Leadership Styles, Decision-making Styles, and Teacher Job Satisfaction: An Indonesian School Context

Thesis submitted by

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October 2011

for the Degree of Doctor of Philosophy

School of Business
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Statement of the Contribution of Others

I have received full financial support from the Directorate General of Higher Education, the Ministry of National Education, the Republic of Indonesia, through my home university, the University of Lampung (Unila), to pursue this PhD Program. Additional financial support has also been received from James Cook University for the field research and for editorial assistance.

My supervisors, Dr Murray Prideaux and Associate Professor Richard Monypenny, have provided invaluable guidance in the supervision of this thesis. Dr Rabi Beg (an economic statistician/senior lecturer in the School of Business) has provided tremendous assistance in the statistics. Editorial and critical feedback has been provided by a professional editor, Ms Sharon Read.

Signature _____ Date _____

Declaration on Ethics

The research presented and reported in this thesis was conducted within the guidelines for research ethics outlined in the *National Statement on Ethics Conduct in Research Involving Human (1999)*, the Joint *NHMRC/AVCC Statement and Guidelines on Research Practice (1997)*, the *James Cook University Policy on Experimentation Ethics, Standard Practices and Guidelines (2001)*, and the *James Cook University Statement and Guidelines on Research Practice (2001)*.

The proposed research methodology received clearance from the James Cook University Human Research Ethics Committee (Approval Number H3464) (see Appendix 18).

Signature _____ Date _____

Acknowledgements

I would like to express my appreciation to those who in one way or another contributed and extended their valuable assistance in the preparation and completion of this PhD thesis. I am mostly grateful to the Almighty God for giving me the strengths and blessing in completing this thesis.

I am heartily thankful to my PhD thesis supervisors. I express many thanks to Dr Murray Prideaux for his invaluable guidance and supervision over the life of this project. I strongly express my thanks to Associate Professor Richard Monypenny for his persistent supervision, constructive guidance, and quick feedback to finalise this thesis.

I owe my deepest gratitude to my home institutions. I am grateful to the Directorate General of Higher Education, the Ministry of National Education, the Republic of Indonesia, for providing me with the permission and financial support to pursue the PhD program at James Cook University, Townsville, Australia. I am also grateful to the University of Lampung (Unila) for providing me with permission and managerial support to pursue and complete the PhD program.

It gives me great pleasure in acknowledging the support and help of Dr Rabiul Alam Beg for his invaluable assistance in the statistics of this thesis.

I wish to acknowledge 60 hours of editing assistance provided by Sharon Read.

I would like to thank Professor Bambang Setiyadi, Dr Ujang Suparman, and Dr Yanyan Mulyana for their expertise in assisting with translations.

I am indebted to the education offices and their heads and staff members in Lampung Province for their permits and assistance to conduct the research: Lampung Province Education Office, Education Quality Assurance Institute, and the other six education

offices in the six districts (Bandar Lampung, Lampung Tengah, Lampung Selatan, Pesawaran, Pringsewu, and Tanggamus).

My special thanks go to the principals and the teachers at the public junior secondary schools in the six districts in Lampung Province for their participation in this study.

My gratitude goes to the developers/publishers of the three standard questionnaires for providing me with permissions to use the questionnaires in this study: MLQ Form 5X-Short, GDMS, and JSS.

I am indebted to the School of Business, the faculty, the library and Learning Centre, and the Graduate Research School at James Cook University and all their staff members who have been helpful on so many occasions.

I would like to dedicate my gratitude to my fellow PhD students in the School of Business for their positive and constructive feedback throughout my study.

Finally, I especially thank my beloved family members: my wife (Ayu), my son (Gamal), and my daughter (Inas) for their support, understanding and patience all the time as well as my parents for their moral support.

May the Almighty God bless them all.

Signature _____ Date _____

Abstract

Education is essential for Indonesia to improve its human resources and to help increase economic growth. However, education standards primarily depend on education leaders, in particular, effective school principals. Effective school principals tend to involve teachers in decision-making and help teachers achieve their job satisfaction. Effective school principals and satisfied teachers can significantly contribute to effective school leadership. Although these ideas are well understood, the literature demonstrating these ideas is extremely little in the Indonesian school context.

This thesis examines the relationships between principal leadership styles and principal decision-making styles, and their possible use as indicators to predict teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia. This thesis has a strong theoretical and empirical background for four reasons: contributing to closing a few of important gaps in the literature of school leadership in Indonesia, helping enhance the quality of Indonesia's education, addressing neglect in using the three comprehensive standard questionnaires together in research in Indonesia, and highlighting academic/theoretical, practical and policy implications for Indonesian schools.

A quantitative research design is used in this thesis to address the research problem and the nine research questions that are linked to some important gaps identified in the literature. The three standard survey questionnaires (MLQ Form 5X-Short, GDMS, and JSS) and demographic questionnaire (see Appendix 10 to Appendix 13) were completed by 36 principals and 475 teachers (a 92% response rate) in 36 schools from six districts. The data were analysed using SPSS Version 18 using descriptive statistics, multiple regression, ANOVA, and t-test.

Key findings are:

- Principals exhibited mostly transformational leadership style and rational decision-making style.
- Teachers were just slightly satisfied.
- Teacher job satisfaction preferences were identified as: co-workers, nature of work, supervision, and communication.
- The relationships between principal leadership styles (transformational, transactional, and laissez-faire), principal decision-making styles (rational, dependent, intuitive, spontaneous, and avoidant), and teacher job satisfaction were mostly significant.
  - In particular, among these principal leadership styles and principal decision-making styles, five variables (transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style) were significant predictors of teacher job satisfaction, with transformational leadership style and rational decision-making style identified as the best predictors.
  - These five variables were still able to predict teacher job satisfaction even after controlling for last education, tenure with current principal, and school location.
  - Principals perceived themselves to be more transformational, more transactional, and less laissez-faire than teachers perceived.

Most findings are consistent with those of prior studies. In particular, the patterns of relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction are consistent with those of prior studies (Ejimofor, 2007; Elpers & Westhuis, 2008; Erkutlu, 2008; Griffith, 2004; Kao & Kao, 2007; Walumbwa, Orwa, Wang, & Lawler, 2005). However, findings in terms of teacher job satisfaction relative to education and tenure are inconsistent with prior findings (Boeve, 2007). Finally, findings comparing self-perceived and teacher-perceived principal leadership styles have not been previously described in the literature.

These findings suggest that, to enhance teacher job satisfaction, stakeholders (particularly policy-makers/government district education leaders) could consider ways to help the principals, in collaboration with their staff to:

- exhibit much more transformational leadership style and rational decision-making style,
- exhibit less transactional leadership style and dependent decision-making style,
- exhibit much less intuitive and spontaneous decision-making styles,
- avoid laissez-faire leadership style and avoidant decision-making style, and
- improve all the facets of job satisfaction.

This thesis has provided a significant contribution to the body of knowledge in at least four areas:

- academic/theoretical contribution to methodology,
- academic/theoretical contribution to leadership studies,
- practical contribution to an Indonesian school context, and
- policy contribution to an Indonesian school context.

In particular, In particular, the findings will extend the literature on these issues. The findings will be of practical use to help achieve effective school leadership in Indonesian schools. The limitations of this thesis are particularly in scope and site, and these are avenues for possible further research.

Keywords: Leadership, Decision-making, Job satisfaction, Schools, Principals, Teachers, Indonesia

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I. INTRODUCTION

1.0 Introduction

This chapter establishes the framework for this thesis to investigate principal leadership styles, principal decision-making styles, and teacher job satisfaction in an Indonesian school context (see Figure 1.8-1).

The research problem is identified in Chapter 2. Nine research questions were formulated to help address the research problem.

A quantitative research design with survey questionnaires was identified as the most appropriate approach for this study to address the nine research questions. Three standard survey questionnaires (MLQ Form 5X-Short, GDMS, and JSS in Indonesian versions) and a demographic questionnaire were used to gather data from a sample of 555 participants in 37 schools from six districts in Lampung Province, Indonesia. Descriptive statistics, one-way between-groups ANOVA, independent samples t-test analyses, Pearson correlation, and multiple regression (standard and hierarchical), using SPSS version 18 were used to analyse the data.

This study provides findings which contribute to closing a few of the important gaps in the literature on school leadership, including principal leadership styles, principal decision-making styles, and teacher job satisfaction, in an Indonesian school context.

This thesis makes a significant contribution to the body of knowledge in two primary areas: (1) an academic/theoretical contribution to methodology and to leadership studies, and (2) a practical and policy contribution to an Indonesian school context. In terms of academic contribution, the first contribution of this thesis lies in its methodology by using three standard questionnaires (MLQ Form 5X-Short, GDMS, and JSS) together. Literature review has shown that such an approach has not been done before. Second, the thesis contributes to an extension of literature on school

leadership by providing complementary insights. More precisely, there are some findings of this thesis that have not been previously described in literature, in addition to other findings that mostly confirmed and that partly did not support previous work. For example, results comparing self-perceived and teacher-perceived principal leadership styles have not been previously described in the literature. The finding that there is a significant relationship between transformational leadership style and job satisfaction supports previous studies (e.g. Ejimofor, 2007; Elpers and Westhuis, 2008; Erkutlu, 2008; Griffith, 2004; Walumbwa et al., 2005). Findings in terms of teacher job satisfaction relative to education and tenure are inconsistent with prior findings (Boeve, 2007; Zembylas & Papanastasiou, 2004). Third, this thesis makes a contribution in developing a deeper understanding of leadership behaviours of principals (their leadership styles and decision-making styles) leading to teacher job satisfaction. These phenomena add to our understanding on how principals should behave, for example, which behaviours should be avoided and which behaviours should be improved in the future in order to help teachers meet their satisfaction because satisfied teachers and principals would harmoniously work together to achieve school goals effectively.

In terms of practical and policy contribution, principals who mostly exhibit transformational leadership style and rational decision-making style could make a practical contribution to help improve school and school leadership effectiveness, meet job satisfaction, produce high-quality human resources, and underpin the development of Indonesian schools. Training efforts to develop transformational leaders may be beneficial. Schools may benefit by implementing training initiatives that develop principal transformational leadership behaviours.

Principals should behave in ways suggested by the thesis findings to help teachers improve their job satisfaction. In turn, satisfied teachers can help enhance effective school leadership.

The limitations of this thesis are particularly in scope and site. The scope was limited to public junior secondary schools, and the site is limited to Lampung Province (out of the 33 provinces) in Indonesia. These limitations are possible avenues for further research.

1.1 Background to this Thesis

The literature on leadership, and particularly in the education sector, is vast (Storey, 2004, p. 249). This is supported by Mertkan (2011, p. 79) who argues that, in the last two decades, leadership development has been an area of much research, and this has been mirrored by increased policy activity in schools. This is because education has been recognised as an important mechanism for countries to provide good quality of human resources for economic growth (Nguni, Sleegers, & Denessen, 2006, p. 145; Watkins et al., 2009, p. 9). Education leaders, particularly effective principals, who perform school leadership roles are a key element in effective schools (Hansson & Andersen, 2007) because effective principals have significant impacts on school success (Gurr, Drysdale, & Mulford, 2005; Raihani, 2008). Leithwood, et al (2010) in Thomas and Kearney (2010, p. 8), in their follow-through study, observe that to date they did not find a single case of a school improving its student achievement record in the absence of talented and effective leadership. Studies of school leadership primarily originated from western culture, particularly the United States of America. However, school leadership in Asia, particularly in an Indonesian school context, has not been extensively explored. This thesis examines the relationships between leadership style and decision-making styles and their use as indicators to predict teacher job satisfaction in an Indonesian school context.

Effective principals involve teachers in decision-making (Barnett & McCormick, 2003, p. 64; Pashiardis, 1993, p. 8; Williams, 2008). This is supported by Kao and Kao (2007, p. 71) who found that leadership styles are related to decision-making styles. One new and most encompassing approach to studying leadership that can apply to the education sector is that of transformational, transactional, and laissez-fair leadership styles (Bass, 1997; Northouse, 2007) measured using Multifactor

Leadership Questionnaire (MLQ) 5X-Short (Bass & Avolio, 2004). These three leadership styles tend to be related to particular decision-making styles (Tatum, Richard, Carin, & Travis, 2003, p. 1012). A comprehensive model used widely is the decision-making typology measured using the General Decision-Making Style (GDMS) inventory developed by Scott and Bruce (1995). The model consists of five different styles: rational, dependent, intuitive, spontaneous, and avoidant. Transformational leaders are associated with a more comprehensive (rational) decision-making style, while transactional/laissez-faire leaders are associated with a less comprehensive decision-making style (Tatum et al., 2003, p. 1007). However, little is known in the literature about the relationships between the leadership styles and the decision-making styles in an Indonesian school context. Studies of these relationships will make an important contribution to the literature and development of the Indonesian school system.

Effective principals tend to produce satisfied teachers (Nguni et al., 2006, in Cerit, 2009, p. 600). Research has revealed the relationships between leadership style and job satisfaction (Ejimofor, 2007; Elpers & Westhuis, 2008; Erkutlu, 2008; Griffith, 2004; Nguni et al., 2006; Walumbwa, Orwa, Wang, & Lawler, 2005). In particular, principal leadership style has a significant and positive effect on teacher job satisfaction (Ejimofor, 2007; Griffith, 2004; Nguni et al., 2006). "Satisfied teachers are likely to be more enthusiastic and to spend more time and energy on educating students" (Nguni et al., 2006, in Cerit, 2009, p. 600). Accordingly, satisfied and productive teachers are a key factor in the success of education (Firman & Tola, 2008) and can contribute to student achievement as a key indicator for school performance. Although these ideas are well-understood in the literature, evidence in the Indonesian school context is lacking. The studies of school leadership are still few in the Asian context (Raihani, 2008; Wong & Wong, 2005). Therefore, studies on leadership in association with job satisfaction in an Indonesian school context will extend the body of knowledge and contribute to an increased understanding of school leadership in Indonesian schools.

Teacher job satisfaction is important (Boreham, Gray, & Blake, 2006; Ngimbudzi, 2009; Seco, 2002; Skaalvik & Skaalvik, 2010). When teachers enjoy their work, they do not

want to leave their schools, they are devoted or committed to their job, and they do not want to abandon their profession—they are stimulated to perform their job very well to achieve school goals. Teachers with high satisfaction could outperform (Judge, Thoresen, Bono, & Patton, 2001, in Klassen & Chiu, 2010; Sargent & Hannum, 2005). Spector's (1985) Job Satisfaction Survey (JSS) is a comprehensive model and widely used instrument to measure overall job satisfaction. This instrument consists of nine facets: pay, promotion, supervision, fringe benefits, contingent rewards, operation conditions, co-workers, nature of work, and communication. However, little attention has been paid to teacher job satisfaction research in developing countries (Michaelowa & Wittmann, 2007, p. 52), particularly in an Indonesian school context.

Studies of the relationships between leadership styles, decision-making styles, and job satisfaction have been neglected in an Indonesian school context. Investigating these relationships may add to the body of knowledge and enhance the performance of Indonesian schools and the quality of Indonesia's education system. Therefore, this thesis examines the relationships between principal leadership style and principal decision-making styles and their use as indicators to predict teacher job satisfaction in an Indonesian context.

1.2 Justification for this Study

A review of the literature has identified important knowledge gaps (see Chapter 2). These gaps were used to formulate the research problem. This thesis can be justified on four grounds. These are:

1) The research problem (outlined in Section 1.3 of this thesis) has been relatively neglected by prior researchers. This thesis is the first to investigate this research problem in Indonesian schools, with the specific context of public junior secondary schools in Lampung Province, Indonesia. There is much discussion in the educational literature, both supportive and critical, about transformational orientations to leadership; however, empirical evidence about its effects in school contexts is extremely little (Leithwood & Jantzi, 2006, p. 204). Specifically,

studies of school leadership are still few in the Asian context (Raihani, 2008; Wong & Wong, 2005).

2) This thesis examines school leadership in the education system in Indonesia, with a particular focus on principal leadership styles, principal decision-making styles, and teacher job satisfaction. This research area is important for Indonesia for four reasons. These are:
   (1) Education is important for Indonesia (and other countries) to help provide good quality human resources to help economic growth (Nguni et al., 2006, p. 145; Watkins et al., 2009, p. 9).
   (2) Education leaders, particularly effective principals, who perform school leadership roles are a key element to help contribute to effective schools (Hansson & Andersen, 2007) because effective principals have significant impacts on school success (Gurr et al., 2005; Raihani, 2008).
   (3) To date no single case has been found of a school improving its student achievement record in the absence of talented and effective leadership (Leithwood, et al., 2010 in Thomas & Kearney, 2010, p. 10).
   (4) Investigating the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction may contribute to enhancing both the performance of Indonesian schools and the quality of Indonesia's education system.

3) There is relative neglect of research methodologies by prior researchers in using the three comprehensive standard questionnaires in research, and particularly in an Indonesian school context. These questionnaires are (1) Multifactor Leadership Questionnaire (MLQ) Form 5X-Short, (2) General Decision-making Style (GDMS) Questionnaire, and (3) Job Satisfaction Survey (JSS). Researchers mostly used them individually or jointly two of the questionnaires (LMQ and JSS). There is little research using joint use of LMQ and GDMS or GDMS and JSS. Joint use of the three questionnaires has not been previously done.

4) Findings of this study will provide academic/theoretical, practical and policy implications which can significantly contribute to the body of knowledge in

school leadership, decision-making, and job satisfaction. In particular, the findings will extend the literature on these issues. Additionally, the findings will be of practical use to help achieve effective school leadership in Indonesian schools.

1.3 Research Problem

The research problem identified in the literature review (see Chapter 2) is:
What are the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia?

To answer the research problem, nine research aims were formulated and are outlined below.

1.4 Research Aims

The aim of this thesis is to examine the relationships between principal leadership styles and principal decision-making styles and their possible use as indicators to predict teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia.

The specific research aims of this thesis are to:

1) Identify what leadership style(s) the principals mostly exhibit as perceived by the teachers?
2) Identify what decision-making style(s) the principals mostly exhibit as perceived by the teachers?
3) Identify what job satisfaction facet(s) the teachers mostly prefer as perceived by themselves, and how satisfied they are.
4) Investigate how teacher job satisfaction varies with tenure (number of years) with current principal, total tenure, qualifications (last education), and job level.
5) Investigate how teacher job satisfaction varies with gender, marital status, certification, and school location.

6) Investigate how self-perceived principal leadership styles compare with teacher-perceived principal leadership styles.
7) Examine the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction.
8) Examine whether principal leadership styles and principal decision-making styles can significantly predict teacher job satisfaction.
   If they can, which variable best predicts teacher job satisfaction.
9) Examine whether the model (or the set of predictor variables) can still significantly predict teacher job satisfaction after the possible effects of last education, tenure with current principal, and school location of participants are controlled for.

These specific research aims suggest an appropriate research methodology including research design, research methods, and data analyses. The next section describes and justifies the research methodology.

1.5 Research Methodology

This section describes and justifies the research methodology which is further presented in Chapter 3.

Research Design

Quantitative research using survey questionnaires was chosen for this study for four reasons. These are:

1) The approach is considered the most effective way to address the nine research questions. The research questions require answers from a large sample to be able to generalise the results to the population of public junior secondary schools in Lampung Province, Indonesia, through statistical analyses which are relatively ineffective if using qualitative or mixed methods research design.
2) It allows more effective use of the researcher's time and budget than qualitative or mixed methods (Creswell, 2009).
3) It is ideal to administer to a relatively large number of participants (Gray, 2004).

4) This approach is especially useful to describe and determine relationships between variables (Babbie, 1990, p. 56).

Population and Sampling

The study area has a population of 11,401 principals and teachers (Kemdiknas, 2009a) employed within 623 public junior secondary schools in Lampung Province (Kemdiknas, 2009b).

In this study, multi-stage sampling was used to randomly select prospective participants. The three stages are:

1) Geographic districts (primary units) – six geographic districts out of 14 districts, were selected.
2) Schools (secondary units) – 37 schools, out of 623 public junior secondary schools in Lampung Province (Kemdiknas, 2009b), including their principals were selected in the six geographic districts.
3) Participants (tertiary units) – a sample of 37 principals and 518 teachers, out of 11,401principals and teachers (Kemdiknas, 2009a), was chosen from the selected schools.

This resulted in a pool of 555 of participants to be surveyed. This sample size of 555 (with a population of 11,401) is greater than the recommended sample size; that is, for a population of 10,000, the recommended sample size is 370, based on 95 per cent confidence level (Gray, 2004, p. 218).

The contact details of selected schools and participants were accessed from the Education Quality Assurance Institution (LPMP) and the Education Offices in Lampung Province. Participants were contacted by phone or in person by the researcher from their schools to request their voluntary participation in this study.

Data Collection Methods: Research instruments

Data were collected using a demographic questionnaire and three standard questionnaires suggested by Gray (2004, p. 161) for the following reasons:

1) These three standard questionnaires fit the topic of interest, particularly the nine research questions.
2) They have well established reliability and validity.
3) They are ideal to administer to a relatively large number of participants, in particular, to explore relationships between variables.
4) They are comprehensively applicable and widely used in research.

The demographic questionnaire was used to describe the following participants' demographics: gender, marital status, certification, age group, last education, tenure (number of years) with current principal, total tenure, job level and school location. The three standard questionnaires are: Multifactor Leadership Questionnaire (MLQ) Form 5X-Short (Bass & Avolio, 2004), General Decision-making Style (GDMS) questionnaire (Scott & Bruce, 1995), and Job Satisfaction Survey (Spector, 1985). The MLQ was used to describe the principal leadership styles: transformational, transactional, and laissez-faire. The GDMS questionnaire was used to describe principal decision-making styles: rational, dependent, intuitive, spontaneous, and avoidant. The JSS survey was used to measure overall teacher job satisfaction. The four questionnaires were translated from English into Indonesian (for participants' completion) and then translated back into English (for analysis). Permissions were obtained from the developer of JSS and the publishers of the MLQ Form 5X-Short and GDMS questionnaire to use these three standard questionnaires (see Appendix 14a to Appendix 16).

Pilot Study

The Indonesian versions of the four questionnaires were pilot-tested on a few selected participants in the same fashion as was intended for the main survey.

Usually, a pilot study is used to establish validity and reliability of an instrument (Creswell, 2009). However, this study used three standard questionnaires that have well-established validity and reliability identified in Chapter 2 and outlined in Chapter 3.

The pilot study was conducted in Lampung Province between 11 November 2009 and 14 January 2010. The pilot study confirmed the feasibility to conduct the main study, subject to minor changes to the delivery of the questionnaires by hand. The hand delivery mode was used in the main study because it was considered an effective way to obtain optimal response rate in the Indonesian school context.

Main Study

The main study, (hereafter referred to as "study"), was undertaken between 28 April and 21 July 2010 in public junior secondary schools in six selected districts in Lampung Province.

The four questionnaires were completed by 36 principals and 475 teachers (92% response rate) in 36 schools in six districts. These four questionnaires were administered to the participants in person, using the hand delivery mode in their natural setting (schools). Participation was voluntary; participants were encouraged to answer as honestly as possible, and they were assured that their answers would remain confidential.

The data were analysed using SPSS version 18. The results of this study are presented in Chapter 4. The data analysis is outlined below.

Data Analysis

The data analysis was carried out as follows:

1) The data were prepared prior to analysis by coding, entered into SPSS, cleaned for errors, checked for missing data, and rescaled as required.
2) Descriptive analysis was employed to describe the participants and the variables, and particularly to address RQs 1-3.
3) The following general assumptions of parametric data were checked: continuous measures, random sampling, normal distribution, independence of observations, and homogeneity of variance.
4) The following statistical analysis techniques were employed: one-way between-groups ANOVA (to address RQ 4), and independent samples t-test (to address

RQs 5-6), Pearson correlation (to address RQ 7), and multiple regression (to address RQs 8-9).

