterion of the factor loading with a range of .31 to .57. Regarding items on MIPI for students, the factor analysis confirmed one factor with an eigenvalue of 1.50, which explained 21.44% of the variance. Items' factor loadings met the criterion of the factor loading with a range of .46 to .82.

Table 15: Factor Loading for Accommodating Student Uniqueness

on MIPI and MIPI for Student

	Factor Loading [a]	Factor Loading [b]
MIPI 6	.31	.52
MIPI 14	.48	.48
MIPI 15	.48	.47
MIPI 17	.46	.50
MIPI 37	.57	.82
MIPI 38	.24	.46
MIPI 40	.26	.47

Note. [a] evaluated by using sample of teachers, and

[b] evaluated by using sample of students.

Teacher Insensitivity towards Students

There are seven items measured on this subscale on MIPI and MIPI for student. The factor analysis confirmed one factor with an eigenvalue 1.65, which explained 23.63% of the variance. Items' factor loadings (see Table 16) met the criterion of the factor loading with a range of .48 to .55. Regarding items on MIPI for students, the factor analysis

confirmed one factor with an eigenvalue 1.97, which explained 28.07% of the variance.

Items' factor loadings except MIPI for student number 13 (*Factor Loading* = .23) met the

criterion of the factor loading with a range of .30 to .60.

Table 16: Factor Loading for Teacher Insensitivity towards Students

on MIPI and MIPI for Student

	Factor Loading [a]	Factor Loading [b]
MIPI 5	.65	.30
MIPI 13	.55	.23
MIPI 18	.60	.58
MIPI 27	.54	.50
MIPI 32	.67	.49
MIPI 36	.55	.60
MIPI 41	.48	.54

Note. [a] evaluated by using sample of teachers, and

[b] evaluated by using sample of students.

Experience — based Learning Techniques/Student — centered Learning Process

There are five items measured in this subscale on MIPI and MIPI for student. The

factor analysis confirmed one factor with an eigenvalue of 1.57, which explained 31.36%

of the variance. Items' factor loadings (see Table 17), except MIPI number 10 (*Factor*

Loading = .20), met the criterion of the factor loading with a range of .31 to .37.

Regarding items on MIPI for students, the factor analysis confirmed one factor with an

eigenvalue of 1.42, which explained 28.38% of the variance. Items' factor loadings met

the criterion of the factor loading with a range of .35 to .66.

Table 17: Factor Loading for Experience ―based Learning Techniques/Student ―
centered Learning Process on MIPI and MIPI for Student

	Factor Loading [a]	Factor Loading [b]
MIPI 2	.31	.35
MIPI 10	.20	.41
MIPI 21	.34	.51
MIPI 24	.34	.66
MIPI 35	.37	.50

Note. [a] evaluated by using sample of teachers, and

[b] evaluated by using sample of students.

Teacher ―centered Learning Process

There are five items measured in this subscale on MIPI and MIPI for student. The factor analysis confirmed one factor with an eigenvalue of 2.16, which explained 43.25% of the variance. Items' factor loadings (see Table 18), except MIPI number 11 (*Factor Loading* = .16) and 34 (*Factor Loading* = .17), met the criterion of the factor loading with a range of .59 to .63. Regarding items on MIPI for students, the factor analysis confirmed one factor with an eigenvalue of 1.60, which explained 32% of the variance. Items' factor loadings met the criterion of the factor loading with a range of .40 to .67.

Table 18: Factor Loading for Teacher ―centered Learning Process
on MIPI and MIPI for Student

	Factor Loading [a]	Factor Loading [b]
MIPI 3	.59	.40
MIPI 11	.16	.67
MIPI 20	.63	.54
MIPI 25	.62	.66
MIPI 34	.17	.41

Note. [a] evaluated by using sample of teachers, and

[b] evaluated by using sample of students.

Teachers' and Students' Satisfaction

Teachers and students were asked to rate their general experience with past and present teaching and studying on a continuum between *totally unsatisfactory* to *totally satisfactory* by using a scale of *0 (no satisfaction)* to *10 (highest possible satisfaction)*. The following two histograms, Figures 5 and 6, present the results of their overall satisfaction distributions for their teaching and study, respectively.

Figure 5 presents the distribution of teachers overall degree of teaching satisfaction with the mean of the teachers' overall satisfaction was 7.02 ($N = 457$; $SD = 2.12$). Most of teachers reported their degree of satisfaction was between 5 and 10; more than 100 teachers responded their degree of satisfaction was around 8 or 9. Few teachers indicated their satisfaction was between 0 to 2. In other words, the teachers indicated a high degree of satisfaction with their daily teaching activities and current job.

Figure 5: Histogram of Teachers Overall Degree of Satisfaction
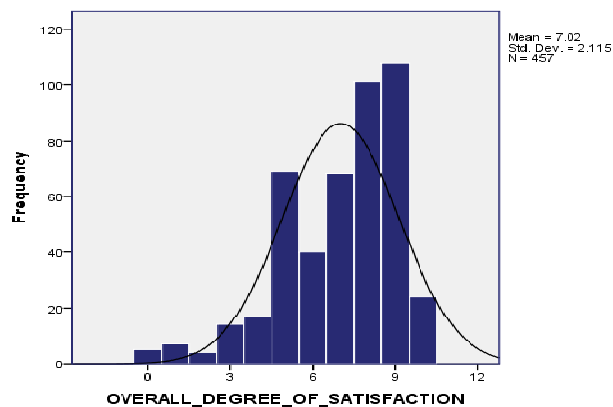
Figure 6 presents the distribution of students overall degree of learning satisfaction with the mean of the students' overall degree of satisfaction of 7.47 (N = 9017; SD = 2.04). The student mean was significantly higher than the mean of teacher satisfaction. Most of the students reported their satisfaction degree fell into range from 7 to 10, and more than 3,500 students responded their satisfaction was 9. Very few students reported their degree of satisfaction ranged from 0 to 6. The students reported a high degree of satisfaction with their daily learning activities. Meanwhile, it should be noted that students overall degree of satisfaction (M = 7.47; SD = 2.04), according to their kurtosis is a less condense distribution than teachers' (M = 7.02; SD = 2.2).

Figure 6: Histogram of Students Overall Degree of Satisfaction
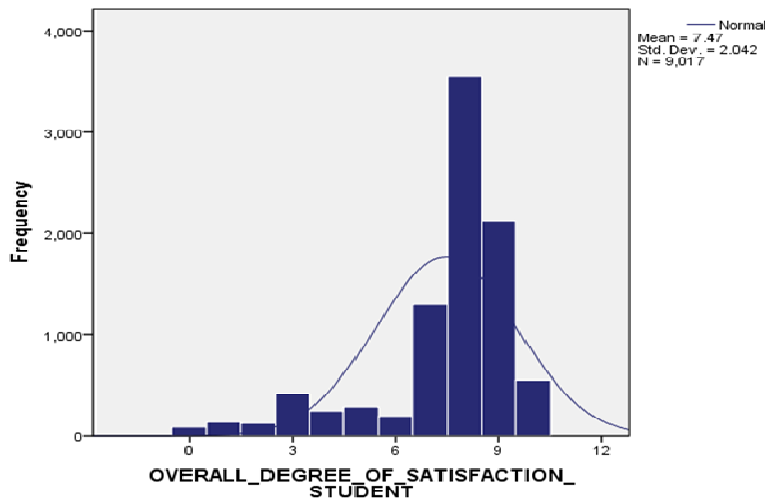
Analyses of Research Questions

In this section, teacher' demographic characteristics, and seven factors of MIPI and MIPI-s were employed as predictors to investigate their impact on teachers' satisfaction,

students' satisfaction, and teachers' merit pay gauged by teachers' annual income. In addition, the differences between teacher's satisfaction, student's satisfaction, and teachers' merit pay among four groups of institutions were analyzed. The results are presented by research questions:

Questions 1: Do teachers' demographic characteristics predict their merit pay, their satisfaction, and their students' satisfaction? Are there any differences among different types of schools?

Standard multiple regressions were conducted with teacher merit pay, teachers' satisfaction, and students' satisfaction as the dependent variables respectively, and teachers demographic characteristics factors such as age, gender, type of school as dummy variables, titles as dummy variables, years of teaching, hours of teaching, merit pay/non-merit pay, agreement of performance evaluated by student, degree of trust to school's policy and implementation of merit pay, times of performance pay received in the recent 3 years etc., as independent variables. Standard multiple regression analyses with dummy variables had also been conducted to explore the differences in teachers' merit pay, teachers' satisfaction, and students' satisfactions. Type of schools (Group 1, Group 2, Group 3, and Group 4) was represented as three dummy variables with public university (Group 1) as the reference group. Meanwhile, Teacher's Titles (Teaching Assistant, Instructor, Assistant Professor, Associate Professor, and Full Professor) was represented as four dummy variables with Teaching Assistant as the reference group. Regression results are summarized in Table 19.

Teachers' Merit Pay and Teachers Demographic Characteristics

Regression results indicate the linear combination of the teachers' demographic

characteristics variables was statistically significant in prediction of teacher merit pay,

$F(11,9005) = 407.93$, $p < .001$, $R^2 = .41$, indicating that approximately 41% of the

variance of the teacher merit pay in the sample can be accounted for by the linear

combination of strength measures.