1.6 Delimitations

Section 1.3 outlined the research problem. This thesis examines the relationships between principal leadership styles and principal decision-making styles and their possible use as indicators to predict teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia. Delimitations of scope and site are the boundary of this study. This study has the following delimitations:

1) The scope is limited to public junior secondary schools administered by the Education Office in Lampung Province, Indonesia.
2) The site is limited to Lampung Province (out of the 33 provinces) in Indonesia.
3) The participants surveyed are limited to principals and teachers who have been at the same schools for more than one year. With more than one year tenure, it is assumed that the principals have had an impact on teacher job satisfaction.

1.7 Definitions of Terms

The following definitions are used in this thesis:

1) **Leadership** is an influence relationship among leaders and followers who intend real changes and outcomes that reflect their shared purposes (Daft, 2005, p. 5). Leadership ranges along a continuum from one end by laissez-faire leadership, transactional leadership lies in the middle of the continuum, and on the other end is transformational leadership. The leadership continuum is within full range leadership (FRL) that covers the highly inactive and ineffective laissez-faire leadership to the highly active and effective inspirational and, ideally, influential transformational leadership (Northouse, 2007, p. 180).

2) **Laissez-fair leadership** is a "hands-off", let-things-ride approach and represents an absence of transactional leadership. A laissez-faire leader avoids making decisions, gives no feedbacks, abdicates responsibility, makes little efforts to help subordinates satisfy their needs and does not use their authority. Laissez-faire is the most passive and ineffective form of leadership (Antonakis, Avolio, & Sivasubramaniam, 2003; Northouse, 2007). Laissez-faire leadership is the absence of leadership and the most inactive and the most ineffective leadership style (Bass & Avolio, 1994, p. 4).

3) **Transactional leadership** is an exchange process between a leader and his/her followers based on job descriptions to complete clear and specific goals. When the responsibilities or requirements are successfully completed, the leaders give their followers a reward in return, yet punish when the followers deviate from the standard (Antonakis et al., 2003; Bryant, 2003, p. 37). There are three transactional leadership factors: (1) contingent reward, (2) management-by-exception active, and (3) management-by-exception passive—these last two factors were previously labelled management-by-exception (Antonakis et al., 2003, p. 265)

4) **Transformational leadership** is an expansion of transactional leadership. Transformational leaders do more with colleagues and followers than set up simple exchanges or agreements. They behave in ways to achieve superior results by employing one or more of the Four I's: idealised influence, inspirational motivation, intellectual stimulation, and individualised considerations (Bass & Avolio, 1994, p. 3). This idealised influence was then divided into two categories: idealised influence (attributes) and idealised influence (behaviour) (Antonakis et al., 2003, p. 265). Idealised influence and inspirational motivation were previously labelled charisma.

5) **Charismatic leadership** is shown by leaders who act as role models, create a sense of identification with a shared vision, and instil pride and faith in followers by overcoming obstacles (Bass, 1985 in Lievens, Geit, & Coetsier, 1997, p. 417). "While there is some debate in the literature, many see charismatic leadership as a

part of transformational leadership" (Sims Jr, Faraj, & Yun, 2009, p. 150). Therefore, charisma is a necessary component of transformational leadership, a leader can be charismatic but not transformational (Bass, 1985 in Yukl, 2002, p. 261).

6) **Decision-making** is a process which consists of several steps to uncover what to do and why for a decision (Nutt, 2008, p. 425).

7) **Decision-making style** is the learned, habitual response pattern exhibited by an individual when confronted with a decision situation. There are five decision-making styles: (1) rational, (2) intuitive, (3) dependent, (4) avoidant, and (5) spontaneous. Rational decision-making style is decision-making by decision-makers using a logical and deliberate approach. For example, a rational decision-maker makes decisions in a logical and systematic way. Intuitive decision-making style is relatively quick decision-making by decision-makers through the use of feelings, without a logical approach. For example, when making decisions, an intuitive decision-maker tends to rely on his/her intuition. Dependent decision-making style is decision-making which counts on others. For example, a dependent decision-maker rarely makes important decisions without consulting other people. Avoidant decision-making style is avoiding decision-making whenever possible. For example, an avoidant decision-maker avoids making important decisions until the pressure is on. Finally, spontaneous decision-making style is decision-making where a decision-maker has a sense of immediacy and a desire to get through the decision-making process as soon as possible. For example, a spontaneous decision-maker generally makes snap decisions (Scott & Bruce, 1995).

8) **Job satisfaction** is an affective or attitudinal reaction to a job (Spector, 1985, p. 694).

9) **School-based management (SBM)** is the decentralisation of levels of authority to the school level. Responsibility and decision-making for school operations is transferred to principals, teachers, parents, sometimes students, and other school

community members. The school-level actors, however, have to conform to, or operate, within a set of centrally determined policies (The World Bank, 2009).

10) **Principal** is a leader of a public junior secondary school.

1.8 Thesis Organisation

This thesis consists of five chapters as shown in Figure 1.8-1. Chapter 1 provides an overview of the thesis, including the background and justification, statements of the research problem, questions and aims, a brief description of the research methodology, delimitations of scope and site, definitions of terms, and thesis outline.

Chapter 2 reviews the literature relating to leadership styles, decision-making styles, and job satisfaction in general, in school contexts, and in an Indonesian school context. Important gaps are identified including a lack of evidence of leadership styles, decision-making styles, and teacher job satisfaction as well as their relationships in Lampung Province schools. The research problem was formulated to help address some of these gaps. The nine research questions were formulated to answer the research problem and meet the aim of this study.

Chapter 3 presents research methodology. The strengths and weaknesses of the three research designs (quantitative, qualitative, and mixed methods) were compared. Quantitative research using survey questionnaires was justified as the most appropriate method to address the nine research questions formulated in Chapter 2. These nine research questions were addressed with the following four analyses: (1) descriptive analysis to address RQs 1-3, (2) multiple regression analysis including standard and hierarchical to address RQs 4-6, (3) one-way between-groups ANOVA to address RQ 7, and (4) independent samples t-test to address RQs 8-9.

Chapter 4 presents data analyses, results and discussions of the results obtained while addressing the nine research questions. The data were obtained from the questionnaires completed by 36 principals and 475 teachers representing a 92% response rate. The four analysis techniques confirmed in Chapter 3 were used to

analyse the data, using SPSS version 18. The results are then discussed within the context of this study and compared to findings of prior studies reviewed in Chapter 2.

Chapter 5 provides a review of the first four thesis chapters. Conclusions about the nine research questions and conclusions about the research problem are presented. The implications for theory arising from the findings of this study are outlined and demonstrate a significant theoretical contribution to the body of knowledge. Implications for practice and policy are also presented, particularly, how principals and policy-makers in an Indonesian school context benefit from the finding of this study. The limitations of this thesis were acknowledged; however, these limitations are avenues for further research.

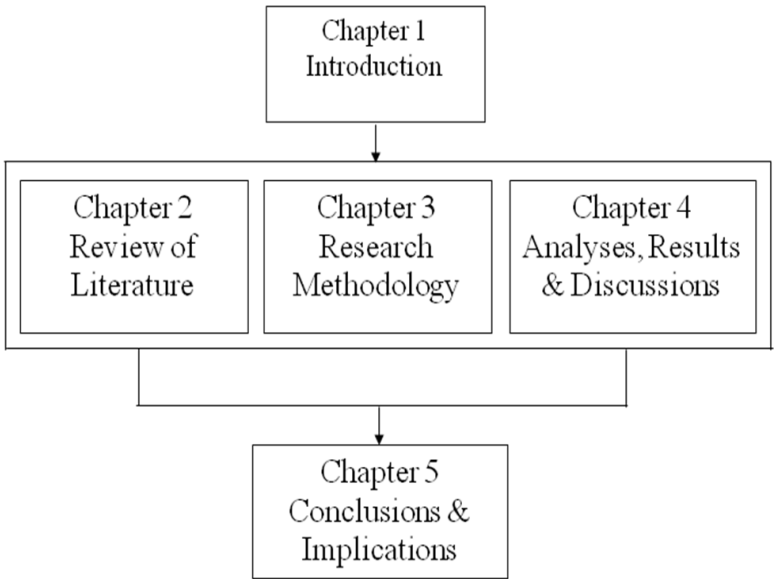

Figure 1.8-1 Research framework for this thesis
Source: Developed for this thesis

1.9 Conclusion

This chapter has established the framework for the thesis to investigate principal leadership styles, principal decision-making styles, and teacher job satisfaction in an Indonesian school context (see Figure 1.8-1). Background to and justification for this thesis as well as the statements of the research problem, and the aims were

presented. The research methodology was briefly described and justified. The limitations and the definitions of terms were highlighted, and the thesis structure was outlined. On these foundations, this thesis can proceed.

The next chapter reviews the literature on leadership, decision-making, and job satisfaction and establishes the research problem and the research questions.

II. REVIEW OF LITERATURE

2.0 Introduction

Chapter 1 established the framework for the thesis to investigate principal leadership styles, principal decision-making styles, and teacher job satisfaction in an Indonesian school context. The purpose of Chapter 2 is to review the literature to ensure that the methodology employed to research the relationships between principal leadership styles, principal decision-making styles, and their possible use as indicators to predict teacher job satisfaction in public junior secondary schools in Lampung Province, Indonesia, is appropriate and does not repeat previous research.

The objectives of this chapter are to:

- review literature relating to leadership styles, decision-making styles, and job satisfaction to identify issues that may provide a framework to guide formulation of the research problem,
- locate gaps in the literature and demonstrate how this thesis helps to close some of these gaps,
- formulate researchable questions to address the research problem, and
- develop a framework to aid in answering the research questions.

This thesis sets out to understand the relationships between principal leadership styles, principal decision-making styles, and their possible use as indicators to predict teacher job satisfaction in public junior secondary schools in Lampung Province, Indonesia.

There is a considerable body of knowledge dealing with leadership styles, decision-making styles, and job satisfaction; though much of the research dealing with these

topics originates from the United States of America. However, there is a paucity of research on these issues in the literature with an Indonesian context.

In relation to Indonesian schools, the theoretical and practical outcomes of this study will contribute to closing important gaps which exist in the literature.

2.1 Analytical Framework

The analytical framework used in this chapter is illustrated in Figure 2.1-1. The relationships between the parent discipline, field of study, immediate disciplines, research foci, research problem, and research questions are shown.

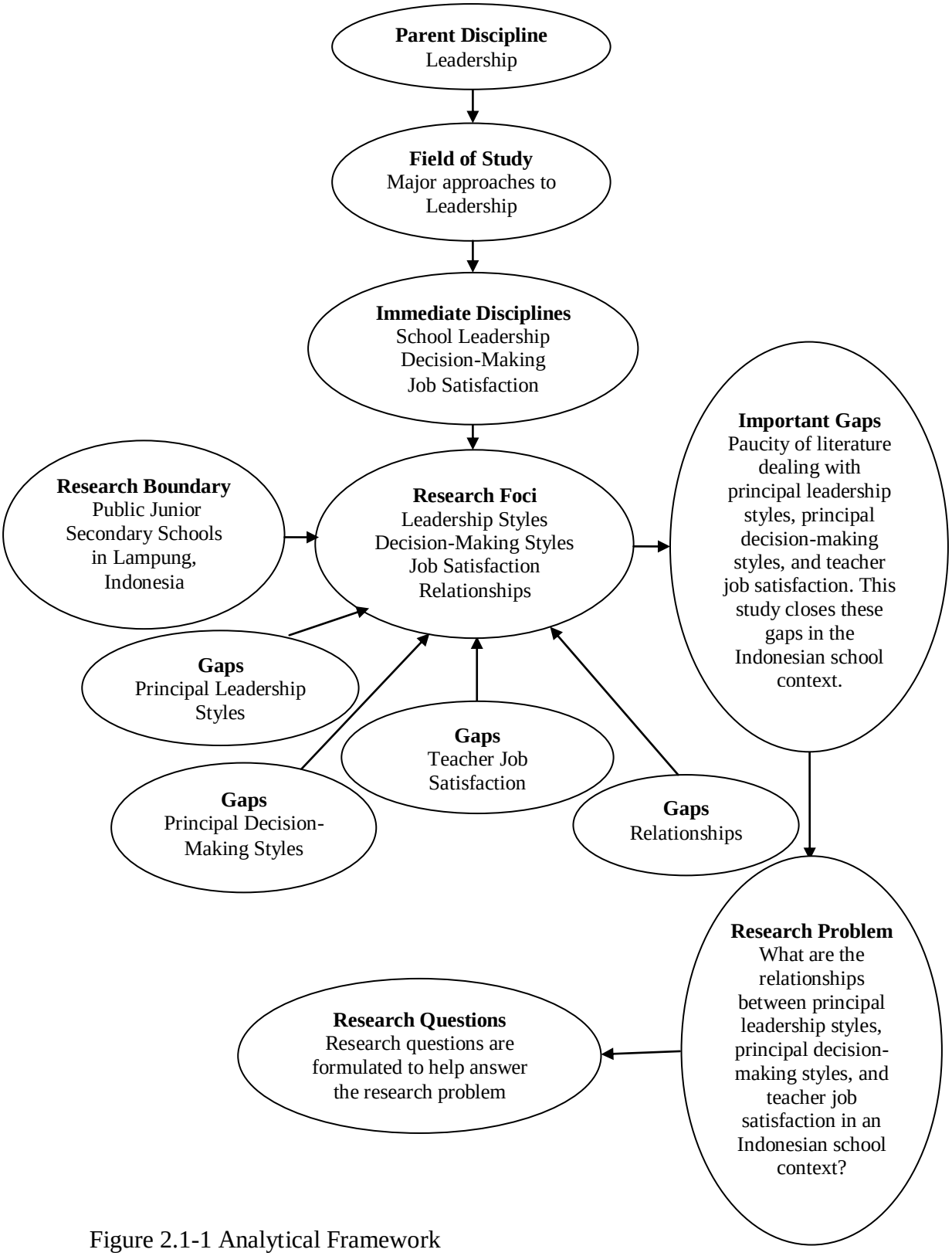

Figure 2.1-1 Analytical Framework
Source: Adapted from Prideaux (2005, p. 29)

This analytical framework shows the logical progression from leadership concept as the parent discipline and major approaches to leadership as the field of study to a discussion of leadership styles, decision-making styles, and job satisfaction, concluding with the important features missing from the literature.

A unique feature of this thesis is that this chapter presents a discussion beginning with leadership concept and the broad field of leadership before progressing to leadership styles, decision-making styles, and job satisfaction, and concludes by addressing the important gaps identified in the literature. Finally, this chapter identifies nine research questions to guide this study.

2.2 Parent Discipline: Leadership

Leadership, particularly school leadership, decision-making, and job satisfaction are the major themes in this literature review. These themes are reviewed in a variety of context, from general to school contexts, and particularly in relation to an Indonesian school context. This section briefly reviews leadership focusing on the importance and concept. Understanding the importance and concept of leadership will contribute to a greater understanding of the importance of the topic of this thesis.

2.2.1 Importance of Leadership

Leadership is important in organisations. Bennis (2007, p. 2) argues that the study of leadership is the most important and urgent subject because "leadership always matters and it has never mattered more than it does now." Further, he asserts that there are four major threats to world stability today: (1) a nuclear or biological catastrophe, whether deliberate or accidental, (2) a world-wide epidemic, (3) tribalism and its cruel offspring and assimilation, and (4) lack of effective leadership. Solving the first three problems will be impossible without exemplary leadership. Exemplary leaders have six competencies: (1) creating a sense of mission, (2) motivating others to join them on that mission, (3) creating an adaptive social architecture for their followers, (4) generating trust and optimism, (5) developing other leaders, and (6) getting results (Bennis, 2007, p. 5).

The importance of leadership is supported by Vugt, Hogan, & Kaiser (2008, p. 182) who affirm that leadership seems not to matter during times of peace and prosperity. However, leadership becomes a matter of life and death when business leaders gamble with people's life savings, when religious leaders create violent sectarian divides, and when politicians start wars.

Thomas & Kearney (2010, p. 8) support that leadership matters at all levels. Price (2006, p. 33) argues that an organisation needs to assess which level needs to develop leaders most: at the frontline manager level, in the senior leadership team, or somewhere in between. Furthermore, Price noted that smart companies get the highest return either by identifying which level of leadership will produce the greatest return or by investing in a systemic approach for developing the entire leadership pipeline.

As leadership is important, identifying and developing effective leadership behaviour continues to be important to organisations (Manning & Robertson, 2011, p. 88). Therefore, although leadership research has been a focus of researchers for more than two decades, it has recently expanded as a field of research and has been recognised by scholars as a topic worth research and recognition (Bodla & Nawaz, 2010, p. 370). This is supported by Daft and Pirola-Merlo (2009, p. 4) who argue that leadership is one of the most observed subjects. In academic journals, in-depth articles typically address one aspect of leadership (Boseman, 2008, p. 36) because leadership is arguably the most important subject in the social sciences and an unavoidable theme in society (Vugt et al., 2008, p. 182) and one of the least understood subjects (Daft & Pirola-Merlo, 2009, p. 4). However, with effective leadership, people will have a better chance. "The noble hope of advancing the empirical and theoretical foundation of leadership—after all, we are all Pelagians at heart—could influence the course of leadership and, eventually, the quality and health of our lives" (Bennis, 2007, p. 5).

Despite the long history of leadership research, Bennis (2007, p. 5) observes that after studying leadership for six decades, he is struck by how small the body of

knowledge is. In particular, the body of knowledge of leadership in the Asian context is extremely little. Studying leadership will expand this knowledge base. This thesis examines leadership styles in association with decision-making styles and teacher job satisfaction in an Indonesian school context.

2.2.2 Leadership Concept

The question of what leadership is has been the focus of research studies for decades (Alimo-Metcalfe & Alban-Metcalfe, 2006, p. 294). However, there is no single definition of leadership that all scholars agree upon (Bennis, 2007, p. 2; Thomas & Thomas, 2011, p. 530), and the meaning of leadership is changing (Price, 2006, p. 33). Scholars are in agreement though that the meaning of leadership is ambiguous (Pfeffer, 1977, in Bass, 1990, p. 11; Janda, 1960, in Yukl, 2002). There are four reasons for this ambiguity. One reason is that the term "leadership" is considered a common word incorporated into the technical vocabulary of a scientific discipline but imprecisely redefined (Janda,1960, in Yukl, 2002). A second reason for this perceived ambiguity is the use of imprecise terms such as authority, power, supervision, administration, management, and control to depict the same phenomena (Yukl, 2002). A third reason is that there are overlapping meanings of leadership. A final reason for ambiguity is that there are as many definitions of leadership as people who comment on the term leadership (Bass, 1990, p. 11). This is supported by Daft and Pirola-Merlo (2009, p. 4) who argue that there have been more than 350 definitions of leadership offered by scholars and writers, and Sims Jr, Faraj, and Yun (2009, p. 150) who observe that although there are hundreds of definitions of leadership, there is no single description that can completely encompass the concept of leadership. Daft (2005) argues that leadership research has evolved over time and will continue to do so, thus expanding the already long list of leadership definitions. Below are some definitions of leadership over time, including the difference between leadership and management.

Bass (1990) defines leadership as: the focus group process, a matter of personality, a matter of inducing compliance, the exercise of influence, particular behaviours, a form of persuasion, a power relation, an instrument to achieve goals, an effect of

interaction, a differential role, initiation of structure, and many combinations of these definitions. While, Yukl (2002, p. 3) cited nine representative definitions of leadership over time to show the development of the concept (see Figure 2.2-1).

1. Leadership is "the behaviour of an individual …directing the activities of a group toward a shared goal" (Hemphill & Coons, 1957, p. 7).
2. Leadership is "the influential increment over and above mechanical compliance with the routine directives of the organization" (D. Katz & Kahn, 1978, p. 528)
3. "Leadership is exercised when persons … mobilize …institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers" (Burns, 1978, p. 18)
4. "Leadership is "the process of influencing the activities of an organized group toward goal achievement" (Rauch & Behling, 1984, p. 46).
5. "Leadership is a process of giving purpose (meaningful direction) to collective effort, and causing willing effort to be expended to achieve purpose" (Jacobs & Jaques, 1990, p. 281).
6. Leadership "is the ability to step outside the culture … to start evolutionary change processes that are more adaptive" (E.H. Schein, 1992, p. 2).
7. "Leadership is the process of making sense of what people are doing together so that people will understand and be committed" (Drath & Palus, 1994, p. 4).
8. "Leadership is about articulating visions, embodying values, and creating the environment within which things can be accomplished" (Richards & Engle, 1986, p. 206).
9. Leadership is "the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization … (House et al., 1999, p. 184).

Figure 2.2-1 Definitions of leadership over the past 50 years
Source: (Yukl, 2002, p. 3)

Figure 2.2-1 shows that there has been no single agreed-upon definition of leadership in over five decades. However, in general, these definitions suggest three important components of leadership: the leader, the followers, and the goal.

More current definitions are provided here from three scholars. According to Robbins (2005) in Bodla & Nawaz (2010, p. 371), leadership is a process of influencing a group towards the achievements of goals and a leader is someone who can influence others and who has managerial authority. Leaders who are considered successful are those who can adjust their behaviours in accordance with the requirements of the organisation or according to the demand of the situation that prevails. This definition emphasises a process of influencing followers by the leaders

to achieve goals. While, according to Boseman (2008, p. 36), leadership is the act of stimulating, engaging, and satisfying the motives of followers that result in the followers taking a course of action toward a mutually shared vision. Vugt et al. (2008, pp. 182-183) define leadership broadly as influencing individuals to contribute to group goals and coordinating the pursuit of those goals. This definition emphasises four important components of leadership: influence, coordination, followers, and group goals. The variety of definitions of leadership above suggests that no agreed-upon definition of leadership has yet been achieved.

In terms of what the "right" definition of leadership is, Bass (1990) argues that "the search for the one and only proper and true definition of leadership seems to be fruitless, since the appropriate choice of definition should depend on the methodological and substantive aspects of leadership in which one is interested," and the definition can be used to suit purposes. This thesis is concerned with leadership behaviour, particularly principal leadership styles; therefore, the definition of leadership by Daft (2005, p. 5) and Daft and Pirola-Merlo (2009, p. 4) has been adopted—"Leadership is an influence relationship among leaders and followers who intend real changes and outcomes that reflect their shared purposes." It is seen that leadership involves leader, influence, change, purpose, intention, personal responsibility and integrity, and followers. The influence happens among people who want significant changes that reflect purposes shared by leaders and followers.

In conclusion, no single definition of leadership is agreed to in the literature. However, leadership is an influence process (Vroom & Jago, 2007; Yukl, 2002), there is no "correct" leadership definition, it is only a matter of how useful it is for increasing our understanding of effective leadership (Yukl, 2002, p. 19), to exercise leadership. A leader has one or more followers—one cannot be leading if no one is following, and there must be a leader, influence, and followers in pursuit of goals (Vroom & Jago, 2007, p. 17; Yammarino & Dansereau, 2008, p. 136). Therefore, an organisation today is well advised to update its definition of leadership to keep pace with the nature of leadership challenges to do the right things (Price, 2006, p. 33).

The importance of leadership, the lack of studies of leadership in the Asian context, and the absence of agreed-upon definition of leadership suggest more studies of leadership in various disciplines and areas should be a focus of researchers. This issue provides additional justification for this study.

Distinct concepts of leadership may result in different approaches. The next section explores major theory approaches to leadership.

2.3 Field of Study: Major Theory Approaches to Leadership

There are different theory approaches to leadership. Fernandez (2005, p. 198) argues that the leadership literature is characterised by several competing clusters of approaches that emphasise different aspects of leadership. Nine leadership theories are introduced in this section to help understand leadership development from traditional (early) leadership to new leadership theory approaches. In particular, four major leadership theories are reviewed: trait theory, behaviour theory, situational/contingency theory, and transformational leadership theory known as full range leadership (FRL) theory. The new leadership theory approach, FRL theory, is considered appropriate to be used in this study.

2.3.1 Introduction to Leadership Theory Approaches

Leadership has a series of perspectives from great man and trait theories to transformational leadership. The traditional (early) theories focus upon the leaders' behaviours and characteristics, while the later theories focus upon the followers' role and the situational demands (Bolden, Gosling, Marturano, & Dennison, 2003). Nine different theory approaches to leadership are introduced.

Brungardt (1996, p. 82) argues that nearly all theories can be classified into five general approaches. These are: (1) trait theory, (2) behaviour theory, (3) situational theory, (4) power-influence theory, and (5) transformational theory.

In contrast to Brungardt (1996), Bolden et al. (2003) classify the leadership into seven approaches. These are: (1) great man theory, (2) trait theory, (3) behaviour theory, (4) situational theory, (5) contingency theory, (6) transactional theory, and (7) transformational theory. However, there are possibly overlaps in the first six approaches.

Yukl (2002, p. 10) classifies leadership into five approaches. These are (1) trait theory, (2) behaviour theory, (3) power-influence theory, (4) situational theory, and (5) integrative theory. Like Bolden et al.'s (2003) leadership theory approaches, there are possibly overlaps in these five approaches.

Daft (2005) classifies leadership into six approaches. These are: (1) great man theory, (2) trait theory, (3) behaviour theory, (4) contingency theory, (5) influence theory, and (6) relational theory. It is difficult to find information on what instrument was used to jointly measure these approaches.

Kao (2005) and Kao & Kao (2007) classify leadership based on four major periods in the study of leadership that reflect the mainstream view of leadership at the time. These are: (1) trait era, (2) behaviour era, (3) contingency era, and (4) new era (transformational theory). The first three theories are classified into traditional (early) theories.

DeChurch, Hiller, Murase, Doty, and Salas (2010) note six categories of leadership which represent different views of leadership. These are: (1) leader traits, (2) leader behaviour and contingency approaches, (3) leader-member exchange (LMX), (4) transformational leadership, (5) strategic leadership, and (6) shared leadership. However, they caution that there are possibly overlaps in these six approaches.

Gardner, Avolio, Luthans, May, and Walumbwa (2005) propose a new model of authentic leader and follower called authentic leadership. This leadership model is intended to address present and future leadership needs. Authentic leadership encompasses relationships with followers and associates. These relationships are characterised by: (1) openness, transparency, and trust, (2) guidance toward worthy

objectives, and (3) an emphasis on follower development. Gardner et al.(2005) emphasise the development processes of leaders and follower self-awareness and self-regulation in the authentic leadership model. The components of self-awareness are values, identity, emotions, and motives/goals. The components of self-regulation are internalised, balanced processing, relational transparency, and authentic behaviour. They view that authentic followership development mirrors the authentic leadership development—"authentic followership development is largely modelled by the authentic leader to produce heightened levels of followers' self-awareness and self-regulation leading to positive follower development and outcomes." These outcomes are trust, engagement, and workplace well-being. These outcomes lead to follower performance which is sustainable and veritable. These developmental processes consider the reciprocal effects with an inclusive, ethical, caring and strength-based organisational climate as well as antecedents of authentic leadership and followership (personal histories and trigger events).

Uhl-Bien, Marion, and McKelvey (2007) propose a new leadership approach called Complexity Leadership Theory (CLT). They argue that CLT is "a new way of perceiving leadership—a theoretical framework for approaching the study of leadership that moves beyond the managerial logics of the Industrial Age to meet the new leadership requirements of the Knowledge Era." They claim that none of the earlier researchers had developed a model addressing the nature of leadership to enable network dynamics—the model whose epistemology is consistent with distributed, connective, contextual, and dynamic views of leadership. CLT envisions three leadership functions. These are (1) administrative leadership, (2) adaptive leadership, and (3) enabling leadership. Administrative leadership refers to a function of CLT based on authority and positions which has the power to make decisions for the organisation. Adaptive leadership refers to a function of CLT to produce outcomes in a social system. Enabling leadership is a function of CLT which has a key role to effectively manage the entanglement between adaptive and administrative structures and behaviours to enhance the overall effectiveness and flexibility of the organisation (Marion & Uhl-Bien, 2007, in Uhl-Bien et al., 2007).

Finally, Bass (1985) extended the work of Burns (1978) and developed the full range leadership (FRL) theory approach which is also known as transformational leadership model (Bass, 1985, 1999). This approach consists of three leadership styles: laissez-faire leadership style, transactional leadership style, and transformational leadership style (as a single continuum). Laissez-faire leadership is non-leadership style. Transactional leadership encompasses fairly traditional managerial styles from early theory approaches to leadership, where managers or leaders gain compliance and performance by either offering rewards or punishing deviations from standards. Transformational leadership provides a compelling and clear vision, mobilises employee commitment through personal identification and involvement, and institutionalising organizational change (Kirkbride, 2006).

The FRL theory approach is considered comprehensive (Trottier, Wart, & Wang, 2008, p. 319), "represents the most popular current view of leadership" (Sims Jr et al., 2009, p. 151), has received more empirical studies than other theories for the past two decades (Walumbwa et al., 2005), and is universally applicable (Bass, 1997). In particular, findings suggest strong and consistent evidence that the nine-factor model best represents the factor structure underlying the MLQ Form 5X-Short instrument (Antonakis et al., 2003, p. 283).

Nine leadership theory approaches have been introduced. These nine approaches suggest that there is a lack of an agreed-upon leadership theory approach. The approaches also suggest that there are two eras of leadership theories: traditional (early) leadership theories and new leadership theories. The first group includes the trait theory, behaviour theory, and situational/contingency theory. The latter includes the CLT, authentic leadership theory, and transformational leadership theory. In particular, Bass' (1985, 1999) full range leadership (FRL) theory suggests representation of the development of leadership styles. His theory approach depicts the whole range of leadership styles, from non-leadership style and early leadership style to transformational leadership style.

2.3.2 Early Leadership Theory Approach

Three major theories of early leadership theory approach are reviewed here. They are: (1) trait theory, (2) behaviour theory, and (3) situational/contingency theory. These theories have emerged over time in pursuit of definitive models of effective leadership.

2.3.2.1 Trait Theory

Trait theory is the earliest approach to leadership theory. This approach focuses on personality characteristics which provide strengths and weaknesses for effective leadership.

The trait theory developed between the late 1880s and the mid-1940s (Kao & Kao, 2007, p. 72). It arose from the great man theory and dominated the study of leadership until the 1950s. It is one of the most prominent theories of the past, and possibly the oldest and most contested feature of leadership research (Stepanov, Yeoh, & Hart, 2007) and has received attention throughout the centuries because the historic/archetypal theory approach to leadership is frequently referred to as the great man theory (Borgatta, Bales, & Couch, 1954). Daft (2005) defined great man approach as "a leadership perspective that sought to identify the inherited traits leaders possessed that distinguished them from people who were not leaders." Studies of great man leadership adopted the belief that leaders (who were always thought of as male) are exceptional people, born with innate and heroic qualities of power and influence, destined to lead (Bolden et al., 2003; Daft, 2005). The trait theory of leadership emerged from the belief that traits such as intelligence are inherited and leadership cannot be learned.

Traits can be isolated and a person who possesses the traits can be recruited to be a leader (Bolden et al., 2003). However, "traits are not to be considered in isolation but rather as integrated constellations of attributes that influence leadership performance" (Zaccaro, 2007, p. 8), and someone cannot become a leader due to

some combinations of the traits solely but the pattern of his/her characteristics has to fit situations, subordinate characteristics, activities, and goals (Bass, 1990, p. 76).

The trait theory approach has four major strengths:

- The trait approach is appealing—it is consistent with the premise that a leader is a great person who has outstanding attributes such as higher intelligence, self-confidence, determination, integrity, and sociability, which are not possessed by a non-leader.
- Second, the trait approach has a great deal of research that validates this theory.
- The trait approach is able to provide a deeper understanding of how a leaders and his/her personality are associated with the leadership process.
- The trait approach gives benchmarks in regard to what attributes a person needs to cultivate if he/she wants to be a leader; the research has found the traits that a person might need to possess if they want to be perceived as a leader (Northouse, 2007, pp. 24-25).

However, the trait approach has five major weaknesses:

- There is no clarity on which traits are important and which ones are not. In other words, the trait approach fails to delimit leadership traits.
- There is an absence of situation as a variable in the approach despite the fact that a person who possesses certain traits can become a leader in one situation but cannot be a leader in another situation (Horner, 1997; Northouse, 2007).
- There is no distinction between traits which help a person to become a leader and those which do not. Researchers sought to identify the personal traits which differentiated leaders from non-leaders. However, only a weak relationship was found between personal traits and leader success or great leadership (Horner, 1997).
- Findings from many studies are inconclusive—"Some leaders might have possessed certain traits but the absence of them did not necessarily mean that the person was not a leader" (Bolden et al., 2003).
- The trait approach is only focused on leaders and their attributes which cannot be learned, and the traits such as loyalty, integrity, intelligence, and honesty are difficult to measure (Bolden et al., 2003).

In conclusion, trait theory approach has contributed to revealing characteristics such as intelligence, self-confidence, determination, integrity, and sociability which can make a person a leader. However, these characteristics are difficult to learn. Judge, Piccolo, and Kosalka (2009, p. 871) argue that the trait approach has enjoyed decades of great prominence in the literature followed by years of scepticism and disinterest, and is criticised for three reasons. These are: (1) its simplicity and futility, (2) its failure to explain the sources of trait development, and (3) its inability to adequately integrate context into the perspective's utility. These and other weaknesses have led to a notion that there should be behaviours that can be learned to make someone become a leader (Bolden et al., 2003; Daft, 2005). The next approach to be reviewed is behaviour theory.

2.3.2.2 Behaviour Theory

Behaviour theory was the second theory approach to leadership. This theory tried to address the weaknesses of trait theory. It provides strengths which are not possessed by trait theory. However, it has several drawbacks.

The researchers sought to reveal what behaviours can be learned to help create a leader. The era when behavioural theory was popular was from the mid-1940s to the mid-1970s (Kao & Kao, 2007, p. 72).

Unlike the trait approach which focused on the personality characteristics of the leaders, the behaviour approach emphasises what the leaders do. In the behaviour approach model, the leaders exhibit two behaviours: relationship behaviours and task behaviours. The two behaviours focus on building harmonious relationships among the leaders and their subordinates to influence the subordinates to achieve goals (Horner, 1997; Northouse, 2007).

Many studies have been carried out to investigate the behaviour approach. These include the Ohio State studies, the Michigan studies, and the studies by Blake and Mouton. The Ohio State leadership studies in the 1940s identified two key and

independent dimensions: consideration and initiation of structure (Horner, 1997). Consideration refers to people-oriented activities or concern for people, while initiation of structure refers to task-oriented activities or getting the job done. Concurrently, the Michigan leadership studies identified two dimensions: production-oriented and employee-oriented, basically similar to those of the Ohio State studies (Bare-Oldham, 1999).

Based on the work of the Ohio State and Michigan leadership studies, Blake and Mouton (1978) in Bare-Oldham (1999) used two factors of behaviours in their Managerial Grid: concern for people and concern for production. The two factors, people and task, are behaviours into which a leader falls when he/she leads followers. Concern for people refers to how leaders behave to help followers get the job done, promote friendship, and pay attention to followers' concerns such as working condition and pay. Concern for production refers to a desire to achieve greater output. The Managerial Grid yielded five leadership styles: (1) task style 9,1 (maximum concern for production combined with minimum concern for people); (2) country club style 1,9 (minimum concern for production coupled with a maximum concern for people); (3) impoverished style 1,1 (minimum concern for both production and people); (4) middle road style 5,5 (moderate concern for both production and people to maintain the status quo); and (5) team style 9,9 (high concern for both production and people). The last style is a team approach. The progress towards identifying the behaviours a leader possesses means that effective leadership can be learned. The work resulted in the thought idea that effective leadership could be taught, and was not necessarily an inborn trait.

One widely used instrument to measure leader's behaviours is the Leadership Behaviour Description Questionnaire (LBDQ). LBDQ was developed by the staff of the Personnel Research Board, at Ohio State University, as one project of the Ohio State Leadership Studies to measure two leadership dimensions or styles: consideration and initiating structure. The questionnaire consists of 40 items, only 30 of which are scored—15 for each dimension. Its statements describe how a leader may behave. Participants indicate how often their leader engages in the described

behaviour by circling one of the five frequencies: A = always, B = often, C = occasionally, D = seldom, and E = never (Halpin, 1957).

The LBDQ was revised to provide sufficient assessment for observable variance in leader behaviour. The new version is called the Leader Behaviour Description Questionnaire–Form XII (LBDQ–XII). The LBDQ–XII comprises 100 items to measure 12 subscales; each subscale is composed of either 5 or 10 items. The 12 subscales are: (1) representation–speaks and acts as the representative of the group, 5 items; (2) demand reconciliation–reconciles conflicting demands and reduces disorder to system, 5 items; (3) tolerance of uncertainty–is able to tolerate uncertainty and postponement without anxiety or upset, 10 items; (4) persuasiveness–uses persuasion and argument effectively; exhibits strong convictions, 10 items; (5) initiation of structure–clearly defines own role, and lets followers know what is expected, 10 items; (6) tolerance and freedom - allows followers scope for initiative, decision and action, 10 items; (7) role assumption–actively exercises the leadership role rather than surrendering leadership to others, 10 items; (8) consideration–regards the comfort, wellbeing, status, and contributions of followers, 10 items; (9) production emphasis–applies pressure for productive output, 10 items; (10) predictive accuracy–exhibits foresight and ability to predict outcome accurately, 5 items; (11) integration–maintains a close-knit organisation; resolves inter-member conflicts, 5 items; and (12) superior orientation–maintains cordial relations with superiors, has influence with them, is striving for higher status, 10 items (Stogdill, 1963).

The behaviour theory approach has four major strengths:

- This approach broadened the scope of leadership research to include leaders' behaviours.
- A wide range of studies on leadership style validates and gives credibility to the basic tenets of the approach.
- Researchers have ascertained that there are two behaviours of a leader: task and relationship.

- The behaviour theory approach is heuristic, giving a conceptual map that is worthwhile to use in our attempts to understand the complexities of leadership (Northouse, 2007, pp. 78-79).

However, the behaviour theory approach has three major weaknesses:

- The research on this approach has not sufficiently shown how leaders' styles are associated with performance outcomes (Bryman, 1992; Yukl, 1994).
- This approach has failed to find a universal style of leadership that could be effective in almost all situations. Neither behaviour theory approach nor trait theory approach is relevant in all situations even though some behaviours and traits increase the likelihood of leaders being effective (Yukl, 2002, in Gordon & Yukl, 2004, p. 362).
- This approach implies that the most effective leadership style is the high task and high relationship leadership style, but this may not be the case in all situations (Northouse, 2007, p. 79).

In conclusion, the strengths of the behaviour theory approach have contributed to helping leaders develop particular leadership behaviours. In particular, this approach has broadened the scope of leadership to include behaviours (task and relationship) with a wide range of studies having contributed to the credibility of this approach. However, the behaviour theory approach has weaknesses. In particular, this approach lacks direction on what behaviours contribute to effective leadership in various situations. This leads to the next approach, that is, situational/contingency approach.

2.3.2.3 Situational/Contingency Theory

Situational/contingency theory emerged to overcome the shortcomings or weaknesses of the behaviour theory approach. Situational and contingency theory is mentioned together due to their closely related philosophy that, in particular, effective leadership depends on situations. This is supported by Sims Jr et al. (2009, p. 150) who contend that a particular leadership style might be best for a particular situation. According to this theory, a leader exists in the interaction not only with traits and behaviours but also with situations (Saal & Knight, 1988, in Horner, 1997).

Four theories representative of the situational/contingency approach are briefly introduced here. They are: Harsey, Blanchard, and Johnson's (1996) situational theory, Fiedler's (1967) contingency theory, House and Mitchell's (1974) path-goal theory, and Graen's (1976) leader-member exchange (LMX) theory.

1) Situational Leadership Theory Approach

The situational leadership theory (SLT) approach which is widely recognised was developed by Harsey and Blanchard (1969) cited in Thompson and Vecchio (2009, p. 837). It has been extensively used in leadership training and development (Northouse, 2007, p. 91) and in the business environment (McLaurin, 2006, p. 101).

SLT uses concepts similar to those of the Ohio State studies: initiating structure (task behaviour) and consideration (relationship behaviour) (McLaurin, 2006, p. 101) plus situations. As the name of the approach implies, leadership styles need to match followers' needs in a certain situation (Kao & Kao, 2007). More precisely, this approach attempts to match a particular leadership style to specific external circumstances, where one leadership style will be effective in one situation, but a different leadership style will be effective in another situation (Sims Jr et al., 2009, p. 149). This is supported by Northouse (2007) who argues that different situations demand different leadership styles, and effective leaders can recognise followers' needs and the leaders adapt their own style to meet the followers' needs.

Thompson and Vecchio (2009) note that since its inception, the situational leadership theory approach has been revised several times (e.g. Blanchard, 1988; Blanchard, Zigarmi, & Zigarmi, 1985; Blanchard, Zigarmi, & Nelson, 1993), and has been revised by Blanchard (2007). The newer version is labelled SLT-II (Thompson & Vecchio, 2009, p. 838), and the earlier version labelled SLT-I.

In SLT-I, Harsey and Blanchard (1996) as cited in McLaurin (2006, p. 102) argue that the two behaviours (task and relationship) underpin four degrees of situational leadership styles:

- telling style (S1), high task-low relationship behaviour;

- selling style (S2), high task-high relationship behaviour;
- participating style (S3), low task-high relationship behaviour; and
- delegating style (S4), low task-low relationship behaviour.

In this earlier version (SLT-I), Harsey and Blanchard (1996) as cited in Northouse (2007, p. 98) defined the four follower developmental levels as the following:

- Level 1 (unwilling and unable),
- Level 2 (willing and unable,
- Level 3 (unwilling and able), and
- Level 4 (willing and able).

The four situational leadership styles depend on the follower developmental levels, combined with their ability and willingness. Telling style refers to a style a leader exhibits by giving certain guidance when followers have low ability and low willingness. Selling style refers to a style a leader exhibits when followers need direct guidance and have low ability and high willingness. Participating style refers to a style a leader exhibits when followers need to be more participative and have high ability and low willingness. Finally, delegating style refers to a style a leader exhibits when followers have high ability and high willingness to accept responsibility (Kao & Kao, 2007, p. 73). Proctor (2004, p. 54) supports the notion that the effectiveness of these leadership styles depends on two primary things: the task and the follower readiness.

In the newer version (SLT-II), the two behaviours, that is, task (directive) and relationship (supportive) underpin four degrees of situational leadership styles:

- directing style (S1), high directive-low supportive behaviour;
- coaching style (S2), high directive-high supportive behaviour;
- supporting style (S3), low directive-high supportive behaviour; and
- delegating style (S4), low directive-low supportive behaviour (Northouse, 2007, p. 93).

Directing style is a style a leader exhibits by giving instructions about what and how goals are to be achieved by the followers and supervising the followers. The leader

primarily communicates the goal achievement and spends less time exhibiting supportive behaviour. Coaching style, an extension of directing style, is a style a leader exhibits by making the final decision on what and how goals are to be achieved. The leader primarily communicates the goal achievement and meets the followers' socio-emotional needs by encouraging and soliciting the followers' input. Supporting style is a style a leader exhibits by listening, praising, asking for input, and giving feedback to provide the followers with control over daily decisions and to facilitate problem solving. The leader does not communicate the goal achievement but primarily uses supportive behaviours that bring out the followers' skills relevant to the task to be accomplished. Finally, delegating style is a style a leader exhibits by minimising his/her involvement in planning, control of details, and goal clarification, and letting followers take responsibility for the goal achievement. The leader facilitates the followers' confidence and motivation in reference to the task by offering less task input and less social support (Northouse, 2007, pp. 93-94).

In the newer version of Situational Leadership Theory (SLT-II), the interaction between leader behaviour and follower developmental level has been modified (Thompson & Vecchio, 2009, p. 838). The follower development level is defined as the following:

- D1 (high commitment and low competence),
- D2 (low commitment and some competence),
- D3 (variable commitment and high competence), and
- D4 (high commitment and high competence) (Northouse, 2007, p. 98).

SLT-II recommends that leadership styles should change with corresponding changes in the commitment and competence of the followers (Avery & Ryan, 2002, p. 243). The four follower developmental levels range from 'developing' to 'developed' levels. The enthusiastic beginner (D1) benefits from directing style. The disillusioned learner (D2) benefits from coaching style. The capable but cautious performer (D3) benefits from supporting style. Finally, the self-reliant achiever benefits from delegating style (Thompson & Vecchio, 2009, p. 839).

The SLT approach (SLT-I/SLT-II) offers four major strengths:

- The approach is recognised as a standard for training leaders.
- It is practical and therefore easy to understand and apply.
- It is prescriptive, suggesting what a leader should and should not do in various contexts to enhance effective leadership.
- The approach is flexible, allowing a leader to find out the followers' needs and adjust their style accordingly (Northouse, 2007, pp. 96-97; Thompson & Vecchio, 2009, p. 838).

In contrast, this approach suggests the following major weaknesses:

- This approach has few studies to support its theoretical underpinnings (Sims Jr et al., 2009, p. 157) or less well-substantiated approach (Thompson & Vecchio, 2009, p. 837).
- Ambiguity surrounds the conceptual definition of follower development level. In one earlier version, Harsey and Blanchard (1996) as cited in Northouse (2007, p. 96) defined the four levels of commitment (maturity) as Level 1 (unwilling and unable), Level 2 (willing and unable), Level 3 (unwilling and able), and Level 4 (willing and able). However, in a recent version (SLT-II), the follower development level is defined as D1 (high commitment and low competence), D2 (low commitment and some competence), D3 (variable commitment and high competence), and D4 (high commitment and high competence).
- The approach is not clear in explaining how commitment changes over time for followers, nor is it clear on how followers move from low development level to high development level.
- The validity of this approach is questionable given the lack of basic research findings supporting use of basic prescriptions for matching leadership styles to followers' developmental levels.
- This approach does not provide guidelines for how the approach can be used by leaders in group settings (Northouse, 2007, pp. 97-100; Thompson & Vecchio, 2009, p. 838).

Thompson and Vecchio (2009) note four prior studies on SLT (Vecchio, 1987; Norris & Vecchio, 1992; Fernandez & Vecchio, 1997; and Vecchio, Bullis, & Brazil,

2006) to test the theory's predicted three-way interaction among leader supportiveness, leader directiveness, and follower readiness/maturity in determining (a) follower performance and (b) follower attitudes toward the leader, e.g. satisfaction with the leader and the quality of leader–member relations in terms of LMX. However, taken together, these studies indicate that the theory has minimal (often only directional) support in the low maturity level condition. Therefore, one cannot fully endorse the theory as originally stated (Thompson & Vecchio, 2009, p. 838).

In their study, Thompson and Vecchio (2009) attempted to test the validity of the Blanchard's SLT approach by contrasting the predictive utility of the three different versions of the theory they identified:

- the original (1972) statement of the theory to replicate the earlier findings of the SLT-I,
- the revised (2007) theory, to provide the first empirical test of its validity and
- the third, alternative, version statement of the SLT's essential prediction that leader autonomy and follower experience interact as indicators to predict follower performance and attitudinal responses.

The survey data were collected from 357 banking employees and 80 supervisors, sampled from 10 Norwegian financial institutions. The data were analysed for predicted interactions. The key findings indicated that the 2007 revised SLT-II was a poorer predictor of follower performance and attitudes than the original SLT-I. The third, alternative, version which predicted an autonomy and job experience interaction offered promise for further research of the SLT's essential principle that follower outcomes are associated with prescribed leader behaviours in combination with follower developmental levels (Thompson & Vecchio, 2009, p. 837).