The unstandardized regression weights of each factor were presented as well. As

we can see in Table 19, all of the factors except degrees of trust in school compensation

policy had positive regression weights, indicating they had a positive impact on

predicting teachers' merit pay.

The effect sizes of each factor have been calculated to explain the proportion of

variance in teachers' merit pay that can be explained by these predictive factors.

According to Cohan (1988), teachers' age ($\eta^2 = .15$), and years of teaching ($\eta^2 = .15$)

were higher than .14, which indicated they had a stronger effect on teachers' merit pay.

And, other factors' effect sizes, such as teachers' highest degrees, hours of teaching, and

performance evaluated by students were below .06, which indicated they had a weak

effect to teachers' merit pay.

In Table 19, we can see the different degrees of impact among different groups on

teachers' merit pay. Teachers who worked at private university in Group 2 scored 1.62

units higher on the teacher's merit pay scale compared to the teachers who worked at

public university in Group 1. Teachers who worked at public vocational college in Group

3 scored 1.42 units higher on the teacher's merit pay scale compared to the teachers who worked at public university in Group 1, while teachers who worked at private vocational college in Group 4 scored 0.89 units higher on the teacher's merit pay scale compared to the teachers who worked at public university in Group 1.

Similarly, we also can see the different degrees of impact among teachers' titles on teachers' merit pay. Teachers who were instructors scored .56 units higher on the teachers' merit pay scale compared to the teachers who were teaching assistants. Teachers who were assistant professors scored .86 units higher on the teachers' merit pay scale compared to the teachers who were teaching assistants. Teachers who were associate professors scored 1.30 units higher on the teachers' merit pay scale compared to the teachers who were teaching assistants. Teachers who were professors scored 2.36 units higher on the teachers' merit pay scale compared to the teachers who were teaching assistants.

Teachers' Satisfaction and Teachers' Demographic Characteristics

Regression results indicate the linear combination of the demographical characteristics variables was statistically significant in predicting teachers' satisfaction, $F(11, 9005) = 189.41$, $p < .001$, $R^2 = .24$, indicating that approximately 24% of the variance of the teachers' overall satisfaction in the sample can be accounted for by the linear combination of measures.

The unstandardized regression weights of each factor were presented as well in Table 19. As we can see, teachers' age, highest degree, years of teaching, and times

received performance pay in recent three years had positive regression weights, indicating they had a positive impact on predicting teachers' satisfaction. On the contrary, hours of teaching and degree of trust in school policy have a negative weight, indicating they had a negative impact on predicting teachers' satisfaction.

The effect sizes of each factor have been calculated to explain the proportion of variance in teacher's satisfaction that can be explained by these predictive factors. According to Cohan (1988), hours of teaching ($\eta^2 = .15$) was higher than .14, which indicated they had a stronger effect to teachers' satisfaction. The factor of times of performance pay teacher received in recent years ($\eta^2 = .07$) was higher than .06, which indicated it had a moderate effect to teachers' merit pay. And, other factors' effect sizes were below .06, which indicated they had a weak effect to teachers' satisfaction.

In Table 19, we can see the different degrees of impact among different groups on teachers' satisfaction. Teachers who worked at private university in Group 2 scored .25 units lower on the teacher's satisfaction scale compared to the teachers who worked at public universities in Group 1, and teachers who worked at public vocational college in Group 3 scored 2.63 units lower on the teacher's satisfaction scale compared to the teachers who worked at public universities in Group 1, while teachers who worked at private vocational colleges in Group 4 scored 1.10 units lower on the teacher's satisfaction scale compared to the teachers who worked at public universities in Group 1.

Similarly, we also can see the different degrees of impact among teachers' titles on teachers' satisfaction. Teachers who were instructors scored 1.27 units lower on the

teachers' satisfaction scale compared to the teachers who were teaching assistants. Teachers who were assistant professors scored 1.43 units lower on the teachers' satisfaction scale compared to the teachers who were teaching assistants. Teachers who were associate professors scored 1.71 units lower on the teachers' satisfaction scale compared to the teachers who were teaching assistants. Teachers who were professors scored 1.53 units lower on the teachers' satisfaction scale compared to the teachers who were teaching assistants.

Students' Satisfaction and Teachers Demographic Characteristics

Regression results indicate the linear combination of the demographic characteristics variables was statistically significant in predicting students' satisfaction, F (11, 9005) = 32.07, $p < .001$, $R^2 = .05$ indicating that only approximately 5% of the variance of the student overall satisfaction in the sample can be accounted for by the linear combination of strength measures.

The unstandardized regression weights of each factor were presented as well in Table 19. As we can see, except for teacher's gender, title, and hours of teaching, all of the other factors had positive regression weights, indicating they had a positive impact on predicting students' satisfaction.

The effect size of each factor also was calculated to explain the proportion of variance on teacher's satisfaction that can be explained by these predictive factors. According to Cohan (1988), all the factors effect sizes (η^2) fell below .06, which indicated teacher demographic characteristics had a weak effect to students' satisfaction.

In Table 19, we can also see the different degrees of impact among different groups on students' satisfaction. Students who studied at private universities in Group 2 scored .58 units higher on the students' satisfaction scale compared to the students who studied at public universities in Group 1, and students who studied at public vocational colleges in Group 3 scored .61 units higher on the students' satisfaction scale compared to the students who studied at public universities in Group 1, while students who studied d at non-merit pay and private vocational colleges in Group 4 scored .63 units lower on the students' satisfaction scale compared to the students who studied at public university in Group 1.

Similarly, we also can see the different degrees of impact among teachers' titles in students' satisfaction. Students whose teachers were instructors scored .22 units lower on the t students' satisfaction scale compared to students whose teachers were teaching assistants. Students whose teachers were assistant professors scored .30 units lower on the students' satisfaction scale compared to students whose teachers were teaching assistants. Students whose teachers were associate professors scored .31 units lower on the students' satisfaction scale compared to the students whose teachers were teaching assistants. Students whose teachers were professors scored .24 units lower on the students' satisfaction scale compared to the students whose teachers were teaching assistants.

Table 19: Multiple Regression Analyses with Merit Pay, Teachers' Satisfaction, and Students' Satisfaction as Dependent Variables and Factors of Demographic Characteristics as Predictors Variable

Variables	Merit Pay					Teachers' Satisfaction					Students' Satisfaction				
	R^2	F	B	t	η^2	R^2	F	B	t	η^2	R^2	F	B	t	η^2
Model	.41	407.93				.24	189.41				.05	32.07			
Gender			.05	3.31	.00			-.12	-2.07	.00			-.04	-.39	.00
Age			.00	2.35	.15			.01	2.40	.05			.01	.36	.01
Degree			.07	6.10	.03			.09	3.14	.00			-.04	-1.32	.00
Years of Teaching			.02	1.78	.15			.11	3.52	.04			.03	.90	.01
Hours of Teaching			.08	7.78	.03			-.10	-3.71	.15			.05	1.55	.01
Performance Evaluated by Students			.01	1.39	.01			-.03	-1.52	.01			.00	.07	.00
Degree of Trust in School Policy			-.01	-.76	.02			-.07	-4.28	.01			-.00	-.08	.00
Times of Incentive Pay Received			.05	.06	.05			.23	7.81	.07			.03	.74	.00
Type of Schools															
Group 2			1.62	40.91	.07			-.25	-2.50	.03			.58	5.17	.01
Group 3			1.42	36.95	.02			-2.63	-26.93	.17			.61	5.61	.01
Group 4			.89	27.23	.02			-1.10	-13.28	.00			-.63	-6.85	.04
Title															
Instructor			.56	12.79	.00			-1.27	-11.33	.01			-.22	-1.80	.00
Assistant Professor			.86	19.30	.03			-1.43	-12.69	.00			-.30	-2.36	.00
Associate Professor			1.30	26.50	.03			-1.71	-13.68	.00			-.31	-2.22	.00
Professor			2.36	34.93	.03			-1.53	-8.92	.03			-.24	-1.25	.00

Note: Type of schools was represented as three dummy variables with merit pay and public university as the reference group.
   Title was represented as four dummy variables with teaching assistant as the reference group.
   $P < .05$

Questions 2: Does teacher performance/ teaching effectiveness in the classroom, evaluated by MIPI/MIPI-s, predict teachers' merit pay, their satisfaction and their students' satisfaction respectively?

First, standard multiple regression analyses were conducted with teacher merit pay, teachers' satisfaction, students' satisfaction as the dependent variables, and MIPI seven factors (*Factor 1:Teacher Empathy with Learners, Factor 2: Teacher Trust of Learners, Factor 3: Planning and Delivery of Instruction, Factor 4: Accommodating Learner Uniqueness, Factor 5: Teacher Insensitivity toward Learners, Factor 6: Experience-based Learning Techniques/Learner-centered Learning Process, and Factor 7: Teacher-centered Learning Process.*) evaluated by teachers as independent variables. Regression results are summarized in Table 20.

Teachers Merit Pay and Seven Factors of MIPI

Regression results in Table 20 indicate the linear combination of the seven factors of MIPI ─ teacher performance evaluated by teachers was statistically significant in predicting teachers' merit pay, $F(7, 9009) = 157.03$, $p < .001$. The sample of multiple correlation coefficient was .33, indicating that approximately 11% of the variance of the teacher merit pay in the sample can be accounted for by the linear combination of strength measures.

The unstandardized regression weights of each factor were presented as well in Table 20. Only *Factor 1:Teacher Empathy with Learners* had positive regression weights, while *Factor 2: Teacher Trust of Learners, Factor 4: Accommodating Learner*

Uniqueness, Factor 5: Teacher Insensitivity toward Learners, Factor 6: Experience-based Learning Techniques/Learner-centered Learning Process, and Factor 7: Teacher-centered Learning Process had negative regression weights, indicating all MIPI factors except teachers empathy in class were negative in prediction of teacher's merit pay. *Factor 3: Planning and Delivery of Instruction* did not contribute to the multiple regression models.

The effect sizes of each factor have been calculated to explain the proportion of variance in teacher's can be explained by these predictive factors. According to Cohan (1988), effect sizes (η^2) of *Factor 2: Teacher Trust of Learners* ($\eta^2 = .11$), *Factor 4: Accommodating Learner Uniqueness* ($\eta^2 = .06$), *Factor 5: Teacher Insensitivity toward Learners* ($\eta^2 = .07$), *Factor 6: Experience-based Learning Techniques/Learner-centered Learning Process* ($\eta^2 = .08$) were higher than .06 but less than .14, which indicated a moderate effect on teachers' merit pay. And, other factors' effect sizes like *Factor 1:Teacher Empathy with Learners* ($\eta^2 = .04$), and *Factor 7: Teacher-centered Learning Process* ($\eta^2 = .04$) were below .06, which indicated a weak effect on teachers' satisfaction.

Teachers' Satisfaction and Seven Factors of MIPI

Regression results in Table 20 indicate the linear combination of the seven factors of MIPI - teacher performance evaluated by teachers was statistically significant in prediction of teachers' satisfaction, $F(7, 9009) = 193.48$, $p < .001$. The sample of multiple correlation coefficient was .36, indicating that approximately 13% of the

variance of the teacher overall satisfaction in the sample can be accounted for by the linear combination of strength measures.

The unstandardized regression weights of each factor were presented as well in Table 20. *Factor 3: Planning and Delivery of Instruction, Factor 6: Experience-based Learning Techniques/Learner-centered Learning Process,* and *Factor 7: Teacher-centered Learning Process* had positive regression weights, while *Factor 1: Teacher Empathy with Learners; Factor 2: Teacher Trust of Learners, and Factor 5: Teacher Insensitivity toward Learners,* which indicate they were negative or positive in predicting the outcome of teachers satisfaction. *Factor 4: Accommodating Learner Uniqueness* did not contribute to the multiple regression models.

The effect sizes of each factor have been calculated to explain the proportion of variance in teacher's satisfaction that can be explained by these predictive factors. According to Cohan (1988), *Factor 1:Teacher Empathy with Learners* $(\eta^2 = .14)$ and *Factor 7: Teacher-centered Learning Process* $(\eta^2 = .18)$ were higher than .14, which indicated they had a stronger effect on teachers' satisfaction. Other factor effect size values (η^2) ranged from .06 to .08, which indicated a moderate effect on teachers' satisfaction.

Students' Satisfaction and Seven Factors of MIPI

Regression results in Table 20, which present the linear combination of the SDC variables was statistically significant in predicting students' satisfaction, $F(7, 9009) = 39.65, p < .001$. The sample of multiple correlation coefficients was .17, which indicated

that approximately 3% of the variance of the teacher overall satisfaction in the sample

can be accounted for by the linear combination of strength measures.

The unstandardized regression weights of each factor were presented as well in

Table 12. *Factor 1:Teacher Empathy with Learners, Factor 2: Teacher Trust of*

Learners, Instruction Factor 4: Accommodating Learner Uniqueness, Factor 5: Teacher

Insensitivity toward Learners, Factor 6: Experience-based Learning

Techniques/Learner-centered Learning Process, and *Factor 7: Teacher-centered*

Learning Process had negative regression weights, which indicated they were negative in

predicting the outcome of teachers' satisfaction. *Factor 3: Planning and Delivery of*

Instruction did not contribute significantly to the multiple regression models.

The effect size of each factor also was calculated to explain the proportion of

variance in teachers' satisfaction that can be explained by these predictive factors.

According to Cohan (1988), all of the factors effect sizes (η^2) fall below .06, which

indicated a weak effect on students' satisfaction.

Table 20: Multiple Regression Analyses with Merit Pay, Teachers' Satisfaction, and Students' Satisfaction as Dependent Variables and Seven Factors of MIPI as Predictors Variable

Variables	Merit pay					Teachers' Satisfaction					Students' Satisfaction n				
	R^2	F	B	t	η^2	R^2	F	B	t	η^2	R^2	F	B	t	η^2
Model	.11	157.03				.13	193.48				.03	39.65			
Teacher Empathy with Learners			.03	6.77	.04			-.14	-13.53	.14			-.00	-.26	.01
Teacher Trust of Learners			-.02	-8.54	.11			-.01	-.97	.08			-.02	-2.69	.02
Planning and Delivery of Instruction			-.00	-.82	.05			.08	7.84	.08			.00	-.04	.01
Accommodating Learner Uniqueness			-.04	-9.91	.06			-.00	-.44	.06			-.03	-2.89	.01
Teacher Insensitivity toward Learners			-.05	-15.92	.07			-.01	-1.36	.08			-.03	-3.84	.01
Experience-based Learning Techniques/Learner-centered Learning Process			-.05	-12.60	.08			.12	13.83	.06			-.09	-10.25	.03
Teacher-centered Learning Process			-.05	-10.58	.04			.15	15.45	.18			-.03	-2.58	.01

Note. P<.05

Similarly, standard multiple regression was conducted with teachers' merit pay, teachers' satisfaction, students' satisfaction as the dependent variable and MIPI-s seven factors (*Factor 1:Teacher Empathy with Learners, Factor 2: Teacher Trust of Learners, Factor 3: Planning and Delivery of Instruction, Factor 4: Accommodating Learner Uniqueness, Factor 5: Teacher Insensitivity toward Learners, Factor 6: Experience-based Learning Techniques/Learner-centered Learning Process,* and *Factor 7: Teacher-centered Learning Process.*) evaluated by students as independent variables. Regression results are summarized in Table 21.

Teachers' Merit Pay and Seven Factors of MIPI-s

Regression results in Table 21 indicated the linear combination of the seven factors of MIPI –s, that is, teacher performance evaluated in the classroom by students was statistically significant, $F(7, 9009) = 66.29$, $p < .001$, The sample of multiple correlation coefficients was .22, which indicated that approximately 5% of the variance of the teacher merit pay could be accounted for by the linear combination of strength measures.

The unstandardized regression weights of each factor were presented as well in Table 21. Only *Factor 2: Teacher Trust of Learners and Factor 6: Experience-based Learning Techniques/Learner-centered Learning Process* had positive regression weights, indicating their positive impact on teacher merit pay. However, *Factor 3: Planning and Delivery of Instruction* did not contribute significantly to the multiple regression models. The other factors indicated a negative prediction of teachers' merit pay.

The effect size of each factor also was calculated to explain the proportion of variance in teachers' merit pay that can be explained by the predictive factors of MIPI-s.

All of the factors effect sizes (η^2) fall below .06, which indicated the seven factors of

MIPI-s had a weak effect to teachers' merit pay according to Cohan (1988),.

Teachers' Satisfaction and Seven Factors of MIPI-s

Regression results in Table 21 indicated the linear combination of seven factors of

MIPI –s, that is, teacher performance evaluated in the classroom was statistically

significant in prediction of teachers' satisfaction, $F(7, 9009) = 59.85$, $p < .001$. The

sample of multiple correlation coefficient was .21, indicating that approximately 4% of

the variance of the teachers' satisfaction in the sample could be accounted for by the

linear combination of strength measures.

The unstandardized regression weights of each factor were presented in Table 21.

Factor 1: Teacher Empathy with Learners, Factor 4: Accommodating Learner

Uniqueness, Factor 5: Teacher Insensitivity toward Learners had positive regression

weights, which indicated a positive prediction of teachers' satisfaction. While *Factor 2:*

Teacher Trust of Learners, Factor 3: Planning and Delivery of Instruction, *Factor 6:*

Experience-based Learning Techniques/Learner-centered Learning Process, and Factor

7: Teacher-centered Learning Process had negative regression weights, which indicated

a negative prediction of teachers' satisfaction.

The effect sizes of each factor also have been calculated here to explain the

proportion of variance in teachers' satisfaction that can be explained by these predictive

factors of MIPI-s. All of the factors effect sizes (η^2) fall below .06, which indicated the

seven factors of MIPI-s had a weak relationship to teachers' satisfaction according to Cohan (1988).

Students' Satisfaction and Seven Factors of MIPI-s

Regression results are summarized in Table 21, which indicate the linear combination of seven factors of MIPI –s, that is, teacher performance evaluated in the classroom was statistically significant, $F(7, 9009) = 46.52$, $p < .001$. The sample of multiple correlation coefficient was .19, indicating that approximately 4% of the variance of the students' satisfaction in the sample could be accounted for by the linear combination of strength measures.

The unstandardized regression weights of each factor were presented as well in Table 21. *Factor 3: Planning and Delivery of Instruction*, and *Factor 7: Teacher-centered Learning* had positive regression weights, which indicated a positive prediction of teachers' satisfaction. While *Process Factor 1: Teacher Empathy with Learners, Factor 2: Teacher Trust of Learners, Factor 4: Accommodating Learner Uniqueness, Factor 5: Teacher Insensitivity toward Learners, Factor 6: Experience-based Learning Techniques/Learner-centered Learning Process,* had negative regression weights, which indicated a negative prediction of students' satisfaction.