2) Contingency Leadership Theory Approach

Contingency leadership theories include Fiedler's Contingency Theory, House's Path-Goal Theory, and Graen's LMX theory. The assumption of contingency theory is that a particular leadership style is likely to be more effective in a particular kind

of situation. Leadership should be contingent on the factors within the particular situation (Sims Jr et al., 2009, p. 150).

Fiedler's Contingency Theory

Fiedler's (1964, 1967; Fiedler & Garcia, 1987) contingency theory is the most widely used among the contingency theories. As the name of the approach implies, contingency theory suggests that effective leadership relies on how well leadership styles fit the context. Understanding the situations is essential for leaders to understand their performance. Effective leadership is contingent on matching a leadership style to the right setting (Northouse, 2007, p. 113). Contingency theory supports the notion that a leadership style that is effective in one situation may not be effective in another situation (McLaurin, 2006, p. 103).

Contingency theory is concerned with leadership styles and situations. Leadership styles are relationship-motivated and task-motivated. Relationship-motivated leaders focus on developing close interpersonal relationships, while task-motivated leaders primarily focus on reaching a goal. The Least Preferred Co-worker (LPC) scale developed by Fiedler is used to measure leadership styles. Relationship-motivated leaders have high score on this scale, but task-motivated leaders have low score on this scale. There are three situational variables: leaders-member relations, task structure, and position power (Northouse, 2007, p. 114).

Fiedler's contingency theory offers five major strengths:

- This approach is backed up by numerous studies.
- It has broadened the understanding that situations have an impact on leaders.
- It is predictive of effective leadership.
- The theory does not require that leaders be effective in all situations.
- It can be used by organisations to provide leadership profile data.

However, this approach has three major weaknesses:

- It fails to explain adequately why a leadership style is more effective in one situation than in another situation.
- The theory depends heavily on the LPC scale whose validity has been questioned.

- It fails to explain adequately how the results of this theory can be used in situational engineering (Northouse, 2007, pp. 117-120).

House's Path-Goal Theory

Path-goal theory (Evans, 1970; House 1971) was first proposed in the 1970s and still remains one of the major leadership approaches. This theory is covered by basic text books on organisational management and management, and over 120 academic articles and several in-depth reviews which have written exploring this theory's scientific merits. However, despite its prominence, a number of authors have asserted that the theory has not been adequately tested (Schriesheim, Castro, Zhou, & DeChurch, 2006, p. 21), the boundary conditions of the theory are not adequately specified (McLaurin, 2006, p. 101) and it generally has less attention in the literature (Vecchio, Justin, & Pearce, 2008, p. 71).

Elkins and Keller (2003, p. 598) argue that, according to path-goal theory, an effective leader engages in behaviours that facilitate goal attainment and maximise the achievement value, thereby affecting followers' expectancies, performance, valence, and satisfaction. Also, the relationship between leadership behaviours and outcomes are moderated by situational variables (e.g. characteristics of the followers, task, and environment). This is supported by Northouse (2007, p. 127) who emphasises that path-goal leadership theory is about how leaders motivate followers to accomplish goals. This approach aims to enhance follower performance and follower satisfaction.

Northouse (2007) compares path-goal theory approach with situational theory approach and contingency theory approach. Situational theory approach suggests that a leader must adapt to the follower developmental level. Contingency theory approach emphasises the match between leadership style and specific situational variables. In contrast to these two approaches, path-goal theory approach emphasises the relationship between the leadership style and the characteristics of the followers and the work setting. Expectancy theory, from which the underlying assumption of the path-goal theory is derived, suggests that followers will be motivated under the following conditions:

- if the followers think they are able to perform their work,
- if the followers believe their efforts will result in a certain outcome, and
- if the followers believe that the pay-offs for doing their work are worthwhile (Northouse, 2007, p. 127).

Therefore, it is necessary for a leader to use a leadership style that best meets the followers' motivational needs. This is done by selecting leadership behaviours that complement what is missing in the work setting (Northouse, 2007, p. 127) to enhance the followers' motivation, satisfaction, and performance. What is missing depends on the environment, the competence, the task, and the motivation of the followers (House & Mitchell, 1974, in Awan, Zaidi, Naz, & Noureen, 2011, p. 134).

This theory approach is complex, comprising different components. These are: leadership behaviours, follower characteristics, task characteristics, and motivation. Leadership behaviours include directive leadership style, supportive leadership style, participative leadership style, and achievement leadership style. Follower characteristics include the followers' needs for affiliation, preferences for structure, desires for control, and self-perceived level of task ability. Task characteristics include follower task, formal authority task system of the organisation, and the primary work group of followers (Northouse, 2007, pp. 131-132).

In essence, path-goal theory is a contingency leadership approach designed to explain how leaders can help followers along a path to the goals by selecting specific leadership behaviours that are most appropriate to the followers' needs and to the situation in which the followers are working. By selecting the appropriate leadership style, leaders enhance the followers' expectations for satisfaction and success (Northouse, 2007, p. 128).

In particular, directive leadership style, which conceptually resembles the initiating structure described in the Ohio State Studies and resembles the telling style described in situational leadership, is appropriate for situations when followers are dogmatic and authoritarian, tasks are ambiguous and complex, and organisational procedures and rules are unclear. Supportive leadership style which conceptually resembles the

consideration behaviour described in the Ohio State Studies is appropriate for situations when followers have strong needs for affiliation, are unsatisfied, need human touch, and tasks are structured or repetitive, unchallenging, mundane and mechanical. Participative leadership style is appropriate for situations when followers are autonomous and have a strong need for control and clarity, and tasks are ambiguous, unclear, and unstructured. Finally, achievement-oriented leadership style is appropriate for situations when followers have high expectations and a strong need to excel, and tasks are ambiguous, challenging, and complex (Northouse, 2007, pp. 129-134).

Path-goal theory approach offers three major strengths:

- It provides a practical model that emphasises the important ways where leaders help followers to achieve goals by defining and clarifying the paths to the goals, removing obstacles, and providing support.
- It provides a useful theoretical framework for understanding how leadership styles affect follower satisfaction and performance.
- The approach integrates the motivation principles of expectancy theory into a leadership theory (Northouse, 2007, p. 135).

However, Northouse, (2007, pp. 136-137) notes that path-goal theory approach has four major weaknesses:

- The approach is complex and encompasses many different aspects of leadership so that it can be confusing to interpret this theory.
- There is a lack of research findings to establish its validity (Schriesheim et al., 2006, p. 21).
- It fails to explain adequately how leadership behaviours affect follower motivation levels.
- The approach is so leader-oriented that it does not promote follower involvement in the leadership process.

Graen's LMX theory

Leader-member exchange (LMX) theory was developed in the 1970s as an extension of the vertical dyad linkage (VDL) model. LMX theory is based on the differential

types of relationships that form between leaders and group members (Liden, Erdogan, Wayne, & Sparrowe, 2006, p. 723). According to Elkins and Keller (2003, p. 599), this theory approach was originally proposed by Graen and his colleagues (Dansereau, Cashman, & Graen, 1973; Dansereau, Graen, & Haga, 1975; Graen, 1976; Graen & Cashman, 1975). However, LMX theory is different from the early VDL theory (Graen & Uhl-Bien, 1995, p. 219). According to LMX theory, leadership is a process that is centred on the interaction between leaders and followers (Northouse, 2007, p. 171), and LMX is defined as the quality of exchange between leaders and followers (Graen & Scandura, 1987, in Walumbwa et al., 2011, p. 204).

Graen and Uhl-Bien (1995, p. 226) suggest that LMX theory model has developed through four stages since its inception three decades ago,. These stages were:

- Stage 1 VDL: validation of differentiation within the work unit,
- Stage 2 LMX: validation of differentiated relationships for organisation outcomes,
- Stage 3 Leadership-making: theory and exploration of dyadic relationship development, and
- Stage 4 Team-making competence network: investigation of assembling dyads into larger collectivities.

However, Northouse (2007, p. 171) argues that leadership-making has been mostly emphasised recently in LMX research. Therefore, this thesis literature review focuses on leadership-making.

Leadership-making is a prescriptive leadership approach that emphasises that leaders should develop high-quality exchanges with all of their followers rather than just a few followers (Northouse, 2007, p. 155). This is done by identifying the importance of generating more high-quality relationships within organisations and by describing a process for how these relationships may be realized in practice (Graen & Uhl-Bien, 1995, p. 230).

Graen and Uhl-Bien (1991, pp. 32-34, 1995, pp. 230-231) suggest that leadership-making develops as a life cycle in which the relationship-building process between

leaders and followers occurs over three stages. These relationship development stages are: the stranger stage, the acquaintance stage, and the mature partnership stage.

In stage 1 (the stranger stage), leaders and followers come together as strangers who occupy interdependent organisational roles. Exchanges between the leaders and followers occur on a more formal basis—leaders and followers engage in an immediate and a "cash and carry" exchange. In this stage of the relationship, exchanges are purely contractual—leaders provide followers only with what they need to perform, and followers behave only as required and do only their prescribed job. These exchanges are low-quality LMX dyads. The relationship can develop to the second stage, the acquaintance stage (Graen & Uhl-Bien, 1991, p. 33, 1995, p. 230).

In stage 2 (the acquaintance stage), leaders and followers have developed from strangers into acquaintances. Frequency of exchanges between leaders and followers increases and not all exchanges are contractual. Leaders and followers engage in sharing more information and resources, on both a personal and work level. However, these exchanges are still limited, and are part of a testing stage. These exchanges are intermediate-quality LMX dyads. The relationship can develop to the final stage, the mature partnership stage (Graen & Uhl-Bien, 1991, p. 33, 1995, p. 230).

In the final stage (the mature partnership stage), leaders and followers have developed from acquaintances to partners. The exchanges between the leaders and followers are highly developed, that is, they are exchanges "in kind" and may have a long time span of reciprocation. The leaders and followers can depend on each other for loyalty and support. The exchanges are not only behavioural but also emotional; mutual respect, trust, and obligations grow throughout the process. These exchanges are extremely high-quality LMX dyads (Graen & Uhl-Bien, 1991, p. 33, 1995, p. 230). Effective leadership-making produces mature leadership relationships and thus results in more effective leadership outcomes (Graen & Uhl-Bien, 1995, p. 233).

Northouse (2007, pp. 158-159) argues that LMX theory approach offers five major strengths:

- This approach has a strong descriptive approach that explains how leaders use some followers (in-group members) more than others (out-group members) to achieve goals effectively.
- It is unique because it is the only leadership approach that makes the leader-member relationship central point of the leadership process.
- It emphasises the importance of communication in leader-member relationships.
- It provides an important reminder for leaders to be fair and equal in how the leaders approach their followers.
- This approach is supported by a large body of research that links high-quality leader-member exchanges to positive outcomes.

However, Northouse (2007, pp. 160-161) notes that LMX theory approach has three major weaknesses:

- This approach runs counter to the basic human value of fairness and justice. It pays special attention to one group but it does not do so to the other group.
- This approach fails to explain how high-quality leader-member exchanges are created even though it emphasises the importance of leader-member exchanges.
- It fails to explain adequately whether the LMX measurement procedures capture the complexities of the leader-member exchange process (Elkins & Keller, 2003, p. 599).

According to situational/contingency theory approach, different circumstances call for different leadership styles (Sims Jr et al., 2009, p. 157). A leader exists in the interaction not only with traits and behaviours but also with situations (Saal & Knight, 1988, in Horner, 1997). No single leadership style is right for every leader under all situations (Bolden et al., 2003). Therefore, a leader is required to exhibit different leadership styles in different situations. It is important for the leader to know how competent their followers are and what they need. Knowing the followers' competence in doing tasks and their needs, the leader synchronises these factors to his/her leadership style. However, this theory has not adequately explained the relationship between leadership styles and situations (Northouse, 2007, p. 125), and

situations in organisations are now changing rapidly. This theory may not work effectively in unstable situations.

Three major theories of the early (traditional) leadership theory approach (trait, behaviour, and situational/contingency) have been reviewed. These theories are included in transactional leadership (Kirkbride, 2006). Although each theory contributes to a comprehensive understanding of leadership (Daft & Pirola-Merlo, 2009, p. 37), traditional leadership approaches are no longer appropriate as today's organisations are characterised by changing, dynamic environments (Salas, Rosen, & DiazGranados, 2010, p. 962). Organisations now face situations ranging from stability to turbulence or rapid change. Therefore, leadership approaches that can work effectively in turbulent situations have become of great interest; effective leadership is very important for an organisation to achieve its organisational goals and gives positive feedback to its stakeholders. Effective leadership can help establish successful teams to enhance customer service, employee morale, innovation, productivity, quality, efficiency, timeliness, and communication (Loveren, 2007). In brief, today's organisations call for effective leadership, a factor that has become more critical and challenging in today's turbulent situations for the organisations' future success. The next section outlines a new leadership theory approach, the FRL theory.

2.3.3 New Leadership Theory Approach: Full Range Leadership Theory

Bass (1985) developed the full range leadership (FRL) theory approach which is also known as the transformational leadership model (Bass, 1985, 1999). This subsection reviews this theory approach focused on the concept, views, elements (laissez-faire, transactional, and transformational leadership), and the MLQ instrument.

2.3.3.1 FRL Concept

The FRL theory approach (transformational leadership model) is one of the new leadership theory approaches (Boal & Hooijberg, 2000, p. 525; Bromley & Kirschner-Bromley, 2007, p. 54; Northouse, 2007). This theory is enjoying

importance and a period of continuous research and development, and is also known as the cutting-edge leadership theory (Bodla & Nawaz, 2010, p. 372), and the final theory of leadership (Bromley & Kirschner-Bromley, 2007, p. 54). Brazier (2005, p. 134) calls this model transformational versus transactional approach. This model is popularly known as full range leadership (FRL) approach (Bass, 1985) because it is a new comprehensive leadership model and has been the focus of more empirical studies than other theories for the past two decades (Walumbwa et al., 2005), currently dominates the leadership literature (Sims Jr et al., 2009, p. 150), and is universally applicable (Bass, 1997). However, the literature on the transformational leadership model is extremely little in an Indonesian school context, particularly, in the specific context of Lampung Province schools.

2.3.3.2 FRL View

Burns (1978) views transactional and transformational leadership model as the opposite ends of a continuum (Tejeda, Scandura, & Pillai, 2001, p. 33; Vera & Crossan, 2004, p. 224). In contrast, Bass (1985) views transactional and transformational leadership as a single continuum (see Figure 2.3-1).

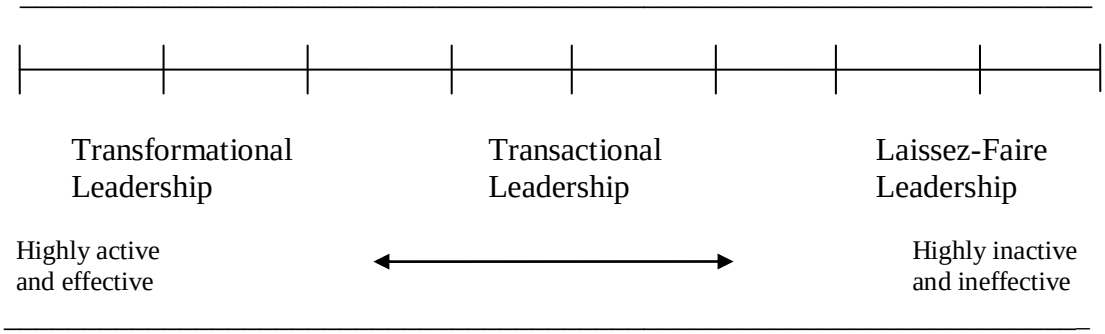

Figure 2.3-1 Leadership continuum
Source: Northouse (2007, p. 180).

Figure 2.3-1 shows that leadership ranges along a continuum, on one end is laissez-faire leadership, transactional leadership lies in the middle of the continuum, and on the other end is transformational leadership. Transformational leadership builds on transactional leadership, including laissez-faire leadership (non-transactional leadership).

The leadership continuum is within the framework of a full range model of leadership that covers the highly inactive and ineffective laissez-faire leadership to the highly active and effective inspirational and, ideally, influential leadership. Effective leaders exhibit both with more emphasis on transformational and less on transactional leadership. While transactional leadership concentrates on the exchange that happens among leaders, followers and colleagues, based on contractual requirements with rewards in return for the requirement fulfilment; transformational leaders do more with colleagues and subordinates than set up simple agreements, they proactively attempt to help subordinates achieve extraordinary results (Antonakis et al., 2003; Bass & Avolio, 1994).

Bass (1985, 1999) described transformational leadership as a paradigm shift from the existing theories of leadership focused primarily on the ways leaders sanctioned and rewarded followers to leadership focused on how leaders affect followers to transcend self-interest for the good of organisations and groups to attain high performance. To remain effective, leaders need to become less transactional and more transformational to a certain extent; as Bass (1999, p. 21) asserts in his augmentation effect theory—"Transformational leadership adds to the effectiveness of transactional leadership; transformational leadership does not substitute for transactional leadership." Therefore, the new theory of leadership developed by Bass (1988) is known as full range leadership (FRL) and consists of three leadership styles. These are: transformational, transactional, and laissez-faire.

Judge and Piccolo (2004) conducted a meta-analytic test of relative validity of the FRL. Their findings (2004, p. 755) support Bass' augmentation effect theory that transformational leadership did add beyond the effect of transactional leadership. These findings also support Bass' view that transformational leadership and transactional leadership are different but they are not mutually exclusive.

The transactional-transformational leadership paradigm transcends organisational and national boundaries. Although this paradigm originated from a culturally individualistic country (United States of America), it seems more likely to be

relevant to culturally collectivistic countries (e.g. those within Asia) and in fact transformational leadership is said to emerge more readily in these culturally collectivistic societies (Jung, Bass, & Sosik, 1995, in Bass, 1997).

Bass (1997, pp. 131-132) argues that the worldwide applicability of the paradigm is due to its universal characteristics. The transactional-transformational leadership paradigm has five universal characteristics. These are (1) simple universal, (2) variform universal, (3) functional universal, (4) systematic universal, and (5) variform functional universal.

- A simple universal refers to the statement that anytime a group of human beings come together, there is always a leader.
- A variform universal refers to a simple regularity influenced to some extent by organisations or cultures. Business organisations almost everywhere are ordinarily led by a single executive officer or managing director.
- A functional universal refers to a universal correlation between variables. This functional universal is the correlation between perceived ineffectiveness and laissez-faire leadership. Everywhere, the leaders who often avoid responsibilities and shirk duties are perceived as dissatisfying and ineffective by followers.
- A systematic universal refers to the paradigm that involves a theory about relationships explaining if-then outcomes across cultures and organisations. FRL theory provides the measurable relationships.
- A variform functional universal refers to a positive, sizable relationship being found almost everywhere between attributed charisma and satisfaction (Bass, 1997, pp. 131-132).

The new leadership approaches emerged from and are built upon prior leadership approaches to address their weaknesses. For example, transformational leadership and transactional leadership model emerged to address the weaknesses of the behavioural approach that could not successfully differentiate which behaviours can contribute to organisational change and which ones cannot. Conversely, transformational leadership and transactional leadership can be seen as two different behaviours; transformational leadership is the type of leadership used to yield drastic

change and transactional leadership is the type of leadership used to yield incremental change (Bass and Avolio, 1997, in Laohavichien, Fredendall, & Cantrell, 2009).

The constructs of transactional leadership, such as contingent reward, were built based on previous traditional leadership constructs, namely, consideration and initiation used in the behavioural leadership approach (Seltzer & Bass, 1990) and "follows House and Michell's (1974) path-goal theory quite closely" (Vera & Crossan, 2004, p. 223). Thus, the FRL theory approach is a comprehensive model because it represents whole leadership behaviours from new perspective (transformational leadership) to traditional leadership (transactional leadership) and non-leadership (laissez-fair leadership) as shown in Figure 2.3-2.

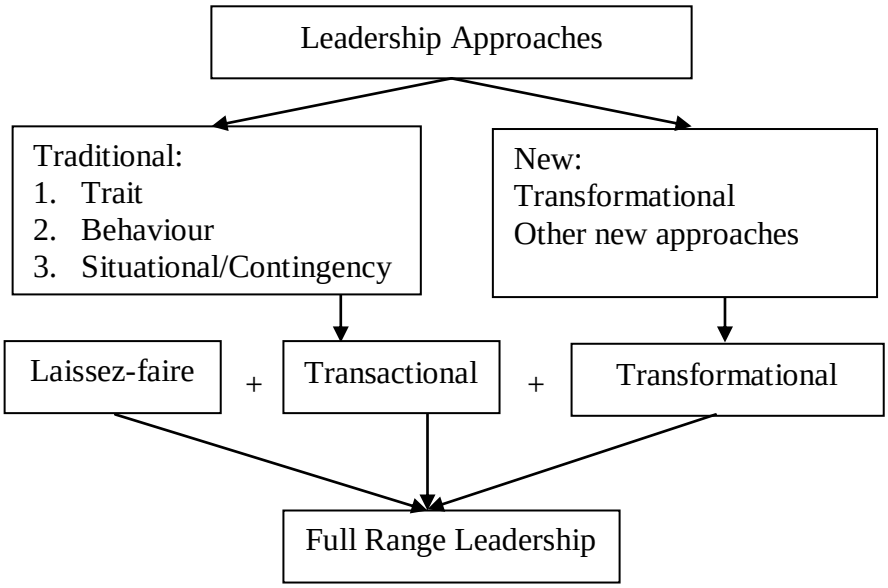

Figure 2.3-2 Leadership approaches
Source: Literature review

Figure 2.3-2 shows that:

- Leadership approaches include both traditional and new leadership theories.
- Trait, behaviour, and situational/contingency theories are included in traditional approaches.
- Laissez-faire leadership is non-transactional leadership.
- Transactional leadership comprises many aspects of traditional leadership.
- Transformational leadership is included in new leadership theory approaches.

- The full range leadership model consists of comprehensive laissez-faire, transactional, and transformational leadership.

To produce effective leadership, transformational leadership adds the effectiveness of transactional leadership as shown in Figure 2.3-3.

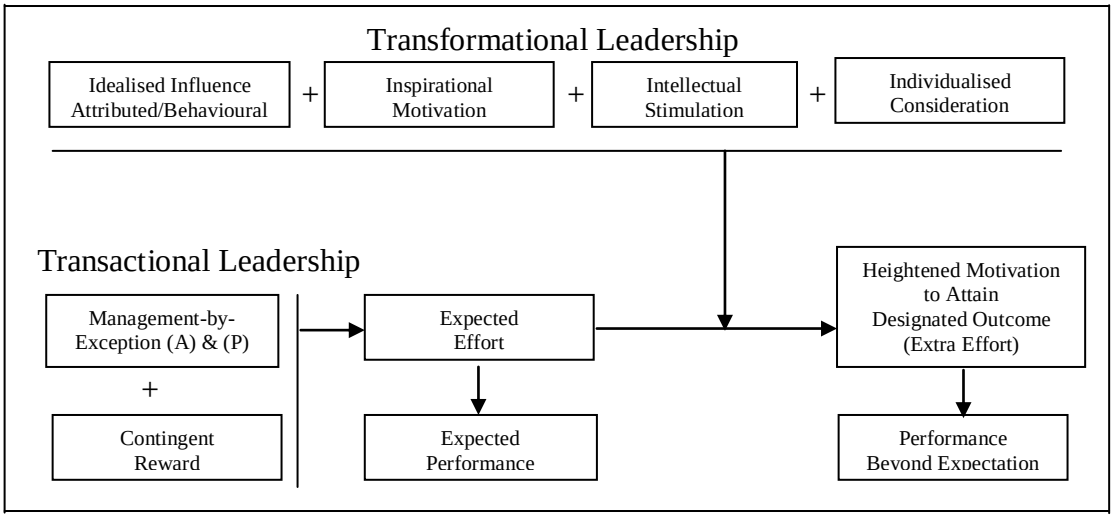

Figure 2.3-3 The augmentation model of transactional and transformational leadership
Source: Bass and Avolio (2004, p. 21)

Figure 2.3-3 shows that:

- Transformational leadership consists of four main dimensions: idealised influence (attributed/behavioural), inspirational motivation, intellectual stimulation, and individualised consideration.
- Transactional leadership consists of two main dimensions: management by exception (active and passive) and contingent reward.
- Transactional leadership results in expected effort and then expected performance. Transactional leadership is an important base on which transformational leadership builds (Judge & Piccolo, 2004, p. 758).
- Transformational leadership adds to the effectiveness of transactional leadership and results in extra effort and performance beyond expectation.

Although transformational leadership is said to emerge more readily in the culturally collectivistic societies (Asia) (Jung, Bass, & Sosik, 1995, in Bass, 1997) due to its

universal characteristics (Bass, 1997, pp. 131-132), the literature on transformational leadership model in an Indonesian school context is extremely little. Therefore, studying transformational leadership model in an Indonesian school context will contribute to the body of knowledge and will help improve effective leadership in Indonesian schools.

2.3.3.3 FRL Elements

The FRL approach consists of three leadership styles: transformational, transactional, and laissez-faire. These three leadership styles are outlined below.

1) Laissez-Faire Leadership Style

The term *laissez-faire* is taken from the French phrase and means a "hands-off", "let-things-ride" approach which represents the absence of transactional leadership. A laissez-faire leader avoids making decisions, gives no feedbacks, abdicates responsibility, makes little effort to help subordinates satisfy their needs and does not use their authority. Laissez-faire is the most passive and ineffective form of leadership (Antonakis et al., 2003; Northouse, 2007).

Laissez-faire leadership is considered non-leadership. An example of laissez-faire leadership would be a manager in a small company who is not concerned about what his/her followers do to achieve the company goals—he/she just lets them work the way they like without giving feedback, does not care whether the followers do something or do nothing or even who does something and who does nothing. When the followers do something, the laissez-faire leader does not emphasise results; he/she is not aware of his/her followers' performance (Northouse, 2007).

2) Transactional Leadership Style

Transactional leadership refers to an exchange process between a leader and his/her followers based on job descriptions to complete clear and specific goals. When the responsibilities or requirements are successfully completed, the leader gives his/her

followers a reward in return, yet disciplines them when the followers deviate from the standard (Antonakis et al., 2003; Bryant, 2003). In transactional leadership, a leader and followers commit to a transaction for a reward. Completing the requirements of a task equals completing the transaction (Bromley & Kirschner-Bromley, 2007). The leader rewards or disciplines the followers depending on the adequacy of the followers' performance.

Transactional leadership comprises the following dimensions: (a) contingent reward, (b) management-by-exception (active), and (c) management-by-exception (passive). Contingent reward refers to a constructive and positive transaction involving directed, consultative or negotiated agreements between leaders and followers about objectives and/or task requirements. The leader promises and/or provides suitable rewards and recognition if followers achieve the objectives or execute the set tasks as required (Bass, Avolio, & Atwater, 1996).

The rewards can include non-financial incentives such as recognition, praise, extra holiday time, and time off. Management-by-exception active (i.e. active corrective transactions) refers to the active intervention of a leader by monitoring the tasks being performed and using corrective methods to ensure that accepted standards are met. Last, management-by-exception passive (i.e. passive corrective transactions) refers to the passive intervention of a leader; the leader only intervenes after non-compliance has happened or when mistakes have already happened. The leader exhibits correction as a response to deviated performance to improve his/her subordinate behaviours (Antonakis et al., 2003).

3) Transformational Leadership Style

The term transformational leadership, which changes and transforms people as implied in its name, was initially coined by Downton in 1973, and introduced by James McGregor Burns in his book *Leadership* in 1978. In 1985, the model was developed and refined by Bass until it reached the form enjoying popularity nowadays (Molero, Cuadrado, Navas, & Morales, 2007). The popularity of the transformational leadership style, which is categorised under the new leadership

paradigm and emphasises the charismatic and affective elements of leadership, might have resulted from its focus on intrinsic motivation and subordinate development as well as its relevance to current needs in chaotic business environment (Northouse, 2007).

According to Burns (1978) in Northouse (2007, p. 179), transactional leadership is different from transformational leadership. Transactional leadership includes many aspects of leadership, concentrating on the transaction between leaders and their subordinates. In contrast, transformational leadership refers to "the process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower." For instance, a manager who practises transformational leadership attempts to change his/her corporate values to reflect a more human standard of fairness and justice. Simply, transformational leaders are concerned about what you can do for your country; in contrast, transactional leaders are more focused on what your country can do for you (Bass, 1999).

Conceptually, a transformational leader refers to someone who stimulates his/her subordinates to alter their beliefs, capabilities, values, and motives to result in congruency between their personal goals and interests with organisational aims (Burns, 1978 in Bass, 1985).

Transformational leadership theoretically includes four key dimensions, known as the Four I's, reflecting four kinds of behaviours which may not be exhibited entirely at once: (1) charismatic leadership or idealised influence (attribute), (2) inspirational motivation, (3) intellectual stimulation, and (4) individual consideration (Bass, 1985, 1988).

- Idealised influence refers to the socialized charisma of a leader, capable of being trusted, admired, and respected as well as viewed as having a high standard of moral and ethical behaviours. The ability of the leader to build trust, admiration and respect can lead to acceptance of radical change within organisations, without any great resistance. By demonstrating high morals/values, beliefs and clear

missions, the leader would be believed as a role model for the followers. Therefore, the followers can count on such a leader to do the right thing. However, there might be a risk if the leader uses his/her power for personal gain. Therefore, the leader is required to avoid using the power, except when urgently needed.

- Inspirational motivation refers to how a leader behaves to motivate and inspire followers to arouse their spirit for a future-oriented view through enthusiasm, optimism, and a shared vision. Followers would be highly motivated to accomplish appropriate behaviours to achieve positive results.

- Intellectual stimulation refers to the ability of a leader to stimulate his/her followers to perform creatively and innovatively, and attempt to do routine tasks in new ways. The followers are encouraged to try new ideas and creative problem solutions. Public criticism is avoided when followers make mistakes; they are not criticised when they have different ideas to the leader.

- Individualised consideration refers to leader behaviour that contributes to follower satisfaction by advising, supporting, and paying attention to the individual needs of followers, and thus allowing them to develop and self-actualise to meet their needs for achievement and growth (Antonakis et al., 2003; Bass & Avolio, 1994; Geijsel, Sleegers, Leithwood, & Jantzi, 2003; Simić, 1998).

In brief, Idealised influence refers to charismatic vision and behaviour that inspires subordinates to follow, inspirational motivation is the ability of a leader to motivate his/her subordinates to commit to the vision, intellectual stimulation refers to the capacity of a leader to encourage his/her subordinates' innovation and creativity, and individualised consideration refers to the ability of a leader to coach his/her subordinates to fulfil their needs of development (Barbuto, 2005; Simić, 1998).

Transformational leadership is believed to be able to effectively respond to the tremendous challenge facing organisations in the turbulence of the modern world (Kirkbride, 2006, p. 31). This is supported by Vera and Crossan (2004) in Gordon

and Yukl (2004, p. 362) who argue that "researchers suggest that transformational leadership is more effective in turbulent environments, times of poor organisational performance, and birth or decline organisational stages because transformational leader behaviours include inspiring others, encouraging change, and providing vision. These behaviours are necessary for leaders because they encourage employees to challenge the status quo and to think about potential futures for the organisation." A transformational leader can empower followers to transform into high involvement individuals and teams focused on service, quality, quantity of output or production and cost-effectiveness (Bass, 1999, pp. 9-10).

The transformational leadership model has been of great interest to researchers in many different sectors such as military, education, psychology, sociology, and political science and in many countries, mainly North America and European countries for over two decades (Bass, 1997; Griffith, 2004; Molero et al., 2007; Tatum et al., 2003). However, literature on transformational leadership model in an Indonesian school context is extremely little. Therefore, studying transformational leadership model in an Indonesian school context will contribute to the body of knowledge and will help achieve effective leadership in Indonesian schools.

2.3.3.4 Multifactor Leadership Questionnaire (MLQ)

The instrument which has most widely been used to measure transformational and transactional leadership is the Multifactor Leadership Questionnaire (MLQ). The MLQ was originally developed by Bass (1995), and is applicable to organisations including schools (Northouse, 2007; Tejeda et al., 2001). This is supported by Bass and Avolio (2004, p. 14) who argue that the MLQ in various versions has been used extensively in organisations in the United States, Belgium, Canada, Germany, Switzerland, Great Britain, India, Ireland, the Netherlands, Italy, Spain, Japan, Israel, New Zealand, Taiwan, Australia, South Africa, Mexico, Venezuela, China, Malaysia, Singapore, and Korea.

There have been several revisions to strengthen the validity and reliability of the MLQ (Antonakis et al., 2003; Northouse, 2007; Tejeda et al., 2001). The validity and reliability of the MLQ Form 5X-Short is outlined in Subsection 3.2.2.1.

In this section, nine major leadership theory approaches were introduced. Five leadership theories, in particular, were reviewed. These theories are trait theory, behaviour theory, situational/contingency theory, and transformational leadership theory known as Full Range Leadership (FRL) theory (Bennett, 2009, p. 10), which builds on prior classifications (Vera & Crossan, 2004, p. 223).

The FRL theory approach was particularly highlighted for the following six reasons:

- It is compatible with the current world situation. Vera and Crossan (2004, pp. 233-234) argue that highly turbulent and uncertain environments need transformational leaders who enhance individuals' self-confidence and self-efficacy, and help them to see their environments as a source of opportunity. In contrast, stable environments need transactional leaders who focus on strengthening existing culture, structure, and strategies. Bass (1999, p. 9) adds that changes in the marketplace and workforce have resulted in the need for leaders to become more transformational and less transactional if they are to remain effective.
- This theory approach is enjoying importance and continuous research and development (Bodla & Nawaz, 2010, p. 372), and has been the focus of more empirical studies than other theories for the past two decades (Walumbwa et al., 2005).
- FRL theory approach is a new comprehensive leadership model (Walumbwa et al., 2005).
- It has the instrument (MLQ Form 5X-Short) that has been well validated.
- This leadership model is universally applicable (Bass, 1997).
- More importantly, the literature on transformational leadership model is extremely little in an Indonesian school context.

These reasons suggest that the FRL approach (and specifically the MLQ) is appropriate to be used in this study to identify and examine principal leadership

styles in association with principal decision-making styles, and teacher job satisfaction in an Indonesian school context. Studying the transformational leadership in an Indonesian school context will extend the body of knowledge and contribute to an increased understanding of school leadership in Indonesian schools.

2.4 Immediate Disciplines

This section reviews the immediate disciplines for this thesis. They are: school leadership, decision-making, and job satisfaction.

2.4.1 School Leadership

This subsection reviews school leadership and focuses on why school leadership is important, how to search for effective school leadership, and what type of leadership behaviours will help achieve effective school leadership.

School leadership is important for school effectiveness, that is, to prepare students to achieve their future success. It has been shown that principals have significant impacts upon the success of schools (Gurr et al., 2005; Raihani, 2008). Therefore, leadership has become an area of much research, and this has been mirrored by increased policy activity in schools (Mertkan, 2011, p. 79). Siegrist (1999) argues that "If leadership is vital to the schools, preparation of those leaders is very serious business indeed, and graduate programs must move beyond the training of efficient managers, to the preparation of visionary, moral, and transformational leaders." This argument is responded to by Leithwood, et al. (2010) in Thomas and Kearney (2010, p. 10) who state that, to date, they have not found a single case of a school improving its student achievement record in the absence of talented and effective leadership.

Leithwood, et al's (2010) response is supported by Stewart (2006, 2008) who affirms that efforts to help achieve effective school leadership have been underway for some time. The emergence of critical scrutiny of school leadership and its relationship to school effectiveness was initially triggered by public demand for school systems to enhance standards and improve the student achievement record, which began around

the mid-1980s. The first step was taken through school reform and accountability movements, where school principals were compelled to improve student achievement. However, little information on best practices was known to help guide principals and realise significant student performance improvement. What most educators recognised about how to measure quality of teaching and learning effectively was based on educational accountability schemes which depended exclusively on high-stakes standardised testing.

School reform is an effort to realise effective school leadership. The transformation which is based on school leadership has been and will continue to be an important cornerstone of government's economic growth plans. School leadership depends substantially on principals' capacity to adopt a collaborative leadership styles to, for example, involve others in decision-making (Barnett & McCormick, 2003, p. 64; Pashiardis, 1993, p. 8; Williams, 2008). Therefore, DeVita (2007) insists that there should be good leadership in school reforms because without good leadership, there are no effective reforms. School leaders are indispensable when it comes to the effective implementation of education (school) reform (Zame, Hope, & Respress, 2008, p. 117).

To have effective reforms, Darling-Hammond (2007) emphasises that educational leaders of a new kind are needed to build a school system organised for student success. For this, Darling-Hammond (2007) suggests several elements of effective school leadership in response to what principals actually do when they engage in leadership practices. They are:

- Set direction, by developing a consensus around vision, goals and directions.
- Help individual teachers, through support, modelling, and supervision, and develop collective teacher capacity, through collaborative planning and professional development that creates shared norms of practice.
- Redesign the organisation to enable this learning and collaboration among staff (and personalisation/support for students), as well as to engage families and community.
- Manage the organisation by strategically allocating resources and support (Darling-Hammond, 2007, p. 14).

School leaders who can incorporate these elements are transformational leaders because, in particular, they emphasise participatory decision-making within and beyond the school. Involving teachers and other staff in decision-making helps principals lead school successfully because school leaders cannot lead schools without staff collaboration (Sanzo, Sherman, & Clayton, 2011, p. 41). Thus, effective leadership at every level of education, including schools, needs to be strongly developed (Raihani, 2007, p. 180). Effective principals are important because leadership behaviours of effective principals are one important factor which positively influences teacher job satisfaction (Bogler, 2001).

Bromley and Kirschner-Bromley (2007, p. 57) argue that it is not easy for a principal to shift from being a traditional leader to a transformational leader; it will take time, knowledge, education, patience, desire, and continuous learning. They suggest ways to help become a transformational leader. These include:

- Continue to learn and grow,
- Set attainable goals,
- Be energetic,
- Be open and responsive to change,
- Be creative in your thinking processes,
- Interact with people honestly,
- Improve your verbal and written communication skills,
- Empower employees and give them more responsibilities, and
- Have a firm belief in ethics and morals.

The second attempts to help achieve effective school leadership were through research studies. The movement towards greater accountability for improved student achievement coincided with a growing number of research studies attempting to assess the influence of school leadership. The studies resulted in the emergence of new terms of leadership such as shared leadership, teacher leadership, distributed leadership and transformational leadership. The emergence of these new terms of leadership was as a reaction to dissatisfaction with instructional leadership which was considered principal-cantered model because the principal acted as the centre of

authority, power, and expertise (Stewart, 2006). The dissatisfaction with instructional leadership is natural because schools are being exposed to the disciplines of the marketplace to be able to adequately fulfil the challenges associated with student preparation for their future success (Geijsel et al., 2003).

School leadership tends to shift from traditional leadership to transformational leadership in response to changing situations in the schools to be able to be globally competitive. For example, Griffith (2004, p. 335) argues that "Recent research supports the notion that principal leadership might be modelled as transformational leadership." He described research findings on the transformational leadership at schools published by scholars such as Leithwood and Jantzi (1999) who studied school staff responses to dimensions of transformational leadership and reported a direct effect of principal transformational leadership on such school conditions as school aims, structure, and planning, which directly influenced classroom conditions, including procedures, policies, and instruction (Stewart, 2006). Geijsel et al. (2003) reported that transformational leadership has been of emergent interest in determining if it is an appropriate form of school leadership that contributes to making changes as required.

The third attempts to help achieve effective school leadership have been through conferences. In particular, at the Wallace Foundation's National Conference, held in New York, from 22-24 October 2007, Colvin (2007, p. 14) presented "Beyond Buzz: Leadership is Moving to the Heart of School Reform." A question was addressed: "Who should be a principal?" Based on the responses, it was observed that education leaders could be classified as either "copers" or "transformers" who were concerned about the importance of instructional leadership. However, participants were likely to prefer transformers because transformers acted; in contrast, copers merely talked about it.

In conclusion, school leadership is important, and the efforts searching for and implementing effective school leadership have been made through school reforms, leadership studies, and conferences. These efforts have demonstrated that the type of school leadership which is considered effective is transformational leadership.

Efforts to identify and develop effective leadership continue to be important to organisations including schools (Manning & Robertson, 2011, p. 88).

Although there is much discussion in the educational literature, both supportive and critical, about transformational orientations to leadership, empirical evidence about its effects in school contexts is extremely little (Leithwood & Jantzi, 2006, p. 204). In particular, few studies of school leadership have an Asian context (Raihani, 2008; Wong & Wong, 2005), and still fewer have an Indonesian school context. Studying school leadership will contribute to the body of knowledge on school leadership and will help enhance effective school leadership in Indonesia.

Leadership styles are inseparable from decision-making styles because decision-making is an important element of leadership. Therefore, decision-making is also important in organisations for goal achievement.

2.4.2 Decision-making

This subsection reviews decision-making focused on the importance, concept, types, process, and styles of decision-making. Understanding decision-making will help leaders including principals to function well in making a decision.

2.4.2.1 Importance of Decision-making

Decision-making, like leadership, is important in organisations including schools. Griffin (2004) in Shahzad, Ali, Hukamdad, Ghazi, and Khan (2010, p. 401) argues that decision-making is an integral part of all managerial functions. These functions are the decisional function, the interpersonal function, and the informational function. The decisional function refers to making appropriate decisions based on the information obtained from others. The interpersonal function refers to building relationships with stakeholders such as subordinates, superiors, co-workers, and customers. The informational function refers to giving and receiving information from others to know what is going inside and outside the organisations (Cohen, Fink, Gadon, Willits, & Josefowitz, 1992).

The success of an organisation depends on the quality of the decisions made by managers (Robbins, Bergman, Stagg, & Coulter, 2009). How decisions are effectively made in an organisation is much reliant on managers because they are the ones who are in charge of setting up the decision-making process. This process is essential to accommodate inputs from subordinates to make desirable decisions for goal attainment, job satisfaction fulfilment, performance, and overall effectiveness. Therefore, managers needs to follow a few guidelines to make better decisions; steps in the decision-making process should be clear and precise, particularly when facing complex decisions in today's competitive business (DuBrin, Ireland, & Williams, 1989).

Leaders and managers are judged by their decisions-decisions that lead to success, decisions that create failure, and especially decisions that have far-ranging ethical and moral consequences (Eberlin & Tatum, 2008, p. 311). Thus, a leader should understand decision-making concepts, decision types, decision-making process, and decision-making styles to function well in making a decision.

2.4.2.2 Decision-making Concept

Decision-making is a process which consists of several steps to uncover what to do and why for a decision (Nutt, 2008, p. 425). According to Shahzad et al. (2010, p. 400), a decision is a choice between two or more selected alternatives according to criteria. Among the selected alternatives, a decision-maker has to choose the one which best fits the criteria to achieve organisational goals to minimise uncertainty and to manage risks. A decision-maker should consider a wide range of inputs from other people in the process of decision-making. It is assumed that including more people, who may have different amounts of information, would result in more effective decision-making. For example, a principal wants to decide whether or not to recruit a teacher. He/she should listen to the opinions of other staff to consider the advantages and disadvantages of having the new teacher, what skills and personality he/she should have, identify candidates that fit the criteria, evaluate each candidate, and choose the one that best fits the criteria.

Effective decision-making, according to Rausch (2005, p. 989) involves the following steps: defining issues to be addressed, identifying alternatives, finding relevant information, evaluating the alternatives, selecting the most desirable alternative, implementing the alternative, and monitoring the progress of the implementation toward the desired outcome. Simon (1987, p. 57) supports the view that, after making decisions (or participating in the decision-making), a manager communicates the decisions to others, and monitors how the decisions are carried out.

One of the decision-making concepts which is considered comprehensively applicable in organisations is that of Scott and Bruce (1995, p. 4). Their concept is based on the work of other researchers such as Driver (1979). Scott and Bruce (p. 820) define decision-making as "the learned habitual response pattern exhibited by an individual when confronted with a decision situation." This definition suggests behaviours, not traits, in decision-making. Here, different decision contexts can result in different decision-making styles for the most desirable alternative selection. Because the decision-making styles are built on behaviours, an individual can learn and practice them in his/her organisation.

In conclusion, decision-making is an attempt to reach the most desirable alternative and to minimise risks. Information from different people can help to yield a better decision. Thus, participation of people in the decision-making process is important.

2.4.2.3 Decision-making Process

The decision-making process consists of action-taking steps indicating how to make a decision (Nutt, 2008, p. 425). Some scholars such as Robbins et al. (2009) and DuBrin et al. (1989) propose distinctive steps of the decision-making process as shown in Figure 2.4-1.

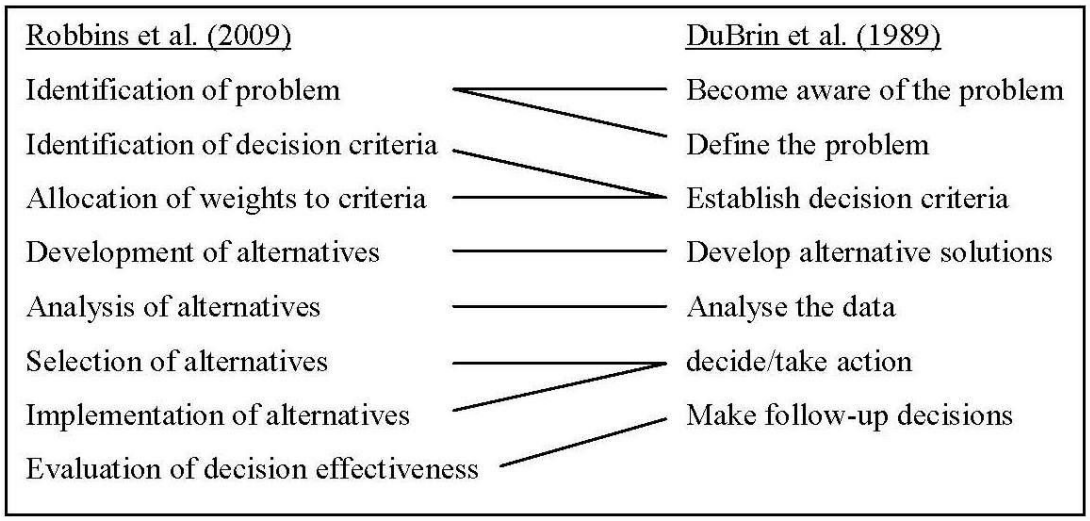

Figure 2.4-1 Decision-making process by Robbins et al. (2009) and DuBrin et al. (1989)
Source: Adopted from Robbins et al. (2009, p. 217) and DuBrin et al. (1989, p. 104)

Figure 2.4-1 shows two models of decision-making process. The models describe the decision-making process made by a rational decision maker because it suggests making decision through a reasonable way. However, leaders may not depend on solely rational decision-making style; they may also practice the other decision-making styles (e.g. intuitive, dependent, spontaneous, and avoidant).

2.4.2.4 Types of Decisions

Shahzad et al. (2010, p. 401) argue that there are two types of decisions: programmed and non-programmed decisions. Programmed decisions are those that routinely occur so that a decision-maker can have elaborated procedures how to face them. In contrast, non-programmed decisions are those that do not occur routinely so that a decision-maker has not elaborated procedures how to face them, but the novel non-programmed decisions need customised procedures. Both decision types are not really distinct but exist as a continuum—highly non-programmed decisions are at one end and highly programmed at the other end. Distinguishing programmed from non-programmed decisions is to classify different techniques to face the programmed

and the non-programmed aspects of the decision-making (Simon, 1960). Figure 2.4-2 summarises characteristics of both decisions.