The effect sizes of each factor have been calculated here to explain the proportion of variance in teachers' satisfaction that can be explained by these predictive factors. According to Cohan (1988), all of the factors effect sizes ($\boldsymbol{\eta^2}$) fall below .06, which indicated a weak effect to students' satisfaction.

Table 21: Multiple Regression Analyses with Merit Pay, Teachers' Satisfaction, and Students' Satisfaction as Dependent Variables and Seven Factors of MIPI-s as Predictors Variable

	Merit Pay					**Teachers' Satisfaction**					**Students' Satisfaction**				
	R^2	F	B	t	η^2	R^2	F	B	t	η^2	R^2	F	B	t	η^2
Model	.05	66.29				.04	59.85				.04	46.52			
Teacher Empathy with Learners			-.02	-3.39	.03			.01	1.24	.01			-.03	-2.59	.02
Teacher Trust of Learners			.01	4.46	.02			-.06	-11.81	.03			-.02	-2.77	.03
Planning and Delivery of Instruction			-.00	-.69	.01			-.01	-1.19	.01			.01	.99	.01
Accommodating Learner Uniqueness			-.02	-5.49	.02			.00	.13	.01			-.01	-.85	.01
Teacher Insensitivity toward Learners			-.03	-13.69	.03			.08	14.38	.03			-.06	-11.50	.03
Experience-based Learning Techniques/Learner-centered Learning Process			-.03	-5.93	.03			-.03	-2.63	.01			-.03	-2.51	.02
Teacher-centered Learning Process			.01	1.75	.02			-.01	-1.52	.02			.02	2.57	.01

Note. $p < 0.05$

Chapter 5

Discussion

This chapter presents a summary of the study and important conclusions drawn from the data presented in Chapter 4. It provides a discussion of the implications for action and recommendations for further research.

Summary of the Study

The purpose of this study was to investigate the primary factors that impact teachers' merit pay, teachers' satisfaction and students' satisfaction in different higher education settings. Factors in teachers' demographic characteristics such as ages, gender, titles, years of teaching, and workload (hours of teaching per week), and factors of teachers' effectiveness in the classroom evaluated by both teachers and students were considered to be the factors of this study. In investigating those factors, this study employed a uniform instrument (MIPI) as a teacher assessment procedure based on instructive perspective to investigate teachers teaching effectiveness in the classroom on a short-term basis. Further on, this study sought to understand the reliability and feasibility of predicting teachers' merit pay with different compensation styles as well as teachers' satisfaction with their teaching and students' satisfaction with learning while expanding this instrument to be an assessment procedure for a different country. Second, the researcher had the intention to investigate the significant differences of teachers' merit pay, teachers' satisfaction and students' satisfaction

among different groups who belong to different educational settings. Third, the researcher had the intention to understand whether the underlying factors relating to teachers' demographic characteristics are predictors to their satisfaction and teachers' merit pay.

Accordingly, the literature review in this study explored several standard key factors, including gender, ages, titles, years of experience, comments on administration's policies, etc., of the demographic characteristics among teachers' motivations and perceptions. This study also considered and summarized the definitions, history, standards, practices and comments from previous research on teacher pay, satisfaction, performance evaluation by utilizing the most important instrument — MIPI — while reflecting on the central status and prominent practices of teachers from a different country, China.

Research Questions

Research questions related to the above problems have been investigated and reported by students and teachers as follows:

- Do teachers' demographic characteristics predict their merit pay, their satisfaction, and their students' satisfaction? Are there any differences among different types of schools?

- Does teacher performance/ teaching effectiveness in the classroom, evaluated by MIPI/MIPI-s, predict teachers' merit pay, their satisfaction and their students' satisfaction respectively?

Findings

This study answered and explained the proposed questions in detail. Some major findings were concluded based on the results of Chapter 4, as the following shows:

Reliabilities and Validities of MIPI and MIPI for Students

In this study, MIPI and MIPI-s are the prominent measures were employed by the researcher as a teacher performance assessment procedure to test teachers' effectiveness in the classroom. The Cronbach's alpha coefficient of factor 1 to 7 in MIPI ranged from .42 to .67, and the Cronbach's alpha coefficient of factor 1 to 7 in MIPI for students ranged from .31 to .66. The researcher considered the MIPI and MIPI-s was the first time introduced among Chinese higher educational universities and colleges, some potential threats to the research instruments resulted in the lower results comparing previous studies among these items as presented in Chapter 3 and Chapter 4, for instance, cultural difference, translation problems, social desirability bias, and sampling bias etc. (Hseuh, et al., 2005; Picot et al., 1997).

As for each item with the Factors, some items in MIPI, for instance, number 8, 10, 11,33, 34, 38, 40, and items in MIPI-s, for instance number 26 and 13, their factor loadings value were less than .30, according to Kline (1994), they should be ignored. When going back to the items, the researcher found these factors mainly relating to teacher learning objectives, teaching techniques, and the use of instructional methods in the classroom (Henschke, 1989; Ryan, 2009).

Since these instruments had been advocated in the USA, the researcher wondered if there were some concerns about the instructional differences between the USA and China, such as teaching method, group learning, and instruction techniques, for instance, online classroom, which impacted the results of this research (Yuan, 2005).

Differences in Teachers' Merit pay, Teachers' Satisfaction and Students' Satisfaction among Different Groups

In general, the mean of the degree of students' satisfaction to learn was higher than the mean of the degree of teachers' satisfaction to teach. To be more specific, as for teachers' satisfaction, teachers from public university were satisfied than the other teachers belonged to the other groups: private university, public vocational college, and private vocational college. The sequence of remaining groups, in descending order of satisfaction, was private universities, private vocational colleges, and public vocational colleges. As for students' satisfaction to learn, on the contrary, satisfaction was highest in private, and the sequence of other groups in descending order was public vocational college, public university, and private vocational college. We can infer that there are no necessary relationships between teacher's and student's satisfaction, in other words, teachers with higher satisfaction from teaching did not generate students with higher satisfaction from learning and *vice versa*.

As for teachers' merit pay, teachers' merit pay was highest in private university, and the sequence of other groups in descending order was public vocational college, private vocational college and public university.

From previous statements, we could infer that teachers who participated in this study, and worked in public university who actually were hired by governments and gained more funding supports from governments than the others had little in their merit pay, but they indeed had the highest satisfaction among the participants.

Predictors of Demographic Characteristics Relating to Teachers Motivation and Perception of Teacher Satisfaction, Teacher Merit Pay

The results of standard multiple regressions indicated that a combination of Demographic Characteristics variables was statistically significant with respect to merit pay and teacher satisfaction. The results of specific Demographic Characteristics variables taken individually, however, revealed a more complicated picture. Although age was not found to be a predicator of merit pay, Demographic Characteristics variables including gender, degrees, titles, years of teaching, hourly workload (hours of teaching), faith in merit pay fairness, were found to be predictors of merit pay (Yang, 2009). On the other hand, although performance evaluated by students was not found to be predictors of teacher satisfaction, DC variables such as age, work setting, degrees, titles, hourly workload and faith in merit pay fairness and years of teaching were found to be predicators of teacher satisfaction in this study as well (Cook, 2004; Wyss, 2002;

Houchines, Shippen & Cattret, 2004; Hughes, 2006; Knox, et al., 1992; Sauer, 2003).

Among those factors, we also know that teachers' age and years of teaching contributed greater effects on teachers' merit pay comparing to other Demographic Characteristics factors. Although hourly workload (hours of teaching) presented negative relationship to teachers' satisfaction, it contributed greater effects on teachers' satisfaction comparing to other Demographic Characteristics factors.

Seven Factors of both MIPI   and MIPI-s as Predictors to Teachers Satisfaction, Teacher Merit Pay, Students Satisfaction

The results of standard multiple regressions, which were based on the data considered in Chapter 4, indicated that a combination of the seven factors from MIPI and MIPI-s was statistically significant for predicting teachers' merit pay, teachers' satisfaction, and students' satisfaction. As for the MIPI individual factors, factors of *Teacher Trust of Learners, Accommodating Learner Uniqueness, Teacher Insensitivity toward Learners, Experience-based Learning Techniques/Learner-centered Learning Process,* and *Teacher-centered Learning Process* had a larger effect on teacher merit pay, and factors of *Teacher Empathy with Learners, Planning and Delivery of Instruction, Teacher Insensitivity toward Learners, Experience-based Learning Techniques/Learner-centered Learning*

Process, and *Teacher-centered Learning Process* had a larger effect on teacher satisfaction.

Although teacher performance (as evaluated by teachers and students) had a statistically significant, albeit weak, effect on student satisfaction, it was very difficult to determine any effect of teacher performance (as evaluated by teachers and students) on merit pay or teacher satisfaction.

Surprise Findings from the Study

Listed below are a number of surprises the researcher found in this study:

- In this study, the mean of students' satisfaction to learn and teachers' teaching was higher than the mean of teachers' satisfaction to teaching and students' learning, while the unbalance between teachers' satisfaction and students' satisfaction would improve teachers teaching. Just as previously stated by Hines et al. (1985), and, Rai and Srivastava (2013), the differences between students and teachers would result in more motivation to teachers teaching in the workplace.