Characteristics	Programmed decisions	Non-programmed decisions
Type of problem	Structured	Unstructured
Managerial level	Lower levels	Upper levels
Frequency	Repetitive, routine	New, unusual
Information	Readily available	Ambiguous or incomplete
Goals	Clear, specific	Vague
Time frame for solution	Short	Relatively long
Solution relies on	Procedures, rules, policies	Judgement and creativity

Figure 2.4-2 Programmed versus non-programmed decisions
Source: Robbins et al. (2009, p. 227)

Programmed decisions are relatively clear-cut and apt to depend on previous solutions because the problems faced are the structured ones which are straightforward, familiar and easily defined. There are three types of programmed decisions commonly available in organisations to face structured problems: procedure, rules, and polices. A procedure refers to a series of interrelated sequential steps a decision-maker can use to respond to a structured problem. A rule refers to an explicit statement that tells a decision-maker what he/she can and cannot do. In contrast to a rule, a policy refers to a guideline that establishes general parameters for a decision-maker rather than stating what should or should not be done. Appositely, when organisations face unstructured problems, a decision-maker addresses non-programmed decisions with judgment and creativity (Robbins et al., 2009, pp. 226-227).

The types of decision-making depend on the types of problems; programmed decision-making is appropriate for structured problems, while non-programmed decision-making is appropriate for unstructured problems. Whether a decision-maker uses programmed or non-programmed decision-making is then followed by his/her decision-making style.

2.4.3 Job satisfaction

Like leadership and decision-making, job satisfaction in organisations is an important element that contributes to achieve organisational goals.

This subsection reviews job satisfaction focusing on the concept and theory. This discussion will help underpin understanding teacher job satisfaction as the dependent variable in this study. Teacher job satisfaction is later reviewed in Subsection 2.5.3.

2.4.3.1 Job Satisfaction Concept

Job satisfaction is defined in many ways. There are at least three different definitions according to different scholars. First, job satisfaction can be defined as people's attitudes toward their jobs (Robbins et al., 2009, p. 515; Wu, 2009, p. 77; Yelboga, 2009, p. 1066).

Second, based on the definitions of other scholars (e.g. Spector, 1997; Tovey & Adams, 1999), Terranova (2008, p. 11) defines job satisfaction as the degree to which an individual likes their job and identifies two components. These are: (1) an affective component which comprises an individual's feeling of satisfaction regarding their job, and (2) a perceptual component which evaluates whether one's job is meeting one's needs. How individuals are satisfied with their job depends on how they feel to what extent their wishes and needs are fulfilled. Their satisfaction varies to some extent.

Finally, job satisfaction refers to the subjective feeling of what individuals expect to fulfil from their job according to their best interest and the reality of what they actually get from the job. A match between expectation and reality results in satisfaction. In contrast, any mismatch between them results in dissatisfaction (Terranova, 2008). For example, in the June 2009 demonstration of Queensland Government teachers seeking fair pay (www.teachersolidarity.com, 2009), there is a discrepancy between what they expected and what they obtained. Nevertheless, good

payment does not always necessarily produce satisfaction; many employees do not work only for money.

Although the definitions of job satisfaction vary from scholar to scholar, these definitions are not contradictory but complementary. Job satisfaction is seen as an attitude and subjective feeling to the job. Job satisfaction is the most widely researched job attitude as well as one of the most extensively researched subjects in industrial/organisational psychology (Judge & Church, 2000, in Redmond, 2011). However, there are extremely few studies of job satisfaction in an Indonesian school context. Therefore, studying job satisfaction in an Indonesian school context will contribute to the body of knowledge on job satisfaction and will help enhance job satisfaction of principals, teachers and other staff.

2.4.3.2 Job Satisfaction Theory

Scholars have been interested in finding dimensions or factors that can increase job satisfaction of employees in organisations. The search for these factors is influenced by the theories of motivation. Yelboga (2009) insisted that the three most common theories of motivation which are of importance in job satisfaction studies are Herzberg's Two-Factor Theory, Maslow's Hierarchy of Needs, and Adams' Equity Theory. In particular, Herzberg's Two-Factor Theory is discussed here because it indicates theoretical and practical consequences as well as one of the most interesting theories of motivation; in addition, it has been widely used in job satisfaction studies.

Herzberg's (1966) theory of job satisfaction, known as the Two-Factor Theory of Motivation, has been underpinned job satisfaction research. According to Herzberg's (1966) findings, job satisfaction and dissatisfaction are caused by separate and different factors.

Herzberg et al. (1959) in Tietjen and Myers (1998) developed two distinct lists of factors. These factors are: (1) motivators or job factors and (2) hygiene factors (extra-job factors). Motivators are a set of factors which cause happy feelings or a good attitude. These factors are task-related. They are:

- recognition,
- achievement,
- possibility of growth,
- advancement,
- responsibility, and
- work itself.

Hygiene factors are the other set of factors which are present when feelings of unhappiness or bad attitude are evident. These factors are related to conditions that surround doing that job, but are not directly related to the job itself. They are:

- salary,
- interpersonal relations – supervisor,
- interpersonal relations – subordinates,
- interpersonal relations – peers,
- supervision – technical,
- company policy and administration,
- working conditions,
- factors in personal life,
- status, and
- job security (Tietjen & Myers, 1998, p. 226).

The first set of factors, labelled motivators or satisfiers, are determiners of job satisfaction because these factors tend to make employees motivated to achieve higher performance. These factors are an intrinsic part of the job itself. In contrast, the other set of factors, labelled hygiene factors or dissatisfiers, tend to cause dissatisfaction. These factors need to be maintained to keep employees satisfied since the factors contribute very little to job satisfaction. These two feelings (satisfied and dissatisfied), however, are not the opposite of each other. There is a zero point between being satisfied and dissatisfied, that is, being not satisfied or being not dissatisfied (Herzberg, 1966).

School leadership, decision-making, and job satisfaction were reviewed in this section. These three elements in organisations including schools are important to

help achieve organisational goals. In particular, principals have significant impacts upon the success of schools (Gurr et al., 2005; Raihani, 2008). Success of organisations including schools depends a lot on the quality of decisions (Robbins et al., 2009). Job satisfaction is related to absenteeism, employee well-being, levels of stress, and general life satisfaction (Aletraris, 2010, p. 1132). However, the literature on school leadership, decision-making, and job satisfaction in an Indonesian school context is extremely little. Therefore, studying these three themes in an Indonesian context will contribute to the body of knowledge and will help enhance effective school leadership and staff job satisfaction in Indonesian schools.

2.5 Research Foci

Section 2.4 reviewed the immediate disciplines: school leadership, decision-making, and job satisfaction. This section reviews the research foci of this study: leadership styles, decision-making styles, and teacher job satisfaction.

2.5.1 Leadership Styles

This subsection reviews leadership styles focused on full range leadership (FRL) theory known as the transformational leadership model. The universality and research of this model are briefly reviewed.

Bass (1997, p. 130) argues that there is universality in the transactional-transformational leadership paradigm. The same phenomena and relationships can be observed in a wide range of organisations and cultures. This universality is supported by evidence gathered in studies conducted in organisations in business, education, the military, the government, and the independent sector. The universality of the transformational leadership paradigm has led to its effectiveness and success worldwide. Transformational leadership has been widely studied and found to be effective leadership for over two decades. For example, although the transactional-transformational leadership paradigm originated from a culturally individualistic country (United States of America), it seems likely also to be relevant to culturally collectivistic

countries (e.g. those within Asia) and in fact transformational leadership is likely to be used more in these culturally collectivistic societies (Jung, Bass, & Sosik, 1995, in Bass, 1997).

In their 39 studies in the transformational leadership literature, Lowe, Kroeck, and Sivasubramaniam (1996) revealed that transformational leaders are more effective than transactional leaders. In a similar line, Northouse (2007) and Bass (1985) reported that transformational leaders are able to encourage followers to perform beyond expectation and the followers are highly motivated to outdo their own interests for the excellence of the groups or the organisations. Transformational leaders accomplish effective leadership by using their ability to encourage followers to be more interested in the group rather than in themselves (Burns, 1978 in Griffith, 2004).

The success of transformational leadership has been demonstrated by over thirty studies in a wide range of settings, including military, schools and corporations. The findings show that transformational leadership brought about high motivation, commitment, and performance of subordinates (Bryant, 2003).

Employees strongly preferred transformational leaders to transactional leaders. There were some reasons that employees prefer transformational leaders. Transformational leaders could inspire employees to meet the organisational mission. Moreover, transformational leaders were more likely to build good rapport, share decision-making power, and communicate regularly with employees about the organisation's mission and aims. As a result, transformational leadership style could create more engaged and devoted employees and they found their jobs more challenging and meaningful. Nevertheless, transactional leaders were considered authoritative; they made employees feel they had to bargain for power and benefits. Transactional leaders did not inspire employees to exceed organisational goals (Purvanova, Bono, & Dzieweczynski, 2006, in Loveren, 2007, p. 25).

These findings support earlier findings of Sarros, Gray, and Densten (2001, p. 9) who conducted research in Australia. Their findings showed that:

> Executives in the AIM-Monash survey considered that they all used transformational leadership styles as well as the transactional style of contingent reward fairly often. The findings show that Australian executives are more likely to use coaching (IC), reward (CR), visionary (IM), and role modelling (IB) leadership behaviours that challenge workers (IS) ahead of appeals to charismatic leadership approaches (IA). In contrast, the transactional leadership styles of MBE (active) and MBE (passive) are perceived as being used less frequently while laissez-faire is considered to be hardly used at all.

Research conducted in boutique hotels in Turkey by Erkutlu (2008) supports the idea that transformational leadership behaviours stimulate organisational commitment and job satisfaction. Erkutlu (2008, p. 721) asserts that for transformational leaders to be successful, it is essential to have sustainable and healthy organisations, and suggests that managers attempt to:

- use transformational leadership behaviours rather than transactional leadership behaviours and avoid laissez-faire behaviour,
- create a vision giving followers a sense of identity and meaning within the organisation,
- become strong role models for their followers by developing a set of moral values and expressing strong ideals,
- act as change agents who initiate and implement new directions within organisations,
- provide a supportive climate in which they listen carefully to the individual needs of followers, and
- act as coaches and advisers while trying to assist individuals in becoming fully actualised.

The universality and research relating to the transformational leadership model have been briefly reviewed. Evidence of the universality was gathered from studies conducted in organisations worldwide. The studies of this leadership model indicate similar findings—transformational leadership style is more effective than traditional (transactional) leadership style. However, some research revealed that the styles are

complementary; effective leaders more often use transformational than transactional leadership style in organisations. Most leadership studies were conducted in western countries, particularly USA. However, the literature on the transformational leadership model is extremely little in an Indonesian context.

2.5.1.1 Leadership Styles in Schools

This subsection reviews research on school leadership, particularly the transformational leadership model in the school contexts.

There has been much research about transformational leadership in schools. Geijsel et al. (2003) note that research about transformational leadership in schools was initially conducted in Canada by Leithwood and his colleagues between the early1980s and the late1990s. It was based on the work of Burns (1978, 1979) and Bass (1985, 1998) and then followed by a number of studies that investigated the effects of such leadership on teachers, students and school organisations. In 2003 alone, there were approximately 30 studies using Leithwood's three core dimensions of transformational leadership model: (1) setting directions, (2) developing people, and (3) redesigning the organisation.

Leithwood and Jantzi (2000a) conducted the third in a series of studies in schools in Canada to examine the effects of transformational leadership practices on organisational conditions and student engagement with school, taking into account the potentially large effects of family educational culture by including ten subordinate dimensions of transformational leadership model. These were developed through their own research in schools, included building school vision and goals, providing intellectual stimulation, offering individualised support, symbolising professional practices and values, demonstrating high performance expectations, developing structures to foster participation in school decisions, staffing, instructional support, monitoring school activities, and community focus. Findings supported previous studies of principal leadership effects (e.g. Leithwood & Jantzi, 1999)—it was found that, among other things, transformational leadership effects on selected organisational conditions and student engagement with school were

significant; however, there was a weak effect on the affective or psychological dimension (identification) and the behavioural dimension (participation) of student engagement in school.

Leithwood and Jantzi (2000b) concurrently conducted a survey using a sample of 1,818 teachers and 6,490 students in a Canadian school district to investigate the relative effects of principal and teacher leadership on student engagement with school. Results indicated consistency with other large-scale, quantitative studies in that principal leadership had a greater effect on student engagement than teacher sources of leadership. The effects of principal leadership were weak but significant, whereas the effects of teacher leadership were not significant. Many researchers such as Leithwood and colleagues have attempted to seek effective school leadership in developed countries and developing countries. However, the literature of school leadership is extremely little in an Indonesian context.

Comparing the results of the Canadian and Dutch studies, Geijsel, Sleegers, Leithwood, and Jantzi (2003, p. 228) reported that transformational leadership dimensions have effects on the teachers' extra efforts and commitment. In particular, the intellectual stimulation and vision-building are significant but, in general, the findings clearly indicate the importance of analysing dimensions of transformational leadership for their separate effects on teacher commitment and extra effort within the context of educational reform.

Research conducted over two decades indicates that school leadership contributed to a difference in school climate and outcomes; school leaders affect the school to change, and in particular positively affect student achievement (Hallinger, 1999). Stoll and Fink (1996) in Hallinger (1999) insist that schools will only get worse without better principals and teachers in our complex, rapidly changing times. In particular, principals need to make efforts to improve school effectiveness. These include:

(1) creating a shared vision and mission for the school (to envision the future),
(2) restructuring the formal organisation of the school such as class schedules, teachers' time, and grade/unit organisation to support instructional

effectiveness and enhance staff collaboration, decision making, and communication about teaching and learning,

(3) providing stimulation and individualised support for development of the teaching and learning capacities of staff (to empower staff), and

(4) reshaping the school culture to emphasise norms of continuous learning and collaborative work.

These efforts would be successful if the school leaders have capacity to build collaboration with stakeholders such as teachers, students, parents, and local governments. Such leaders should be transformational principals. Transformational principals will effectively lead schools in democratic and participative ways and involve more teachers in the decision-making because these leaders are ones who can engage in collaborative leadership and decision-making (Petzko et al., 2002, p. 4 in Sanzo et al., 2011, p. 33).

The studies of school leadership have been focused on transformational leadership and its effects on such variables as teachers, students and school organisations. Overall, the studies on transformational leadership indicate positive effects.

Based upon the above literature review on leadership styles, this study employs Bass and Avolio's (2004) full range leadership approach and aims to explore principal leadership styles in secondary public schools in Lampung, Indonesia, because of lack of prior research employing this leadership model in an Indonesian school context. Hence, the following research question is proposed:

RQ 1: What leadership style(s) do the principals mostly exhibit as perceived by the teachers?

2.5.2 Decision-making Styles

Decision-making styles vary from leader to leader. However, a leader needs to choose appropriate decision-making styles that suit followers and situations in the organisations. These decision-making styles can be derived from a decision-making model. There are several decision-making models. Four important models are: (1)

Vroom and Jago's (1988) decision-making model, (2) Robbins' (2003) decision-making model, (3) Rowe and Boulgarides' (1992) decision-making model, Decision Style Theory (DST), and (4) Scott and Bruce's (1995) decision-making model (GDMS).

Vroom and Jago's (1988) decision-making model comprises five decision-making styles: (1) Autocratic I (AI), (2) Autocratic II (AII), (3) Consultative I (CI), (4) Consultative II (CII), and (5) Group II (GII). AI means that the leader solves problem or make decisions alone using available information at the time. AII means that the leader asks specific questions of followers to obtain important information, but makes decisions alone. The leader may or may not tell followers the purpose of her or his question or give information about the problem or decision on which he/she is working. Followers are not engaged in the definition of the problem or in generating or evaluating alternative solutions. CI refers to a decision model where the leader shares the problem with the relevant followers individually, not collectively, to obtain information, ideas, and suggestions, but then makes a decision alone. Accordingly, the decision may not reflect the followers' influence. In CII, the leader shares the problem with followers in a group meeting to gain information and ideas from the whole group. However, the decision may not reflect followers' influence. GII means that the leader shares the problem with followers collectively. The followers as group members share information. Both leader and followers generate and evaluate alternatives and attempt to reach consensus on a solution. The leader supports the final decision (Vroom & Jago, 1988). Each style reflects a distinctive degree of involvement by followers in decision-making—from the zero involvement (AI) to the highest involvement (GII). There is an increased involvement of group members from zero involvement (AI), individual responses to specific questions (AII), individual/one-on-one data sharing (CI), group data sharing (CII), to group data sharing and consensus (GII). However, only at GII level are decisions made by both; the leader makes decisions alone in the first four levels. According to this model of decision-making, the leader makes, and never avoids making, a decision with or without followers' participation.

In contrast to Vroom and Jago's (1988) decision-making model, Robbins' (2003) decision-making model is the rational decision-making style which includes six steps. These steps are: (1) define the problem, (2) identify the decision criteria, (3) allocate weights to the criteria, (4) develop the alternatives, (5) evaluate the alternatives, and (6) select the best alternative. The first step, defining the problem, requires a decision-maker to clearly define the problem. The problem is the discrepancy between the existing state and the expected one. Then, the decision-maker identifies the decision criteria to make the decision. However, decision criteria are often of unequal importance, requiring the decision-maker to weigh the criteria and give the identified criteria priority. Next, the decision-maker generates possible alternatives for successful problem solving. The possible alternatives are then analysed and evaluated. Finally, the evaluated alternatives are weighed up against the criteria and the best matching alternative is selected. Rational decision-making is achieved through a long decision-making process because a leader seeks significant amounts of information in order to make an objective and logical decision (DuBrin et al., 1989). As a result, rational decision-making style yields a rational decision.

However, a leader sometimes makes an intuitive decision (DuBrin et al., 1989) because "intuition is a real phenomenon and contributes to effectiveness, especially in situations where it counts (time-pressured complex decision-making in the real world)" (Salas et al., 2010, p. 966). This intuitive decision is a decision made according to intuition or gut feeling with limited information to reach a decision quickly. It is an unconscious process based on experience. Although the rational decision might be more desirable to analyse a problem rationally, the intuitive decision is also required to face situations quickly. A leader tends to put greater weight on the intuitive decision than on the analytic reasoning when the problems become more complicated (Yang, 2003). In reality, a leader can use a variety of decision-making styles—they are not limited to the rational decision-making style. When wanting to apply this intuitive decision-making style, Salas et al. (2010, p. 942) argue that "it is important to understand the conditions under which intuition is likely to be accurate and lead to good decision-making outcomes and when it is likely to lead a decision-maker astray."

The third decision-making model is Decision Style Theory (DST) developed by Rowe and Boulgarides (1992) in Boulgarides and Cohen (2001). DST consists of four distinctive styles: (1) directive, (2) analytical, (3) behavioural, and (4) conceptual. A directive decision-maker exhibits a strong need for structure and is oriented towards tasks to be done more than towards people. The directive decision-maker emphasises technical decisions, has a low tolerance for ambiguity, is often autocratic and uses power. He/she makes a decision using limited amounts of information. An analytical decision-maker is also oriented towards tasks and technical aspects but can tolerate some ambiguity. He/she seeks great amounts of information and considers many alternatives to makes a technical decision. As a result, this style of decision-maketr enjoys problem solving and strives for the maximum that can be achieved in a given situation. Consequently, the leader often achieves top posts in an organisation, or starts his/her own companies. He/she is not particularly quick in their decision-making and prefers written reports, as well as challenges and examines every detail in a situation. However, because the leader considers position and ego as important characteristics and focuses on technical decisions, he/she is an autocratic leader. A third behavioural decision-maker focuses on people and social aspects. He/she is receptive to suggestions, communicates easily, shows warmth, is empathetic, persuasive, and willing to compromise and to accept less control. With low data input, this style tends towards short-range focus and uses meetings primarily for communicating. However, he/she is sometimes insecure. Finally, a conceptual decision-maker both tolerates ambiguity and is concerned for people. He/she tends to use data from multiple sources and considers many alternatives. Similar to the behavioural style, there is trust and openness in relationships and shared goals with subordinates. He/she may emphasise ethics and values in their behaviour. He/she is creative and can readily understand complex relationships. His/her focus is long-range with high organisational commitment. He/she is achievement-oriented and values praise, recognition, and independence. He/she prefers less control over power and frequently encourages followers' participation in decision-making. He/she may be characterised as a thinker rather than a doer. Because the conceptual style emphasises a high tolerance for ambiguity and more concern for people, the conceptual style would be more desirable than the other styles.

The directive style emphasises a low tolerance for ambiguity and more concern for task than for people; in contrast, the analytical shows a high tolerance for ambiguity; but, like the directive style, the analytical style is more concerned for task than for people. Like the directive style, the behavioural style exhibits a lower tolerance for ambiguity, but more concern for people than for task. Finally, the conceptual style emphasises a high tolerance for ambiguity and more concern for people than for task. Therefore, it seems that the conceptual decision-making style could be more desirable than the other styles.

Finally, Scott and Bruce (1995) developed General Decision-making Style (GDMS) model. The GDMS is comprehensive and applicable in organisations (1995, p. 4). Scott and Bruce (1995, p. 830) argue that their study on the development of GDMS as a measure of decision-making can be used across contexts and decision situations. The GDMS consists of five decision-making styles: (1) rational, (2) intuitive, (3) dependent, (4) avoidant, and (5) spontaneous.

These five decision-making styles are a result of the thorough research and relevant literature reviews done by Scott and Bruce (1995). The first three decision-making styles were adopted from the work of Harren (1979), avoidant decision-making style was adopted from the work of Philips, Pazienza, and Ferrin (1984), and spontaneous decision-making style was derived from their own research (Scott & Bruce, 1995).

Harren (1979) suggested three styles of decision-making: rational, dependent, and intuitive. Rational decision-making style is decision-making by decision-makers through a logical and deliberate approach. Dependent decision-making style is decision-making which depends on others. Intuitive decision-making style is relatively quick decision-making by decision-makers through a use of feelings that decisions are correctly made, without logical approach. “Intuition is rooted in a largely unconscious information processing system, which produces a rapid and holistic judgment based on complex patterns of temporal and conceptual relationships” (Salas et al., 2010, p. 950). These three styles were then adopted by Scott and Bruce.

Scott and Bruce (1995) argues that the fourth style, avoidant decision-making style, emerged from the work of Philips, Pazienza, and Ferrin (1984) who found that rational and dependent decision-making style approached problems, but did not avoid problems. Avoidant decision-making style is avoiding decision-making whenever possible.

Finally, spontaneous decision-making style emerged when Scott and Bruce examined the initial four decision-making styles. Scott and Bruce (1995) added the avoidant and the spontaneous decision-making styles to Harren's (1979) rational, intuitive, and dependent decision-making styles (Gati, Landman, Davidovitch, Asulin-Peretz, & Gadassi, 2010, p. 278).

The research and relevant literature reviews have yielded a comprehensive General Decision-making Style (GDMS) inventory that consists of five decision-making styles (rational, dependent, intuitive, spontaneous, and avoidant).

2.5.2.1 GDMS Instrument

The GDMS instrument is used to describe decision-making styles. This instrument has been validated several times by its developer (Scott & Bruce, 1995) and other researchers (e.g. Baiocco, Laghi, & D'Alessio, 2008; Gambetti, Fabbri, Bensi, & Tonetti, 2008; Loo, 2000; Spicer & Sadler-Smith, 2005; Thunholm, 2004, 2008).

Scott and Bruce took a sample from each of four populations to validate the GDMS instrument. The four-decision-making style instrument was initially used to examine the decision-making styles of the first sample (1,441 male military officers). When analysing the data, a fifth style related to the amount of time devoted to decision-making emerged. This suggested the existence of a fifth decision-making style—spontaneous decision-making style. This style is decision-making through an immediate decision-making process (Scott & Bruce, 1995).