- Teachers who worked for public university had the lowest merit pay, while they had the highest satisfaction among these four groups. According to previous statements, these teachers were hired by governments, gained more funding supports from governments, and got paid higher than the others. The fact brought us back to the point which delineated in Chapter 2 about merit pay in higher education, "many

schools chose to distribute relatively small awards across all school

personnel, regardless of individual performance" (Springer & Gardner,

2010, p. 14). Even teachers work at public university, the administration

and policy makers in public university would like to balance the interests

of different stakeholders, which results in a lower merit pay actually for

teachers while does not affect their teachings (Springer & Gardner, 2010;

Taylor & Springer, 2009).

- The effectiveness of teachers in class, as evaluated by their students, not

  only had very little effect on merit pay and teacher satisfaction, it also had

  very little effect on student satisfaction.

Conclusions

The purpose of this study was to explore which factors in teacher

demographic characteristics and teacher teaching effectiveness in the classroom

evaluated from perspectives of both teachers and students could possibly impact

teachers' merit pay, teachers' satisfaction and students' satisfaction. Therefore, as

a quantitative study, teachers' demographic characters and their performance

evaluated with MIPI and MIPI-s by students and teachers, teachers' merit pay,

teachers' satisfaction and students' satisfaction, and their relationships had been

measured, analyzed and discussed in different approaches in this study.

This study was an extension of implementing the Modified Instructional

Perspective Inventory (MIPI) and the corresponding Modified Instructional

Perspective Inventory for students (MIPI-s) in China, which offered an excellent

practical opportunity to evaluate teacher performance, that is, their teaching effectiveness in the classroom through exploring their beliefs, feelings and behaviors. The overall reliability of using these instruments has also been established in another country (Vatcharasirisook, 2011), and also enhanced the concept that the assessment measures were more objective, practical, and focused on human development than the typical standards offered by many educational administrations (Henschke, 1984; Ryan, 2009; Tecker, 1984; Vatcharasirisook, 2011).

In addition to examining the connection between Modified Instructional Perspective Inventory (MIPI) and the corresponding Modified Instructional Perspective Inventory for students (MIPI-s) with teacher merit pay, this study contributes to the development of educational leadership and policy study in education as it expanded the evaluation procedures with payments to educational human resources development. At the same time, this research can serve to inform educational administrative practitioners about how to attract and retain this kind of teacher population, and to what degree the teachers are satisfied with their annual merit pay and performance based on evaluation from teachers per se and their students. Hence, it would provide significant references for policymakers in the adjustment and stipulation of future legislation.

Finally, as previously stated, merit pay is a relatively new plan in China, just advocated in recent years and has only been used for five years. The uniform standards of evaluating teacher performance are also unshaped and largely

descriptive in contemporary discussions (Wang & Cheng, 2012). As advancement

to this research, there is important practical and theoretical significance to the

improvement of a teacher assessment procedure to associate satisfaction and merit

pay, especially in merit-based systems of compensation, among different

education settings.

Issues for Future Research

Although it was a good research to show some significant evidence

between teacher merit pay and their performance effectiveness evaluated from

perspectives of both teachers and students in class, the results generated from the

study could only be generalized to the similar study among different higher

educational systems which had different compensation systems and attributions.

Therefore, it still needs further study.

First, as for the measures, since MIPI and MIPI-s were fixed mode for

students and teachers to choice, but in this study, the researcher found some

students and teachers held different opinions during their responding to MIPI and

MIPI-s because they thought they should have different instruction method and

instruction style in class instead of the current one. Hence, further different

investigations or comparative studies on MIPI and MIPI-s should be encouraged

to take among different settings to show their reliabilities and generalizations.

Second, although this research served a part of a leadership and policy

study, and the author mainly inspected the relationship under the belief of that

both instructions from teacher perspective and learning feedback from student

view were the most directly related to teachers performance in a teaching unit, at

the same time, some of factors associated with merit pay and performance

evaluation have been investigated via demographic questionnaire, the author did

not scrutinize the whole institution policy, legislations, the whole teacher's

performance evaluation process in these universities and schools, and the

accordingly teacher's union, supervisors and other stakeholders involved in merit

pay and teachers' performance evaluation (Hawley, 1982; Schneider, 1983;Tecker,

1984). For instance, in China, it is well-known that many universities are now

pursuing publications with high reputation and also using the volume of how

many publications the teacher have per year as their annual performance

evaluation evidence, meanwhile decide whether and how much the teacher can

accept merit pay in the end. Basically, teachers in different universities can

receive one time awards of renmingbi from 5,000 to 100,000 yuan per article

based on the quality of journal he or she published at the end of the year once who

published (Chen & Hong, 2012). To some degree, it would result in very common

phenomena that teachers would prefer to pursue their researches than delivering

highly teaching to students in their daily work (Chen & Hong, 2012). Therefore,

teachers' publication volume should be a critical factor impact teacher's merit pay

and their satisfaction.

Third, as stated in the preface, the author assumed the informants from the

same area would enhance the data's integrity, reliability and consistency, and the

study also assumed that teachers and students answered the survey honestly and to

the best of their ability, therefore, this study was limited to the data collected, and reviewed and monitored by universities and schools in a typical location and specified. Studies on merit pay and teacher performance evaluation should be based on a long-term data, at least more than five years long (Springer & Gardner, 2010). In order to generalize the study, various locations selection and long-run investigation relating to this study should be done in the future.

In addition, the study's reliability of teachers' performances evaluated by students is still in question. Although many studies have made substantial efforts on this pending issue, there is still no standardized answer or generalized conclusion (Obenchain et al., 2001). In this study, the researcher combined the teachers' evaluation by themselves with students, although the overall reliability between MIPI and MIPI-s was .726, it still deserves to further investigation because there are still other issues potentially affecting students evaluation such as politics environment, student preference and even emotional intelligence (Corcoran & Tormey, 2013; Obenchain et al., 2001).

In the end, this study just concentrated on factors and their relationships on merit pay, satisfaction and performance assessment, and also identified some factors had direct effects on teachers' merit pay, satisfaction and students' satisfaction, but the researcher did not explore the functions of intrinsic variables' roles. It brings more consideration need to be done to investigate their interactions and specify what kind of factors indirectly impact on their satisfaction at different levels. For this point, moderators and mediators relating to this study, and their

impacting procedures on teacher merit pay and satisfaction, need to be determined and discussed in future research to prove which points we need to pay attention to when referring to teacher merit pay and satisfaction.

Summary

The purpose of this study was to explore which factors in teacher demographic characteristics and teacher teaching effectiveness in the classroom evaluated from perspectives of both teachers and students could possibly impact on teachers' merit pay, teachers' satisfaction and students' satisfaction. Therefore, as a quantitative research, teachers' demographic characters and their performance evaluated with MIPI and MIPI-s by students and teachers, teachers' merit pay, teachers' satisfaction and students' satisfaction, and their relationships had been measured, analyzed and discussed in different approaches in this study. The study lasted eight months since May 2013, participants in this study were students and teachers enrolled in 2012- 2013 academic years. Four hundreds and seventy-five teachers and 9,017 students had been invited by the researcher and their teachers to take part in this study. Data collected via an online designed approach and had been analyzed in standard multiple regression. The findings included the measures reliabilities and validities had been investigated, factors impacted teachers' merit pay, teachers' satisfaction and students' satisfactions had been identified, and differences among different universities and colleges with different settings had been explored as well. Limitations of this study and further research were advocated as a means for future research, such as measures

implementation of MIPI and MIPI-s, repeating the same study, and deeper research into the functions by defining mediators and moderators impacting merit pay and satisfaction, to provide additional information to be able to generalize and contribute more the results in the future.

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Appendixes

Appendix A: Protection of Human Rights (IRB)

Office of Research Administration

One University Boulevard
St. Louis, Missouri 63121-4499
Telephone: 314-516-5899
Fax: 314-516-6759
E-mail: ora@umsl.edu

DATE: June 8, 2013

TO: Yunlin Lu
FROM: University of Missouri-St. Louis IRB

PROJECT TITLE: [470774-1] AN EXPLORATION OF MERIT PAY, TEACHER AND STUDENT
                    SATISFACTION, AND TEACHER PERFORMANCE EVALUATION FROM AN
                    INSTRUCTIONAL PERSPECTIVE

REFERENCE #:
SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: June 8, 2013

REVIEW CATEGORY: Exemption category # 2

The chairperson of the University of Missouri-St. Louis IRB has APPROVED has reviewed the above
mentioned protocol for research involving human subjects and determined that the project qualifies for
exemption from full committee review under Title 45 Code of Federal Regulations Part 46.101b. The
time period for this approval expires one year from the date listed above. You must notify the University
of Missouri-St. Louis IRB in advance of any proposed major changes in your approved protocol, e.g.,
addition of research sites or research instruments.

You must file an annual report with the committee. This report must indicate the starting date of the
project and the number of subjects to date from start of project, or since last annual report, whichever is
more recent.

Any consent or assent forms must be signed in duplicate and a copy provided to the subject. The
principal investigator must retain the other copy of the signed consent form for at least three years
following the completion of the research activity and they must be available for inspection if there is an
official review of the UM-St. Louis human subjects research proceedings by the U.S. Department of
Health and Human Services Office for Protection from Research Risks.

This action is officially recorded in the minutes of the committee.

If you have any questions, please contact Carl Bassi at 314-516-6029 or bassi@umsl.edu. Please include
your project title and reference number in all correspondence with this committee.