The five decision-making style instrument was used to examine sample 2 (84 MBA students), sample 3 (229 undergraduate students), and sample 4 (189 engineers and technicians). In their natural settings (classroom and workplace), participants were voluntarily encouraged to give honest responses and assured that they would be kept confidential. In general, the test indicated consistent and stable results. The notion that decision-making is closely related to individual cognitive style is supported by the finding that relationships between control orientation and decision-making scales were significant. That rational decision-makers tend to approach, rather than avoid, problems is supported by the finding that rational and avoidant decision-making were negatively correlated. That avoidant decision-making is characterised by relatively passive personalities and attempts to avoid decision-making is also supported in the findings. The findings suggested that the five decision-making styles were not mutually exclusive, and individuals did not depend on a single decision-making style (Scott & Bruce, 1995).

The research and literature review resulted in the GDMS instrument comprising five decision-making styles: rational, dependent, intuitive, spontaneous, and avoidant. The total number of the items in the instrument is 25, with five items identified for each decision-making style. These decision-making styles are measured on a five-point Likert scale ranging from “strongly disagree” to “strongly agree.”

The GDMS has also been tested in studies by other researchers (e.g. Baiocco et al., 2008; Gambetti et al., 2008; Loo, 2000; Spicer & Sadler-Smith, 2005; Thunholm, 2004, 2008), and it has shown its sound validity. The studies examined the decision-making styles and their pattern of relationships; results indicated relative consistency.

Loo (2000) examined the GDMS instrument using a sample of 223 management undergraduates from eight classes. Participants also completed the Marlowe-Crowne Social Desirability scale and several classes completed the values scale of Fitzsimmons, Macnab, and Casserly (1985). He found that there were no significant gender differences in any of these styles.

Thunholm (2004) used a sample of 206 Swedish military officers from all services to explore the relationship between individual decision-making styles as measured by the General Decision-making Style (GDMS) instrument, developed by Scott and Bruce (1995), and some mental abilities theoretically related to decision-making. He found that the five different styles are not mutually exclusive, and the pattern of their interrelationships corresponds to the findings reported by Scott and Bruce (1995) that there was a negative relationship between rational and avoidant decision-making styles.

Another consistent finding was that, despite practicing one dominant style, people were likely to use various decision-making styles. The findings were also supported by Spicer and Sadler-Smith (2005) who examined the psychometric properties and construct validity of the GDMS in two independent samples, each comprising 200 undergraduates at two different United Kingdom university business schools. They found that the individuals exhibited various decision-making styles. These findings are consistent with Scott and Bruce's (1995) original findings.

Spicer and Sadler-Smith's (2005) research included gender, but they found no relationships between gender and the decision-making styles. These findings are similar to those of Baiocco, Laghi, and D'Alessio (2008). Baiocco, Laghi, and D'Alessio (2008) examined the psychometric properties and construct validity of the GDMS in a sample of 700 Italian students/adolescents (aged 15-19 years) in secondary school. They found that, among adolescents, older adolescents tended to exhibit more rational decision-making style and less intuitive, avoidant and spontaneous styles than the younger adolescents. The researchers also reported positive relationships between higher school achievement and rational decision-making style, but negative relationship between the number of absences from school and spontaneous and avoidant styles.

Thunholm (2008) used a sample of 23 male Swedish Army majors to make decisions in two different military situations. He found that the five decision-making styles were not mutually exclusive, and individuals did not rely on a single decision-making style. In particular, the overall pattern of positive and negative correlations

among the styles corresponds with prior research (Loo, 2000; Scott & Bruce, 1995; Thunholm, 2004).

A study conducted by Gambetti et al. (2008) examined the psychometric properties of the Italian version of the GDMS on a sample of 422 students of the University of Bologna; 230 students also completed the Italian version of the SOLAT (Style of Learning and Thinking) on the same occasion. Results indicated that the reliability of the GDMS scales had good internal consistency, the pattern of interrelationships confirmed previous findings, and the decision-making styles and thinking style assessed by the SOLAT scales gave concurrent validity to the GDMS.

The studies suggest acceptable validity and reliability of the GDMS instrument. The validity and reliability of the GDMS instrument is outlined in Subsection 3.2.2.1.

The four models of decision-making have been reviewed. Vroom and Jago's (1988) decision-making model comprises five styles. Based on the characteristics of the five styles, this decision-making model suggests that a decision-maker makes, but never avoids making, a decision with or without followers' participation. In contrast, Robbins' (2003) decision-making model has one style of decision-making (rational decision-making style). Rowe and Boulgarides' (1992) decision-making model (DST) comprises four decision-making styles. Based on the characteristics of the four styles, this decision-making model suggests that a decision-maker makes a decision ranging from a low tolerance for ambiguity and less concern for people than tasks to a high tolerance for ambiguity and more concern for people than tasks. Like Vroom and Jago's (1988) decision-making model, this model suggests that the decision-maker makes, and never avoids making, a decision. Finally, Scott and Bruce's (1995) GDMS comprises five styles. Unlike the other models, this model suggests that a decision-maker does not always make a decision. The GDMS seems to embrace the other three decision-making models. The GDMS instrument is appropriate to measure principal decision-making styles in an Indonesian school context due to its comprehensiveness and empirical validation (Galotti et al., 2006, p. 630).

Drawing from the above, this study employs Scott and Bruce's (1995) GDMS and aims to explore principal decision-making styles in secondary public schools in Lampung, Indonesia, because of paucity of research of this kind in an Indonesian school context. Hence, the second research question is proposed:

RQ 2: What decision-making style(s) do the principals mostly exhibit as perceived by the teachers?

2.5.3 Teacher Job Satisfaction

This subsection reviews teacher job satisfaction focused on its definition as a teacher attitude, importance, influencing variables, attitude-enhancing leadership, and instrument.

Although there is no generally agreed-upon definition, teacher job satisfaction is about a teacher's attitude to their job at schools. Tietjen and Myers (1998, p. 230) argue that an attitude serves as the bottom line in specifying behaviours. Attitude is an evaluative statement about people, events or objects. For example, if a teacher says, "I like my job," he/she is expressing an attitude about their job. Robbins et al. (2009) classifies an attitude based on three components: cognitive, affective, and behavioural. Cognitive component is someone's beliefs and opinions. Affective component is someone's feelings and emotions. Behavioural component is someone's intention to behave towards someone or something. For example, "Motivating students is good" (cognition); "The principal likes the teacher because the teacher motivates the students" (affect); "The principal gives a reward to the teacher" (behaviour).

Many studies found that teacher job satisfaction is very important (Boreham et al., 2006; Ngimbudzi, 2009; Seco, 2002; Skaalvik & Skaalvik, 2010). Judge, Thoresen, Bono, and Patton (2001) in Klassen and Chiu (2010, p. 742) and Sargent and Hannum (2005, p. 175) argue that job satisfaction is associated with higher levels of job performance. Subordinates with high satisfaction could outperform; in contrast, those with low satisfaction underperform.

The importance of teacher job satisfaction has motivated scholars to study variables that impact teacher job satisfaction. In the literature, these variables include at least two primary types: sources or factors of teacher job satisfaction and leadership.

Skaalvik and Skaalvik (2011, p. 2) argue that a number of variables influence teacher job satisfaction and dissatisfaction A number of studies attempted to seek sources or factors of teacher satisfaction and dissatisfaction These studies include (1) Boeve (2007), (2) Chen, Yang, Shiau, and Wang (2006), (3) Heesbeen, Benneker, and Boer (2008), (4) Lee (2006), (5) Wong and Wong (2005), and (6) Zembylas and Papanastasiou (2004). Their findings help compare teacher job satisfaction, for instance, between developed countries and developing countries.

Investigating factors (sources, or facets) that contribute to teacher job satisfaction and dissatisfaction help enhance teacher satisfaction. There has been much evidence of such research. Zembylas and Papanastasiou (2004) insisted that over the last two decades many studies (mostly conducted in developed countries such as Australia, England, New Zealand and the USA) have sought sources of teacher satisfaction and dissatisfaction, mostly found to be associated with intrinsic motivation, and reliant on individual and school characteristics. They provided an overview of the factors that contribute to teacher job satisfaction. These factors are: working with children, trying new ideas, participating in decision-making, reform efforts, social relations, self-esteem, use of valued skills, teacher autonomy/independence, warm relationships with students, and intellectual teaching challenge. However, many factors, such as work overload, students' discipline and behaviour problems, a lack of career growth, low respect for the profession, a lack of participation in decision-making and poor pay and benefits, contribute to teacher job dissatisfaction. Individual and school characteristics are other important factors that can determine teacher job satisfaction and dissatisfaction. For example, teachers with high expectations tend to be dissatisfied when schools do not meet their desires. Feeling satisfied and dissatisfied is subjective; thus, degrees of satisfaction and dissatisfaction are likely to be different from teacher to teacher. Therefore, in general, intrinsic motivation might be more dominant than extrinsic motivation to determine teacher job satisfaction in developed countries.

Bond, Gallinsky, and Swanberg (1997, p. 121) affirm that facets of pay and fringe benefits are often considered key determinants of teacher job satisfaction. This is supported by Carraher (2011, p. 35) who argues that pay is important to attract employees, and benefits are important to attract and retain employees.

Chen et al. (2006) conducted research on teacher job satisfaction in college teachers in developed countries—Europe and America—and found similar findings. Both European and American teachers emphasised welfare, fair promotion systems, and high salaries. Furthermore, Chen et al. (2006) contend that although most schools tended to improve dissatisfied or low quality attributes (e.g. teaching techniques) over time to enhance student performance, the attributes did not focus on the teacher requirements. As a result, a great amount of money spent on the dissatisfied attributes did not influence better teacher satisfaction. Unfortunately, dissatisfied teachers would result in poor student performance. Accordingly, poor student performance is claimed to reflect school failure; the school failure is claimed to be due to ineffective school leadership. Thus, school leadership is a 'core' milestone of school success or failure; in other words, school success or failure much depends on effective school leadership.

Another different aspect concerns equal promotional opportunities for male and female teachers. Wong and Wong (2005) revealed that, in Hong Kong schools, although similar percentages of promotion (35.5% and 32.2% for females and males respectively), female teachers were less satisfied than their counterparts, and male teachers who had not been promoted were believed to have a higher chance of being promoted than female teachers.

In the case of the relationship between teacher ownership and job satisfaction, using three different schools in the research (The Kulosaari Secondary School in Finland, The United World College of the Adriatic in Italy and State College High School in the United States of America), Heesbeen et al. (2008) reported that there was a strong and positive relationship between perceived teacher ownership and job satisfaction.

With different subjects, i.e. physician assistant (PA) faculty members, through a webpage instrument using Job Descriptive Index factors, Boeve (2007) from Eastern Michigan University discovered that faculty members were more satisfied than dissatisfied with their jobs in general, with education experience as their significant predictor for overall job satisfaction. The PA faculty members reported the greatest satisfaction in co-worker relation, followed by the work itself. However, they were least satisfied with salaries they obtained and advancement opportunities.

Most research on teacher job satisfaction has been conducted in developed countries with much less focus on teacher job satisfaction research in developing countries (Michaelowa & Wittmann, 2007, p. 52). However, several researchers have conducted similar research in developing countries. For example, Zembylas and Papanastasiou (2004) conducted research on teacher job satisfaction in Cyprus. They discovered that Cypriot teachers chose the profession due to time devoted to teaching, holidays, and pay. The degree of the Cypriot teacher satisfaction and dissatisfaction depended on "to what extent the motives met their expectations." There were two interesting findings in their research. First, teachers with longer tenure tended to be more satisfied than those with shorter tenure; this is likely to be because teachers with longer tenure gained higher pay than those with shorter tenure, or they learned to love their profession with time. Second, decreased teaching hours as a result of administrative work with greater involvement in decision-making could increase the level of teacher satisfaction. Extrinsic motivation exceeded intrinsic motivation to have an effect on teacher job satisfaction in Cyprus.

Like in Cyprus, NGO school teacher job satisfaction in Phnom Penh, Cambodia, was found to be mostly influenced by levels of pay and welfare (remunerative incentives). However, non-remunerative incentives such as principal leadership, school management, a meaningful sense of life through teaching, and career development, contributed to teacher job satisfaction as well (Lee, 2006). To some extent, Cypriot and Cambodian teachers indicate consistent requirements in terms of high salaries. Teachers in other developing countries, including Indonesia, are likely

to have a similar requirement; however, the literature of teacher job satisfaction is extremely little in an Indonesian school context.

In contrast to these studies that focused on factors that impact teacher job satisfaction, Bare-Oldham (1999) focused on leadership that impacts on teacher job satisfaction. Bare-Oldham (1999) supports the importance of teacher job satisfaction as an essential element for career decisions and argues that school leaders should systematically enhance teacher job satisfaction through behavioural models to influence teachers at schools. If teachers have a high level of job satisfaction, they will have a positive attitude towards their job. Satisfied teachers tend to be productive teachers; their happiness can contribute to working hard and committing to their job. They may have lower levels of absenteeism and turnover. Consequently, satisfied teachers may improve students' achievement because satisfied teachers can make students happy and motivate students to study hard. In contrast, dissatisfied teachers will have a negative attitude. They may not be productive and may not improve student performance. Loveren (2007) adds that leaders should lead in ways that motivate and inspire their subordinates, build effective communication, establish a culture of collaboration across the organisation, and help their subordinates reach personal growth in order to help achieve their job satisfaction.

Leadership can enhance teacher job satisfaction. Hinduan, Wilson-Evered, Moss, and Scannell (2009) argue that transformational leaders can enhance attitude because, in particular, according to Boseman (2008) transformational leaders can stimulate and satisfy followers' higher-level needs. These leaders have six central personality characteristics: empowerment, creativity, interaction, vision, passion, and ethics (Hackman & Johnson, 1991, in Bromley & Kirschner-Bromley, 2007). These characteristics can enhance satisfaction. However, empowerment is one of the most important characteristics of the transformational leader. Teacher empowerment makes teachers feel valued. They feel that they make a valuable contribution to schools. Empowered teachers can readily accomplish tasks and thus may enhance job satisfaction and produce a positive attitude. This is supported by Bass (1999, p. 10) who argues that transformational leadership fosters autonomy and challenging work and becomes increasingly important to followers' job satisfaction.

Teacher job satisfaction, focused on its definition as a teacher attitude, importance, influencing variables, attitude-enhancing leadership, and instrument, has been reviewed. Teacher job satisfaction is important. In particular, investigating facets of factors of job satisfaction will help enhance job satisfaction. The review of literature relating to teacher job satisfaction suggests a multifaceted-instrument is required to measure comprehensive facets of teacher job satisfaction. Spector's (1985) Job Satisfaction Survey (JSS) which consists of nine facets can be used to investigate teacher job satisfaction in an Indonesian school context.

2.5.3.1 Job Satisfaction Survey (JSS)

One comprehensive model and most widely used instrument to measure overall job satisfaction is Spector's (1985) Job Satisfaction Survey (JSS). This instrument consists of nine facets: pay, promotion, supervision, fringe benefits, contingent rewards, operation conditions, co-workers, nature of work, and communication.

Job Satisfaction Survey (JSS) is comprehensively applicable particularly to non-profit, public, and human service organisations. It was developed by Spector in 1985. JSS is a 36-item survey instrument designed to measure nine sub-scales of employee job satisfaction. JSS which is based on a six-point Likert scale is designed to yield a good measure of overall job satisfaction (Spector, 1985). Although JSS incorporates comprehensive facets, it is important to measure overall job satisfaction as a single concept, separated from its facets, because it is more than just a combination of those facets (Aletraris, 2010, p. 1132). Therefore, this thesis focuses both on overall teacher job satisfaction in addition to its individual facets and possible predictors. These possible predictors are principal leadership styles and principal decision-making styles. The validity and reliability of the JSS are outlined in Subsection 3.2.2.1.

The review of teacher job satisfaction was focused on its definition as a teacher attitude, importance, influencing variables, attitude-enhancing leadership, and instrument. Teacher job satisfaction is important. Job satisfaction and the variables

that impact it have been the focus of researchers and management scholars for more than seven decades (Tillman & Tillman, 2008, p. 1), and much research has focused on job satisfaction predictors (Aletraris, 2010, p. 1132). In the education sector, teacher job satisfaction in general has attracted a broad range of pedagogical research. However, only little attention has been paid to teacher job satisfaction research in developing countries (Michaelowa & Wittmann, 2007, p. 52), particularly in an Indonesian school context. Therefore, studies on teacher job satisfaction in association with the variables that impact on it, particularly leadership styles and decision-making styles, in an Indonesian school context, will extend the body of knowledge and contribute to an increased understanding of school leadership in Indonesian schools.

Based upon the above literature review on teacher job satisfaction, this study employs Spector's (1985) JSS and aims to explore teacher job satisfaction with respect to the teachers' preference and the associated data because of lack of research investigating job satisfaction in an Indonesian school context. Hence, the next research questions are proposed:

RQ 3: What job satisfaction facet(s) do the teachers mostly prefer? How satisfied are they in general?

RQ 4: How does teacher job satisfaction vary with: tenure (number of years) with current principal, total tenure, qualification, and job level?

RQ 5: How does teacher job satisfaction vary with: gender, marital status, certification, and school location?

2.5.4 Relationships

This subsection reviews the relationships between the variables. These relationships are between: (1) leadership styles and decision-making styles, (2) leadership styles and job satisfaction, (3) decision-making styles and job satisfaction, and (4) leadership styles and decision-making styles, and job satisfaction.

2.5.4.1 Leadership Styles and Decision-making Styles

Leadership styles are related to decision-making styles as reported by Kao and Kao (2007) who surveyed executives at Taiwanese-investment companies in Shanghai, China. This is supported by Tatum et al. (2003) who argue that as leaders have different leadership styles, they may also have different decision-making styles because the different leadership styles should be used with different decision-making styles. This led Tatum et al. (2003) to question whether transformational, transactional, or laissez-faire leaders practice different decision-making styles. The decision-making styles of a leader vary with the amount of information the leader has, the number of choices he/she considers, and sources of input he/she has. According to them, it is reasonable that prior to making a decision, a transformational leader uses a comprehensive or rational decision-making style; he/she considers more information and more alternatives and listens to more people. In contrast, a transactional leader tends to use more limited information and fewer alternatives, and laissez-faire leaders try to avoid decision-making (Tatum et al., 2003, p. 1007). Finally, Tatum et al. (2003, p. 1012) contend that transformational, transactional, and laissez-fair leadership styles tend to be related to particular decision-making styles.

Similarly, using a sample of 98 officers of a large manufacturing organisation in India, Tambe and Krishnan (2000) found a positive relationship between transformational leadership and rational decision-making style, a negative relationship between transformational leadership and avoidant decision-making-style; while, avoidant decision-making style moderated the relationship between transformational leadership and rational decision-making style.

In general, there are relationships between leadership styles and decision-making styles. However, very few studies have investigated these relationships, particularly in an Indonesian school context.

2.5.4.2 Leadership Styles and Job Satisfaction

Just as leadership styles are related to decision-making styles, leadership styles are related to job satisfaction. A number of researchers have found the relationships between leadership style and job satisfaction.

Results of a study by Walumbwa et al. (2005) in Kenyan and US Financial Firms indicated that transformational leadership had a positive and strong impact on job satisfaction and organisational commitment in both cultures.

Elpers and Westhuis (2008) conducted a national survey using the Leadership Practices Inventory (LPI)-Observer which consists of 30 statements that use a 10-point frequency scale, ranging from 1 (almost never) to 10 (almost always). The 30 statements describe five leadership practices: (1) challenging the process, (2) inspiring a shared vision, (3) enabling others to act, (4) modelling the way, and (5) encouraging the heart. Each of the five practices encompasses six statements from the 30-item inventory. The chief result was that organisational leadership influenced job satisfaction.

Another researcher, Erkutlu (2008) surveyed a sample of 722 subjects (60 managers and 662 non-managerial employees) from 60 boutique hotels with Multifactor Leadership Questionnaire (MLQ), Organisational Commitment Questionnaire (OCQ) and Job Descriptive Index (JDI) to measure leadership, commitment, and job satisfaction respectively. Results indicated that transformational leadership was significantly and positively related to job satisfaction (Erkutlu, 2008, p. 715).

Using a survey of all elementary schools in a large metropolitan suburban school district in the United States of America, Griffith (2004) reported that principals practiced transformational leadership style. The principals displayed the following dimensions of transformational behaviours: inspiration or charisma, individualised consideration, and intellectual stimulation. The principal transformational leadership

style showed a strong, positive and significant relation to staff job satisfaction (Griffith, 2004, p. 345).

In Tanzania, Nguni, Sleegers, and Denessen (2006) conducted a survey of 700 primary school teachers from 70 schools located in five districts in the eastern educational zone of Tanzania. They found that principal transformational leadership style had a positive and significant effect on teacher job satisfaction.

In another school context, Ejimofor (2007) conducted a study with a sample of 518 secondary school teachers and 48 principals from two large Local Government Areas in South-eastern Nigeria. The results showed that principal transformational leadership significantly influenced teacher job satisfaction, and long-term principals in their positions perceived themselves more transformational than short-term principals.

These findings suggest that transformational leadership is related to job satisfaction. Transformational leaders tend to give more job satisfaction to subordinates because they pay attention to individual's needs; in contrast, transactional leaders simply focus on exchange reward with subordinates. However, the literature on the relationships between leadership styles, particularly transformational leadership style, and teacher job satisfaction is extremely little in an Indonesian school context.

2.5.4.3 Decision-Making Styles and Job Satisfaction

The literature on the relationships between decision-making styles and job satisfaction is extremely little.

Only one study that supports the relationship between decision-making styles and job satisfaction was found. Kand and Rekor (2005) surveyed nurses in Estonia and revealed that perceived involvement in decision-making was a determinant of job satisfaction; increasing the involvement in decision-making contributed to a positive influence on job satisfaction.

However, decision-making styles are possibly related to job satisfaction; in particular, rational decision-making style is possibly positively related to job satisfaction. This is because leadership styles are related to decision-making styles (Kao & Kao, 2007). In particular, transformational leadership style is positively related to rational decision-making style (Tambe & Krishnan, 2000), and transformational leadership style is positively related to job satisfaction (Griffith, 2004, p. 345).

A recommendation of this thesis is that the lack of research on the relationships between decision-making styles and job satisfaction is an avenue for further research. Therefore, investigating the relationships between decision-making styles and job satisfaction in an Indonesian school context will extend the body of knowledge.

2.5.4.4 Leadership Styles, Decision-making Styles, and Job Satisfaction

Research has revealed the relationships between leadership styles, decision-making styles, and job satisfaction. For example, Loveren (2007) surveyed deans, development officers, central development staff, and unit development staff at the University of South Florida via email. The results revealed that perceptions of leadership, decision-making and relationships are strongly related to their perceived organisational outcomes such as job satisfaction, trust, and commitment. Other researchers (e.g. Fuller et al., 1999; Gellis, 2001; Mary, 2005; Elpers & Westhuis, 2008) supported the findings that the transformational leadership style with participatory decision-making was associated with employees' organisational outcomes (job satisfaction, organisational performance, and commitment).

In the school context, results also indicated that principal transformational leadership positively affected teacher job satisfaction. Then, through teacher job satisfaction, transformational leadership negatively affected teacher turnover and positively affected student achievement. This research was conducted in school setting in the United States of America and the results add to the evidence that the theory of transformational leadership describes effective leadership in a variety of settings, including public educational settings (Griffith, 2004).

The relationships between the variables were divided into four categories: (1) leadership styles and decision-making styles, (2) leadership styles and job satisfaction, (3) decision-making styles and job satisfaction, and (4) leadership styles and decision-making styles, and job satisfaction. It was found that these relationships were mostly significant. However, there is little literature on the relationships between leadership styles, decision-making styles, and job satisfaction, particularly in an Indonesian school context.

Based upon the above literature on the relationships between the variables and the dearth of literature on these topics in an Indonesian school context, this study aims to compare self-perceived principal leadership styles and teacher-perceived leadership styles and examine principal leadership styles and principal decision-making styles in association with teacher job satisfaction, including their possible use in predicting teacher job satisfaction. Hence, the next research questions are proposed:

RQ 6: How do self-perceived principal leadership styles compare with teacher-perceived principal leadership styles?

RQ 7: What are the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction?