Appendix B: Online Survey Instructions

网上调查问卷指引

Instructions

网上调查问卷指引

Included in this survey, you will find the following information:

- *Instructions for participants via online survey and paper*
- *Informed Consent for Participation in Research Activities*
- *Demographic Questionnaire*
- *Modified Instructional Perspectives Inventory (for teachers and students)*
- *Incentive Information and Personal Contact information*

该网上调查问卷内，你将会发现如下相关材料：

- 网上调查或纸质调查问卷指引
- 参与研究活动知情同意书
- 参与调查者基本情况调查问卷
- 教学评价指标库（教师适用和学生使用）
- 参与调查奖励计划和个人联系方式

The steps for conducting the online survey as the following:

- **Step 1:** Please use your **ID** (or your teacher **ID)** and corresponding password, select "Access for Teachers" or "Access for Students" to get into your correct web page to fill in the survey.
- **Step 2:** Please read carefully about the **Cover Letter** in your first page and **Informed Consent for Participation in Research Activities** in the second page, then select "**I Accept**" or "**I will not accept**", and then press the **ENTER key to go** to the next step**.**
- **Step 3:** Please complete your **Demographic Questionnaire**
- **Step 4:** Please complete **the Modified Instructional Perspectives Inventory (for teachers and students)**according to your categorized webpage.
- **Step 5:** Read **Incentive Information** carefully and leave your contact address, telephone or email address at **the Personal Contact Information.**

网上调查问卷步骤：

- 第一步：请输入你的ID和相应教师的ID，然后输入相应的密码，选择"教师进入接口"或者"学生进入接口"，确保进入正确的界面，并开始填写问卷；
- 第二步：请仔细阅读该指引和第二页的"参与研究活动知情同意书"，选择"接受"或者"我不接受"然后点击"ENTER"进入到下一步；
- 第三步：请填写"基本情况调查问卷"；
- 第四步：请根据你进入的界面填写相应的"教学评价指标库（教师使用和学生适用）"；
- 第五步：请仔细阅读"参与者奖励细则"，并请留下您的电话、email地址、联系方式等"个人联系方式"。

Thank you for making an important contribution to my understanding the relationships between the annual income of the teachers and their beliefs, feelings and behaviors in instruction!

感谢您为我了解绩效工资与教师在其教学过程中的信仰、感受及教学行为关系分析做出的重要贡献！

Yunlin Lu, Researcher

Doctoral Candidate

College of Education, Leadership & Policy

University of Missouri – St. Louis

St. Louis, MO 63121

研究者：鲁云林

博士在读

教育学院、领导力和政策

密苏里大学圣路易斯分校

圣路易斯，密苏里州63121

Appendix C: Informed Consent Form

Division of Educational Leadership and Policy Studies

One University Blvd.
St. Louis, Missouri 63121-4499
Telephone: 314-359-4431
E-mail: ylnmd@umsl.edu

Informed Consent for Participation in Research Activities
AN EXPLORATION OF MERIT PAY, TEACHER AND STUDENT SATISFACTION, AND TEACHER

PERFORMANCE EVALUATION FROM AN INSTRUCTIONAL PERSPECTIVE

Participant _____   HSC Approval Number _____

Principal Investigator __Yunlin Lu____   PI's Phone Number 1-314-359-4431; 86-138-5157-8797

1. You are invited to participate in a research study conducted by Yunlin Lu and Dr. Lloyd Richardson. The purpose of this research is to investigate the relationships existing among merit pay, teachers and students satisfaction and performance evaluation in class in higher educations in Nanjing, China.

2. a) Your participation will involve completing a brief demographic online survey, including questionnaires, and the Modified Instructional Perspective Inventories.

   Data will be collected from students and teachers working and enrolled in higher education inbetween 2012 and 2013 academic year in Nanjing, China. Approximately 500 subjects are expected to participate in this research.

   b) The amount of time involved in your participation will be approximately 20 minutes.

3. There are no anticipated risks associated with this research. All data will remain anonymous; do not put your name on the survey. The researcher is the only person who will have access to the data unless the participants give permission to reveal their information. Your teachers will not see your response.

4. There are no direct benefits for you participating in this study. However, your participation will contribute to the knowledge about the relationships between merit pay and teacher satisfaction we are taking in higher education and may help society to understand teachers' importance to the nation.

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose to participate in this research by selecting "I read and agree to take part in this research" bottom of this consent form before accessing to this survey with your account number and password, and completing the online survey designed in this set.

   You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw. In all cases, your organizations and teachers will not see your answers.

6. By agreeing to participate, you understand and agree that your data may be shared with other researchers and educators in the form of presentations and/or publications. In all cases, your identity will not be revealed. In rare instances, a researcher's study must undergo an audit or program evaluation by an oversight agency (such as the Office for Human Research Protection). That agency would be required to maintain the confidentiality of your data. In addition, all data will be stored on a password-protected computer and/or in a locked office.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Yunlin Lu at 314-359-4431 (USA); 138-5157-8797(China) or the faculty advisor, Dr. Lloyd Richardson at 1-314-516-5095. You may also ask questions or state concerns regarding your rights as a research participant to the Office of Research Administration, at 516-5897.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

Participant's Signature	Date	Participant's Printed Name

Signature of Investigator or Designee	Date	Investigator/Designee Printed Name

APPENDIX D: DEMOGRAPHIC QUESTIONNAIRE

APPENDIX D: DEMOGRAPHIC QUESTIONNAIRE

基本情况调查问卷表

Thank you for your willingness to participate in this study. You are asked to provide the following demographic information. This information is for research purposes only.

感谢您参与该研究调查。您将会被问及如下相关的基本信息，以下的信息仅供研究之用。

Section A: *For each item, please select the correct response.*

A 部分：下面选择项，请您选择正确的回答

1. *Gender（性别）:* **Male（男）Female（女）**

2. Age年龄:　（　）

3. *What kind of school your are studying and teaching in?（请问您执教或者学习在如下何种类型的学校？）*

Public and Merit Pay University（公立并实行绩效工资的院校）

Private and Non-merit Pay University（私立尚未实现绩效工资的院校）

Public and Merit Pay Vocational college（公立并实行绩效工资的职业学院）

Private and Non-merit Pay Vocational college（私立尚未实现绩效工资的职业学院）

4**.***What is your highest diploma or degree you have?（您拥有的最高学历或者学位？）*

High school（高中）College (大专) Undergraduate（本科） Masters（研究生） Doctor（博士生）

5.*Circle the number which best indicates your level of satisfaction with your learning/teaching in class.*

No satisfaction   Highest possible satisfaction

不满意   0 1 2 3 4 5 6 7 8 9 10最高可能的满意

6.*Overall, how would you rate your general experience with your study/career, past and present?.*

No satisfaction   Highest possible satisfaction

不满意   0 1 2 3 4 5 6 7 8 9 10最高可能的满意

7.*Please explain the reason for your overall satisfaction rating:*

 (   )

8.*Please enter your teachers ID here again:（请再次填写您授课老师的ID）：*

（）

Section B: ***This section is designed for only teachers to complete. For each item, please indicate the correct response.***

 B 部分：该部分仅供教师填写。如下选项，请选择相应的正确答案。

9. *Title（职称）:*

Teaching Assistant（普通教学人员）　Assistant Professor （助教）Instructor(讲师) Associate Professor （副教授） Professor （教授）

10. *How many years you have been teaching（请问您执教多少年了）?*

1-year （1年） 2-years（2年）3 years（3年） 4 years（4年） 5 years（5年）morethan 5 years（5年以上）

11. *How many hours you teach per week in this semester?（请问您在本学期内每周教授多少课时？）*

2 hours（2小时） 3 hours（3小时） 4 hours（4小时） 5 hours（5小时）6 hours（6小时） 6 hours more（6小时以上）

12. *What is your annual income now after you enrolled this education program?（请问您的年薪在如下那个范围内？单位：RMB）*

  10,000~29,999　30,000~49,999　50,000~69,999　70,000~99,999 higher than 100,000（高于10万元）

13.*Are you in a merit pay system?（您是否已经属于绩效工资范畴？）*

  Yes No

14.*Do you like or agree to be paid by your performance evaluated by your organizations or by students？（您同意或者喜欢您的报酬基于您的表现（由您供职的单位和您教学的学生测评）的方式来进行支付呢？）*

Very much （非常喜欢） High（喜欢）Moderate （一般） I do not care（我不关心）Dislike（厌恶）Dislike very much

15**.** *Do you trust in the school system about performance pay?（请问您信任学校的绩效工资体系么？）*

Totally（完全信任）　Pretty much（信任）Some（一般）A little（不信任）　I do not care（我不关心）

16*.How do you like the design and implementation of the pay system of your organization?（请问您如何评价您所在的组织现有的工资体系的设计与执行？）*

Fair and Transparent （公正和透明）　Somewhat Fair and Transparent（一般公正和透明）　A Little Fair and Transparent （有限公正和透明）　I Don't Care and Believe （我不关心也不相信）

17.*Did you receive performance pay in recent three years?（您在最近三年内是否已经接受了绩效或者奖励工资？）*

Once（一次）　2 times （2次）3 times (3次) more than 3 times（超过3次）

Thank you!

感谢！

Appendix E: Modified Instructional Perspective Inventory –

Adapted for Students (MIPI – S)

教学评价指标库 (学生适用版本)

APPENDIX E: Modified Instructional Perspectives Inventory
--Adapted for Students (MIPI-S)

© John A. Henschke, Adapted by Yunlin

教学评价指标库（学生使用版）

Listed below are 45 statements reflecting beliefs, feelings and behaviors beginning or seasoned teachers of adults may or may not possess at a given moment. Please indicate how frequently each statement typically applies to your instructor. Circle the letter thatbest describes the instructor.

如下45个评价指标主要反映从事高等教育的新老教师可能或者不可能在一个给定时期内持有和表现的信仰、感受和行为。针对您的执教老师而言，对于下面每个选择项，请回答他们对相应问题的表现程度（A, B, C, D, E）如何。请圈处最适合的选项来描述您的老师。

How frequently does your teacher… 你的老师有多久。。。。	Almost Never 从不	Not Often 不常	Sometimes 有时候	Usually 经常	Almost Always总是
1. use a variety of teaching techniques?(在教学中)利用多种教学技巧?	A	B	C	D	E
2. use buzz groups (students placed in groups to discuss information from lectures)? 组建临时讨论小组（学习者组成不同小组，对讲课人的信息进行讨论）？	A	B	C	D	E
3. appear to believe that his/her primary goal is to provide students with as much informationas possible?相信他或她的主要目标能够给学生提供尽可能多的信息？	A	B	C	D	E
4. appear to be fully prepared to teach?对教学做好了充分的准备来执教？	A	B	C	D	E
5. have difficulty understanding student point-of views?很难理解学生的观点？	A	B	C	D	E
6. appear to expect and accept student frustration as they grapple with problems?期望和接受学生的困惑当学生	A	B	C	D	E

正遇到问题时？					
7. purposefully communicate to students that each is uniquely important?期望与学生进行沟通，并且每次沟通都是独一无二的重要？	**A**	**B**	**C**	**D**	**E**
8. express confidence that students will develop the skills they need?对学生形成他们的技能上表现自信？	**A**	**B**	**C**	**D**	**E**
9. show he/she values searching for or creatingnew teaching techniques?展示他或者她在寻求和创造新的教学技巧方面的价值？	**A**	**B**	**C**	**D**	**E**
10. teach through simulations of real-life settings or situations?通过对现实生活情景的模拟来组织教学？	**A**	**B**	**C**	**D**	**E**
11. appear to teach exactly what and how he/she has planned?严格有计划的进行教学？	**A**	**B**	**C**	**D**	**E**
12. notice and acknowledge positive changes in students?留意和认识到学生中间的积极变化？	**A**	**B**	**C**	**D**	**E**
13. have difficulty getting his/her point across to students?很难向学生传递他或者她的观点	**A**	**B**	**C**	**D**	**E**

?					
14. appear to believe that students vary in the way they acquire, process, and apply subject matter knowledge?相信学生在他们获取、学习过程和应用所学相关知识等存在不同？	**A**	**B**	**C**	**D**	**E**
15. really listen to what students have to say?▪学生不得不▪的事情▪真▪听？	A	B	C	D	E
16. appear to trust students to know what their own goals, dreams, and realities are like?相信学生知道他▪自己的目▪、梦想和▪▪是如何的？	A	B	C	D	E
17. encourage students to solicit assistance from otherstudents?鼓励学生向其他同学▪求学▪上的帮助？	A	B	C	D	E
18. appear to feel impatient with students' Progress?▪学生学▪的▪展表▪不耐心？	A	B	C	D	E
19. balance his/her efforts between student content acquisition and motivation?在学生教学内容的▪取和激励两面平衡他或者她的努力？	A	B	C	D	E
20. make her/his presentations clear enough to forestall all student questions？他或者她在讲课时演讲内容清晰足可	**A**	**B**	**C**	**D**	**E**

以释疑所有学生的问题？					
21. conduct group discussions?（在教学过程中）践行小组讨论？	**A**	**B**	**C**	**D**	**E**
22. establish instructional objectives?建有具体的教学目标？	**A**	**B**	**C**	**D**	**E**
23. use a variety of instructional media? (Internet, distance, interactive video, videos, etc.)广泛利用教学媒介（网络、远程、交互式视频与视频等）？	**A**	**B**	**C**	**D**	**E**
24. use listening teams (students grouped together to listen for a specific purpose) during lectures?在讲学时利用听课团队（被分成不同的组来听某一个具体教学目标）？	**A**	**B**	**C**	**D**	**E**
25. appear to believe that his/her teaching skills are as refined as they can be?相信他或者她的教学技能已经精益求精？	**A**	**B**	**C**	**D**	**E**
26. express appreciation to students who actively participate?对经常参加上课的同学表达感激之意？	**A**	**B**	**C**	**D**	**E**
27. appear to experience frustration with student apathy?对学生在上课时表现	**A**	**B**	**C**	**D**	**E**

得无兴趣有挫折感？				
28. appear to prize the student's ability to learn what is needed?对学生学习他们需要的能力进行赞扬？	**A**	**B**	**C**	**D**	**E**
29. appear to feel that students need to be aware of and communicate their thoughts and feelings?能感受学生被注意的需要和与他们沟通他们的想法与感受？	**A**	**B**	**C**	**D**	**E**
30. enable students to evaluate their own progress in learning?增强学生评估自己在学习过程中取得进步的能力？	**A**	**B**	**C**	**D**	**E**
31. hear what students indicate their learning needs are?倾听学生如何诉说他们的学习需求？	**A**	**B**	**C**	**D**	**E**
32. have difficulty with the amount of time students need to grasp various concepts?在学生需要了解大量的概念上，费时费解？	**A**	**B**	**C**	**D**	**E**
33. promote positive self-esteem in students?鼓励学生积极向上，自尊？	**A**	**B**	**C**	**D**	**E**
34. require students to follow the precise learning experiences	**A**	**B**	**C**	**D**	**E**

which he/she provides to them?要求学生严格遵循他或者她提供的教学经验？				
35. conduct role plays?（在上课时）进行较色转换？	**A**	**B**	**C**	**D**	**E**
36. appear to act bored with the many questions students ask? 厌烦学生的提问？	**A**	**B**	**C**	**D**	**E**
37. individualize the pace of learning for each student?区别对待处理学生的学习节奏？	**A**	**B**	**C**	**D**	**E**
38. help students explore their own abilities?帮助学生探寻他们自己的能力？	**A**	**B**	**C**	**D**	**E**
39. engage students in clarifying their own aspirations?促进学生实现他们的愿望？	**A**	**B**	**C**	**D**	**E**
40. ask the students how they would approach a learning task?询问学生他们如何完成自己的学习任务？	**A**	**B**	**C**	**D**	**E**
41. appear to feel irritation at student inattentiveness in the learning setting?对学生上课时不集中精力容易发怒？	**A**	**B**	**C**	**D**	**E**
42. integrate teaching techniques with subject	**A**	**B**	**C**	**D**	**E**

mattercontent?将教学技巧和课程内容整合在一起？					
43. develop supportive relationships with your students? 与学生形成支持的关系？	A	B	C	D	E
44. appear to experience unconditional positive regard for students?对学生践行无条件的积极的关怀？	A	B	C	D	E
45. respect the dignity and integrity of thestudents?尊重学生的尊严和人格的完整？	A	B	C	D	E

Thank you for participating in this research.

再次感谢您参加本研究！

Appendix F: Modified Instructional Perspective Inventory (MIPI)

教学评价指标库

Modified Instructional Perspectives Inventory (MIPI)

© John A. Henschke, Adapted by Yunlin Lu

教学评价指标库（教师适用版）

Listed below are 45 statements reflecting beliefs, feelings and behaviors beginning or seasoned teachers of adults may or may not possess at a given moment. Please indicate how frequently each statement typically applies to you. Circle the letter that best describes you.

如下45个评价指标主要反映从事高等教育的新老教师可能或者不可能在一个给定时期内持有和表现的信仰、感受和行为。针对您而言，对于下面每个选择项，那种程度（A, B. C, D, E）更适合您。请圈处最适合的选项来描述您。

How frequently doyour … 您有多久。。。。	Almost Never 从不	Not Often 不常	Sometimes 有时候	Usually 经常	Almost Always总是
1. use a variety of teaching techniques?在教学中利用多种教学技巧？	A	B	C	D	E
2. use buzz groups (students placed in groups to discuss information from lectures)? 组建临时讨论小组（学习者组成不同小组，对讲课人的信息进行讨论）？	A	B	C	D	E
3. believe that your primary goal is to provide students with as much information as possible?相信您的主要目标能够给学生提供尽可能多的信息？	A	B	C	D	E
4. feel fully prepared to teach? 对教学感觉做好了充分的准备？	A	B	C	D	E
5. have difficulty understanding student point-of views?对学生的观点理解有困难？	A	B	C	D	E
6. expect and accept student frustration as they grapple with problems?期望和接受	A	B	C	D	E

学生的困惑当学生正遇到问题时？					
7. purposefully communicate to students that each is uniquely important?期望与学生进行沟通，并且每次沟通都是独一无二的重要？	**A**	**B**	**C**	**D**	**E**
8. express confidence that students will develop the skills they need?对学生形成他们的技能上表现自信？	**A**	**B**	**C**	**D**	**E**
9. search for or create new teaching techniques?寻求和创造新的教学技巧？	**A**	**B**	**C**	**D**	**E**
10. teach through simulations of real-life?通过对现实生活情景的模拟来组织教学？	**A**	**B**	**C**	**D**	**E**
11. teach exactly what and how you have planned?严格有计划的进行教学？	**A**	**B**	**C**	**D**	**E**
12. notice and acknowledge to students positive changes in them?留意和认识到学生中间的积极变化？	**A**	**B**	**C**	**D**	**E**
13. have difficulty getting your point across to students?在向学生传递您观点时有困	**A**	**B**	**C**	**D**	**E**

难？					
14. believe that students vary in the way they acquire, process, and apply subject matter knowledge?相信学生在他们获取、学习过程和应用所学相▪知识等存在不同？	**A**	**B**	**C**	**D**	**E**
15. really listen to what students have to say?对学生不得不说的事情认真倾听？	**A**	**B**	**C**	**D**	**E**
16. trust students to know what their own goals, dreams, and realities are like?相信学生知道他们自己的目标、梦想和现实是如何的？	**A**	**B**	**C**	**D**	**E**
17. encourage students to solicit assistance from other students?鼓励学生向其他同学请求学习上的帮助？	**A**	**B**	**C**	**D**	**E**
18. feel impatient with students' progress?对学生学习的进展表现不耐心？	**A**	**B**	**C**	**D**	**E**
19. balance your efforts between student content acquisition and motivation? 在学生教学内容的获取和激励两面平衡自己的努力	**A**	**B**	**C**	**D**	**E**

？					
20. try to make your presentations clear enough to forestall all student questions?在讲课时演讲内容清晰足可以释疑所有学生的问题？	**A**	**B**	**C**	**D**	**E**
21. conduct group discussions?（在教学过程中）践行小组讨论？	**A**	**B**	**C**	**D**	**E**
22. establish instructional objectives?设有教学目标？	**A**	**B**	**C**	**D**	**E**
23. use a variety of instructional media? (Internet, distance, interactive video, videos, etc.)利用教学媒介（网络、远程、交互式视频与视频等）？	**A**	**B**	**C**	**D**	**E**
24. use listening teams (students grouped together to listen for a specific purpose) during lectures?在讲学时利用听课团队（被分成不同的组来听某一个具体教学目标）？	**A**	**B**	**C**	**D**	**E**
25. believe that your teaching skills are as refined as they can be?相信他或者她的教学技能已经精益求精？	**A**	**B**	**C**	**D**	**E**

26. express appreciation to students who actively participate?对经常参加上课的同学表达感激之意？	**A**	**B**	**C**	**D**	**E**
27. experience frustration with student apathy?对学生在上课时表现得无兴趣有挫折感？	**A**	**B**	**C**	**D**	**E**
28. prize the student's ability to learn what is needed?对学生学习他们需要的能力进行赞扬？	**A**	**B**	**C**	**D**	**E**
29. feel students need to be aware of and communicate their thoughts and feelings? 能感受学生被注意的需要和与他们沟通他们的想法与感受？	**A**	**B**	**C**	**D**	**E**
30. enable students to evaluate their own progress in learning?增强学生评估自己在学习过程中取得进步的能力？	**A**	**B**	**C**	**D**	**E**
31. hear what students indicate their learning needs are?倾听学生如何诉说他们的学习需求？	**A**	**B**	**C**	**D**	**E**
32. have difficulty with the amount of time students need to grasp various concepts?在学生需要了解	**A**	**B**	**C**	**D**	**E**

大量的概念上，费时费解？					
33. promote positive self-esteem in students?鼓励学生积极向上，自尊？	**A**	**B**	**C**	**D**	**E**
34. require students to follow the precise learning experiences which you provide them?要求学生严格遵循您提供的教学经验？	**A**	**B**	**C**	**D**	**E**
35. conduct role plays?（在上课时）进行较色转换？	**A**	**B**	**C**	**D**	**E**
36. get bored with the many questions students ask?厌烦学生的提问？	**A**	**B**	**C**	**D**	**E**
37. individualize the pace of learning for each student?区别处理学生的学习节奏？	**A**	**B**	**C**	**D**	**E**
38. help students explore their own abilities?帮助学生探寻他们自己的能力？	**A**	**B**	**C**	**D**	**E**
39. engage students in clarifying their own aspirations?促进学生实现他们的愿望？	**A**	**B**	**C**	**D**	**E**
40. ask the students how they would approach a learning	**A**	**B**	**C**	**D**	**E**

task?询问学生他们如何完成自己的学习任务？					
41. feel irritation at student inattentiveness in the learning setting?对学生上课时不集中精力容易发怒？	**A**	**B**	**C**	**D**	**E**
42. integrate teaching techniques with subject matter content?将教学技巧和课程内容整合在一起？	**A**	**B**	**C**	**D**	**E**
43. develop supportive relationships with your students?与学生形成支持的关系？	**A**	**B**	**C**	**D**	**E**
44. experience unconditional positive regard for students?对学生践行无条件的积极的关怀？	**A**	**B**	**C**	**D**	**E**
45. respect the dignity and integrity of the students?尊重学生的尊严和人格的完整？	**A**	**B**	**C**	**D**	**E**

Thank you for participating in this research.

再次感谢您参加本研究！

Appendix G: Scoring the MIPI and the MIPI-S

MIPI 和 MIPI-S 评分细则

Appendix： Scoring the MIPI and the MIPI-S 评分细则

Scoring process for both instruments: A = 1, B = 2, C = 3, D = 4, and E = 5 except onreverse scored items.

对两个指标库评分：A = 1, B = 2, C = 3, D = 4, E = 5 除了反向计分项目外.

Scoring for items in Factors 5 and 7 is reversed: A = 5, B = 4, C = 3, D = 2， and E = 1.Reverse scored items are 5, 13, 18, 27, 32, 36, 41 (Factor 5) and 3, 11, 20, 25, 34(Factor 7).

对因子5和7内的项目计分相反：A = 5, B = 4, C = 3, D = 2，和 E = 1。因子5包含计分项目是5, 13, 18, 27, 32, 36, 41，因子7包含的项目是3, 11, 20, 25, 34。

(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	7	1	6	5	2	3
12	8	9	14	13	10	11
19	16	22	15	18	21	20
26	28	23	17	27	24	25
33	29	42	37	32	35	34

30			38	36		
31			40	41		
39						
43						
44						
45						
Total	**Total**	**Total**	**Total**	**Total**	**Total**	**Total**

FACTORS	MEAN	TOTAL	POSSIBLE MINIMUM	POSSIBLE MAXIMUM
1. Teacher empathy with students.			5	25
2. Teacher trust of students.			11	55
3. Planning and delivery of instruction.			5	25
4. Accommodating student uniqueness.			7	35
5. Teacher insensitivity toward students			7	35
6. Experience based learning Techniques (student-centered learning process).			5	25
7. Teacher-centered learning process.			5	25

Appendix H: Incentive Information and Personal Contact Information

参与调查奖励和个人联系方式

Appendix H: Incentive Information and Personal Contact Information

参与调查奖励和个人联系方式

As an incentive to participate in this study, all participants who **_complete the online research surveys_**will be eligible to win a RMB 50 YuanSupermarket, movie, or book-purchasing gift card.

作为参与本研究调查的奖励，所有本研究调查者均有机会获得价值50圆人民币的超市购物券、电影兑换券或者购物卡。

The drawing rate will reach 5% of the total participants in the end.

抽奖中奖比例为总参与人数的5%。

If you wish to take part in the drawing, please fill in your information as the below:

1) completeyour email address,

2) your name and your contact address, or your mail box, and

3) contact telephone number.

如果你愿意参与此次抽奖，请填写相关的信息如下：

1） 请 填 写 您 的 email 地 址 ：
_____

2） 您 的 姓 名 与 联 系 方 式 ， 邮 政 编
码:_____

3） 联 系 电 话 ：
_____

If I win, I understand that the person in charge of the drawing (not the Investigator) willcontact me to verify my above information.

承诺"如果有赢得此次抽奖，我已知道该项目抽奖活动负责任（不是研究者）会仔细核对上面的信息然后联系我"。

Signature：

签名：

If you have any questions or concerns about this drawing, pleasecontact the Investigator:

如果您还有任何问题，请联系该调查人鲁云林先生：

Yunlin Lu, (025)87769211 or yunlinl@hotmail.com.

Appendix I: Instruments Permission Letter from Dr. John A. Henschke

LINDENWOOD
LINDENWOOD UNIVERSITY   ST. CHARLES, MISSOURI

5/25/13

Mr. Yunlin Lu
Doctoral Student
University of Missouri St. Louis
#1 University Drive
St. Louis, Missouri 63121

Dear Mr. Yunlin Lu:

I am pleased that you wish to use the Modified Instructional Perspectives Inventory (MIPI) and the Modified Instructional Perspectives Inventory – Adapted for Student Use (MIPI-S) in your Doctoral Dissertation at the University of Missouri-St. Louis. I understand that your dissertation is to be entitled, "An Exploration of Merit Pay, Teacher and Student Satisfaction, and Teacher Performance Evaluation from an Instructional Perspective."

I hereby give you permission to use these copyrighted instruments. I would expect   appropriate citations for the Inventories in your dissertation or any publications that result from using them.

If there is any other way I may help you in this process, please let me know. My best wishes to you in your research. I look forward to hearing of your results.

Most Sincerely,

John A. Henschke

John A. Henschke Ed. D.
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