RQ 8: Can leadership styles and decision-making styles significantly predict teacher job satisfaction? If they can, which best predicts teacher job satisfaction?

RQ 9: Can the model significantly predict teacher job satisfaction after the possible effects of last education, tenure with current principal, and school location of participants are controlled for?

2.6 Conclusion

The three major themes: leadership, decision-making, and job satisfaction have been reviewed. This chapter demonstrated the paucity of literature dealing with principal leadership styles, principal decision-making styles, and teacher job satisfaction. Important gaps include a lack of literature on principal leadership styles, decision-making styles, and teacher job satisfaction in the Indonesian school context. Hence, the research problem identified for this thesis is:

What are the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia?

The research gaps identified in the literature and related to these three themes can be specified into six:

1) Leadership studies, including school leadership studies, have been mostly conducted in western countries, particularly in USA, but few in Asian countries, with fewer in Indonesia.
2) Much research on teacher job satisfaction has been conducted in developed countries, but little research has been conducted in developing countries, particularly in Indonesia.
3) The relationship between leadership styles and decision-making styles is poorly investigated in an Indonesian school context.
4) Most prior studies have found that transformational leadership was significantly related to job satisfaction, but limited evidence has been found in developing countries, particularly in Indonesia.
5) The relationship between decision-making styles and job satisfaction is poorly investigated in an Indonesian school context.
6) Few studies have investigated the relationships between leadership styles, decision-making styles, and job satisfaction.

This thesis addresses the above six gaps. The nine research questions were formulated to help close the research gaps.

The challenge then is to understand principal leadership for Indonesian schools with respect to principal leadership styles, principal decision-making styles, and their possible use as indicators to predict teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia.

The principal leadership styles and principal decision-making styles are according to the teachers' perceptions because the followers' opinion is more important than the

leader's opinion (Cubero, 2007, p. 352). These research questions are addressed in Chapter 4 and conclusions drawn in Chapter 5.

The next chapter develops the research methodology to answer the nine research questions.

III. RESEARCH METHODOLOGY

3.0 Introduction

Chapter 1 outlined the research methodology of this thesis, and the approach that this thesis takes to explore the issue of leadership styles, decision-making styles, and job satisfaction in an Indonesian school context. The research problem is:

What are the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia?

Chapter 2 reviewed the literature on leadership styles, decision-making styles, and job satisfaction, with particular focus on an Indonesian school context and identified important gaps in the literature. The nine research questions were formulated to help address the research problem and thus close some of these gaps.

This chapter mainly discusses research designs, research methods, and data analysis techniques, including their uses. This chapter also presents the research context issues with respect to Indonesia and schools. The primary purpose of this chapter is to justify what research design, research method, and data analysis techniques are considered the most appropriate for addressing the nine research questions.

3.1 Research Design

There are three types of research design: quantitative, qualitative, and mixed research. These three types of research design are discussed to select which research design is the most appropriate to address the research problem and the nine research questions. Quantitative research design based on survey questionnaires has been

chosen for this study as it is considered the best approach to address the research problem and the nine research questions of this study.

This section discusses definition of research design, components of research design, types of research design, selection of research design, and reasons for choosing a quantitative approach and reasons for not adopting the other approaches.

3.1.1 Definition of Research Design

Research design has various definitions. According to Creswell (2009, p. 3), research design is a research plan and procedures that span the decisions from broad assumptions to detailed methods of data collection and analysis. While, according to Trochim (2006), research design is a design that provides the glue that holds the research project together and is used to structure the research, to show how all the major parts of the research project—the samples or groups, measures, treatments or programs, and methods of assignments—work together to try to address the central research questions. Practically, these two definitions suggest that research design is a structure that guides the research direction to consider data collection methods and analysis techniques to address research questions.

Research design can also be known by other terms. For example, Walter (2006, pp. 10-11) labelled research design "research method"—the technique or practice used to gather and analyse the research data, while Johnson and Christensen (2004 p. 30, 2008 p. 33) labelled it "research paradigm." Sometimes the terms are used interchangeably (Creswell, 2009). However, the term "research design" is mostly used in this study instead of "research method" or "research paradigm."

3.1.2 Components of Research Design

A research design includes three components (Creswell, 2009). These are (1) philosophical worldviews, (2) strategies of inquiry, and (3) specific research methods. In other words, a research design involves interconnectedness of the three components as shown in Figure 3.1-1.

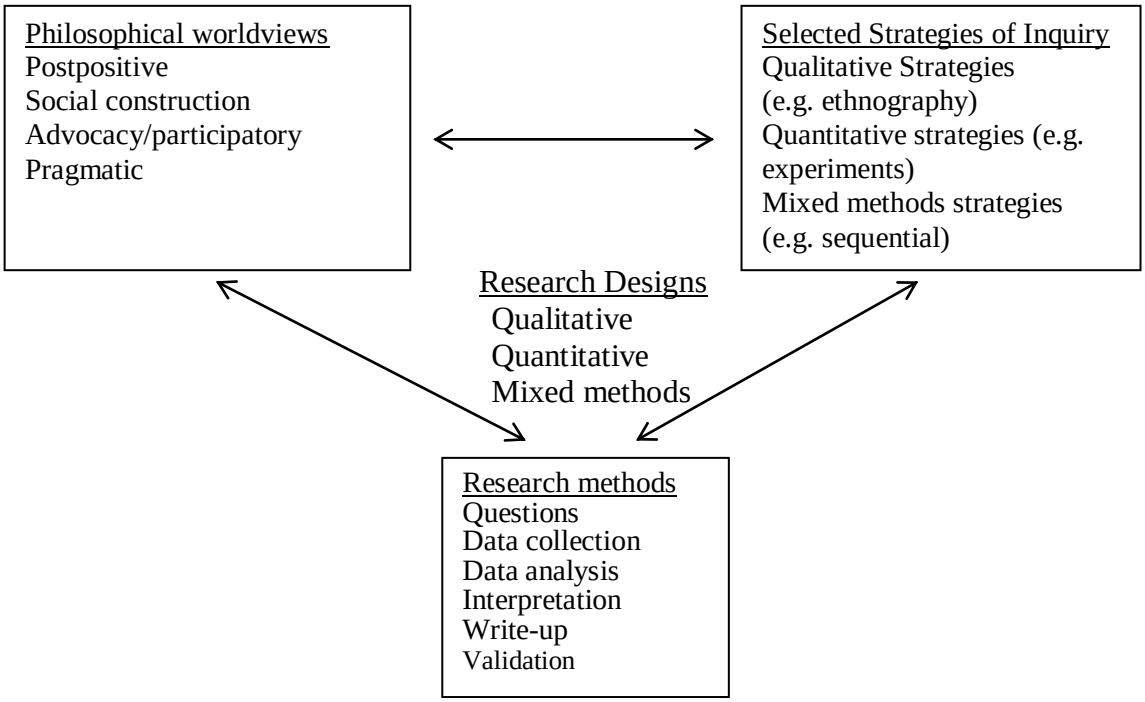

Figure 3.1-1 A framework for design—the interconnectedness of worldviews, strategies of inquiry, and research methods

Source: Creswell (2009, p. 5)

3.1.2.1 Philosophical Worldviews

The first component of a research design is worldview. Creswell (2009) affirms that the term "worldview" meaning "a basic set of beliefs that guide actions" is derived from Guba (1990) instead of *paradigm* (Lincoln & Guba, 2000; Mertens, 1998), *epistemologies* and *ontologies* (Crotty, 1998), or *broadly conceived research methodologies* (Neuman, 2000). Creswell sees worldviews as a general orientation about the world and the nature of research that a researcher holds, and these worldviews tend to incorporate a research design: a quantitative, qualitative, or mixed research approach. Creswell categorises worldviews into four types with the major elements as shown in Table 3.1-1.

Table 3.1-1 Categorisation of worldviews

Four Worldviews	
Postpositivism	Constructivism
- Determination - Reductionism - Empirical observation and measurement - Theory verification	- Understanding - Multiple participant meanings - Social and historical construction - Theory generation
Advocacy/Participatory	Pragmatism
- Political - Empowerment issue-oriented - Collaborative - Change-oriented	- Consequences of actions - Problem-centred - Pluralistic - Real-world practice oriented

Source: Creswell (2009, p. 6)

The first worldview, postpositivism, is typically associated with quantitative approaches. The second worldview, constructivism, is typically associated with qualitative approaches. The third worldview, advocacy and participatory, is typically associated with qualitative more than quantitative approaches. The final worldview, pragmatism, is typically associated with mixed methods research (Creswell & Clark, 2007, pp. 22-23).

These four worldviews have common elements but take different standpoints. These four worldviews represent different views on the nature of reality (ontology), how to gain knowledge of what we know (epistemology), the role values played in research (axiology), the process of research (methodology), and the language of research (rhetoric) (Lincoln & Guba, 2000; Creswell, 2003; in Creswell & Clark, 2007, p. 23). Table 3.1-2 shows examples of how these elements and worldviews are translated into practice.

Table 3.1-2 Common elements of worldviews and implications for practice

Worldview element	Postpositivism	Constructivism	Advocacy and participatory	Pragmatism
Ontology (What is the nature of	Single reality (e.g. researchers	Multiple realities (e.g. researchers	Political reality (e.g. findings are negotiated with	Singular and multiple realities (e.g.

reality?)	reject or fail to reject hypotheses)	provide quotes to illustrate different perspectives)	participants)	researchers test hypotheses and provide multiple perspectives)
Epistemology (What is the relationship between the researcher and that being researched?)	Distance and impartiality (e.g. researchers objectively collect data on instruments)	Closeness (e.g. researchers visit participants at their sites to collect data)	Collaboration (e.g. researchers actively involve participants as collaborators)	Practicality (e.g. researchers collect data by "what works" to address research questions)
Axiology (What is the role of values?)	Unbiased (e.g. researchers use checks to eliminate bias)	Biased (e.g. researchers actively talk about their biases and interpretations)	Biased and negotiated (e.g. researchers negotiate with participants about interpretations)	Multiple stances (e.g. researchers include both biased and unbiased perspectives)
Methodology (What is the process of research?)	Deductive (e.g. researchers test an a priori theory)	Inductive (e.g. researchers start with participants' views and build "up" to patterns, theories, and generalisations)	Participatory (e.g. researchers involve participants in all stages of the research and engage in cyclical reviews of results)	Combining (e.g. researchers collect both quantitative and qualitative data and mix them)
Rhetoric (What is the language of research?)	Formal style (e.g. researchers use agreed-on definitions of variables)	Informal style (e.g. researchers write in a literary, informal style)	Advocacy and change (e.g. researchers use language that will help bring about change and advocate for participants)	Formal or informal (e.g. researchers may employ both formal and informal styles of writing)

Source: Creswell and Clark (2007, p. 24)

3.1.2.2 Strategies of Inquiry

The second component of a research design is strategies of inquiry. Strategies of inquiry, also called research methodologies by Mortens (1998), are types of qualitative, quantitative, and mixed methods designs or models that provide specific direction for procedures in a research design (Creswell, 2009). Researchers can

decide which type of strategy of inquiry is appropriate for their studies. These strategies of inquiry are associated with quantitative, qualitative, and mixed methods approaches as shown in Table 3.1-3.

Table 3.1-3 Strategies of inquiry

Strategies of inquiry		
Quantitative	Qualitative	Mixed Methods
- Experimental designs - Non-experimental designs such as surveys	- Narrative research - Phenomenology - Ethnography - Grounded theory - Case study	- Sequential - Concurrent - Transformative

Source: Creswell (2003, 2009)

The quantitative approach offers two strategies of inquiry. These are (1) experimental designs, including true experiments and quasi-experiments; and (2) non-experimental designs such as surveys, including cross-sectional and longitudinal studies (Creswell, 2003, 2009). In true experiments also known as randomised experiments, researchers use a technique of random assignment for assigning a sample to different groups or treatments. In quasi-experiments, researchers do not use random assignment but use a control group or multiple measures. In non-experimental design, researchers do not use either random assignment or a control group/multiple measures (Trochim, 2006).

The qualitative approach offers five strategies of inquiry. These are (1) narrative research, (2) phenomenology, (3) ethnography, (4) grounded theory, and (5) case study. In narrative research, researchers study the lives of individuals and ask one or more individuals to provide stories about their lives. In phenomenology, researchers identify the "essence" of human experiences concerning a phenomenon. In ethnography, researchers study an intact cultural group in a natural setting over a prolonged period of time by collecting, primarily, observational data. In grounded theory, researchers attempt to derive a general, abstract theory of a process, action, or

interaction grounded in the views of participants in a study. Last, in case study, researchers explore in depth a program, an event, an activity, a process, or one or more individuals (Creswell, 2003, 2009).

The mixed methods approach offers three general strategies of inquiry. These are (1) sequential procedures, (2) concurrent procedures, and (3) transformative procedures. In sequential procedures, researchers seek to elaborate on or expand on the findings of one method with another method. In concurrent procedures, researchers merge qualitative and quantitative data in order to provide a comprehensive analysis of the research problem. Last, in transformative procedures, researchers employ a theoretical lens as an overarching perspective within a design containing both qualitative and quantitative data (Creswell, 2003, 2009).

3.1.2.3 Research Methods

The last component of a research design is specific research methods. Research methods are a variety of techniques that researchers employ to study phenomena. These specific research methods involve the forms of data collection, analysis, and interpretation (Creswell, 2009). These research methods are shown in Table 3.1-4.

Table 3.1-4 Quantitative, qualitative, and mixed methods

Research methods		
Quantitative methods	Mixed methods	Qualitative methods
- Pre-determined - Instrument-based questions - Performance data, attitude data, observational data, and census data - Statistical analysis - Statistical interpretation	- Both pre-determined and emerging methods - Both open-ended and closed-ended questions - Multiple forms of data drawing on all possibilities - Statistical and text analysis - Across data-bases interpretation	- Emerging methods - Open-ended questions - Interview data, observation data, document data, and audio-visual data - Text and image analysis - Themes, patterns interpretation

Source: Creswell (2009, p. 15)

Table 3.1-4 shows the range of methods that researchers can consider to collect- data, analyse data, and interpret results to address research questions. For example, in

quantitative research, quantitative data are collected, analysed, and interpreted; hence, quantitative methods are best for this quantitative research. In mixed methods research, both quantitative and qualitative data are collected, analysed, and interpreted; so, mixed methods are best for this mixed methods research.

The three components of research designs (worldviews, strategies of inquiry, and research methods) have been discussed. Each component contributes to a research design that tends to be quantitative, qualitative, or mixed (Creswell, 2009, p. 15) and must be carefully considered when designing the research to answer the research problem.

3.1.3 Types of Research Design

There are three types of research design: quantitative, qualitative, and mixed research methods. Quantitative research is a means used to test objective theories by examining the relationship among variables. Qualitative research is a means used to explore and understand the meaning individuals or groups ascribe to a social or human problem. Mixed methods research also termed "triangulation" (Walter, 2006, p. 11) is a means used to associate both quantitative and qualitative forms (Creswell, 2009, p. 4).

These research designs result from the intersection of three components of a research design: philosophical worldviews, strategies of inquiry, and specific research methods and they should not be described as contradictory but should be described as occupying different points on a single continuum (see Figure 3.1-2). A study tends to be more quantitative than qualitative or vice versa, and mixed methods research exists in the middle of this continuum because it encompasses elements of both quantitative and qualitative approaches (Creswell, 2009).

Qualitative research Mixed methods research Quantitative research

Figure 3.1-2 Research continuum
Source: Johnson and Christensen (2008 p. 33)

Each type of research design has its own distinct characteristics that enable researchers to choose an approach. These characteristics are outlined in Table 3.1-5.

Table 3.1-5 Characteristics of the three research designs

Tend to or Typically…	Qualitative Approaches	Quantitative Approaches	Mixed methods Approaches
Use these philosophical assumptions	Constructivist/advocacy/ participatory knowledge claims	Post-positivist knowledge claims	Pragmatic knowledge claims
Use these strategies of inquiry	Phenomenology, grounded theory, ethnography, case study, and narrative	Surveys and experiments	Sequential, concurrent, and transformative
Use these methods	Open-ended questions, emerging approaches, text or image data	Close-ended questions, predetermined approaches, numeric data	Both open- and close-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis
Use these practices of research as the researcher	Positions him- or herself Collects participant meanings Focuses on a single concept or phenomenon Brings personal values into the study Studies the context or setting of participants Validates the accuracy of findings Makes interpretations of the data Creates an agenda for change or reform Collaborates with the participants	Tests or verifies theories or explanations Identifies variables to study Relates variables in questions or hypotheses Uses standards of validity and reliability Observes and measures information numerically Uses unbiased approaches Employs statistical procedures	Collects both quantitative and qualitative data Develops a rationale for mixing Integrates the data at different stages of inquiry Presents visual pictures of the procedures in the study Uses the practices of both quantitative and qualitative research

Source: Creswell (2009, p. 17)

In addition to showing the integration of the three components of research design (philosophical worldviews, strategies of inquiry, and specific research methods), Table 3.1-5 shows scenarios illustrating how these three components combine into a research design.

3.1.3.1 Quantitative Approach

Quantitative research approach holds a postpositivist worldview, and uses experimental strategy of inquiry, and pre- and post-test measures of attitudes. "In this scenario, the researcher tests a theory by specifying narrow hypotheses and the collection of data to support or refute the hypotheses. An experimental design is used in which attitudes are assessed both before and after an experimental treatment. The data are collected on an instrument that measures attitudes, and the information is analysed using statistical procedures and hypothesis testing" (Creswell, 2009, p. 16).

Quantitative research depends primarily on the collection of quantitative data (Johnson & Christensen, 2004) that can be analysed by statistical techniques and is often used to test objective theories by establishing relationships between the research variables (Creswell, 2009; Walter, 2006).

Variables are very important in quantitative research because they are usually used to describe and predict aspects of the world. A variable refers to a characteristic of data that has more than one category and varies between different values (Howell, 2007; Walter, 2006). A variable is categorised based on two components: (1) the level of measurement and (2) the role it takes. The types of variables are shown in Table 3.1-6.

Table 3.1-6 Types of variables and their characteristics

Type of variable	Key characteristic	Example
Level of measurement		
Categorical variable	A variable that is made up of different kinds of categories of a phenomenon.	The variable *gender* is made up of the categories of male and female.
Quantitative variable	A variable that varies in degree or amount of a phenomenon.	The variable of annual income varies from zero income to a very high income level.
Role of the variable		
Independent variable (IV)	A variable that is presumed to cause change to occur in another variable, a causal variable.	Amount of studying (IV) affects test grades (DV).

Dependent variable (DV)	A variable that changes because of another variable, the effect or outcome variable.	Amount of studying (IV) affects test grades (DV).
Mediating variable (intervening variable)	A variable that comes in between other variables, and helps to delineate the process through which variables affect one another	Amount of studying (IV) leads to input and organisation of knowledge in long-term memory (mediating variable), which affects test grades (DV).
Moderating variable	A variable that delineates how a relationship of interest changes under different conditions or circumstances.	Perhaps the relationship between studying (IV) and test grades (DV) changes according to the different levels of use of a drug such as Ritalin (moderator).
Control variable	A special type of independent variable that a researcher measures because it potentially affect the dependent variable	
Confounding (or spurious, or third) variable	A variable that is not actually measured or observed because its influence cannot be directly detected.	

Source: Adapted from Creswell (2009, pp. 50-51) and Johnson and Christensen (2004 p. 36)

There are two types of quantitative research: (1) experimental research and (2) non-experimental research. Experimental research is the research designed to ferret out cause-and-effect relationships and can be conducted in a variety of settings such as field, laboratory, and internet. In this research, an independent variable is manipulated to determine its effect on a dependent variable. This research is the strongest research method for providing evidence of a causal relationship between two variables. However, in certain cases, researchers may not be able to conduct an experiment for some reason, even though they are interested in causality. For example, the independent variable cannot be manipulated or it would be unethical to manipulate it. Therefore, in these cases, the researchers use non-experimental research (Johnson & Christensen, 2008 pp. 41-43).

In non-experimental research, an independent variable is not manipulated by the researchers; while non-experimental researchers study the world as it exists. This research is very important to the field of education because many educational variables such as age and gender cannot be manipulated. There are two types of non-experimental research: causal-comparative research and correlational research. Causal-comparative research refers to non-experimental research where the primary independent variable of interest is categorical; while, correlational research refers to non-experimental research where the primary independent variable of interest is quantitative. However, practically, one or more categorical independent variables and one or more quantitative independent variables are included in the same research study, thus this non-experimental research study is a cross between both causal-comparative and correlational (Johnson & Christensen, 2004)

Conducting non-experimental research should follow systematic steps. The typical steps in non-experimental research are similar to the steps in experimental research. These are: (1) determining the research problem and the research hypotheses to be tested, (2) selecting the variables to be used in the study, (3) collecting the data, (4) analysing the data, and (5) interpreting the results of the study (Johnson & Christensen, 2008).

As with all research designs, quantitative research has strengths and weaknesses. Table 3.1-7 identifies the strengths and weaknesses of quantitative research.

3.1.3.2 Qualitative Approach

Qualitative research approach holds constructivist worldview, ethnographic design, and observation of behaviour. In this scenario, "the researcher seeks to establish the meaning of a phenomenon from the views of participants. This means identifying a culture-sharing group and studying how it develops shared patterns of behaviour over time (i.e. ethnography). One of the key elements of collecting data in this way is to observe participants' behaviours by engaging in their activities" (Creswell, 2009, p. 16).

Unlike quantitative research that depends primarily on the collection of quantitative data, qualitative research depends primarily on the collection of qualitative data (Johnson & Christensen, 2004) and "is concerned with exploring the understandings and meanings that people attribute to their social world" (Walter, 2006, p. 11).

Qualitative research as with quantitative research has strengths and weaknesses. These are illustrated in Table 3.1-7.

3.1.3.3 Mixed Methods Approach

Mixed research approach holds a pragmatic worldview, and collects both quantitative and qualitative data sequentially. In this scenario, "the researcher bases the inquiry on the assumption that collecting diverse types of data best provides an understanding of a research problem. The study begins with a broad survey in order to generalise results to a population and then, in a second phase, focuses on qualitative, open-ended interviews to collect detailed views from participants" (Creswell, 2009, p. 18).

Mixed methods research is the class of research that involves combining quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study (Johnson & Christensen, 2004; Johnson & Onwuegbuzie, 2004) where the researcher can gain advantages of each research design and reduce the limitations of a single method (Walter, 2006). It uses three types of inquiry logic: (1) induction, (2) deduction, and (3) abduction. Induction refers to discovery of patterns so that a researcher produces novel hypotheses and grounded theories. Conversely, deduction refers to testing of hypotheses and theories. Abduction refers to uncovering and relying on the best of a set of explanations for understanding one's results (de Waal, 2001, in Johnson & Onwuegbuzie, 2004).

Like quantitative research and qualitative research, mixed methods research has strengths and weaknesses as illustrated in Table 3.1-7.

Table 3.1-7 Strengths and weaknesses of the three research designs

	Quantitative Research	Mixed Research	Qualitative Research
Strengths	- Testing and validating already constructed theories about how (and to a lesser degree, why) phenomena occur. - Testing hypotheses that are constructed before the data are collected. Can generalise research findings when the data are based on random samples of sufficient size. - Can generalise a research finding when it has been replicated on many different populations and subpopulations. - Useful for obtaining data that allow quantitative predictions to be made. - The researcher may construct a situation that eliminates the confounding influence of many variables, allowing one to more credibly assess cause-and-effect relationships. - Data collection using some quantitative methods is relatively quick (e.g. telephone interview). - Provide precise, quantitative numerical data. - Data analysis is relatively less time consuming (using statistical software). - The research results are relatively independent of the researcher (e.g. effect size, statistical significance). - It may have higher credibility with many people in power (e.g. administrators, politicians, people who fund programs). - It is useful for studying	- Words, pictures, and narrative can be used to add meaning to numbers. - Numbers can be used to add precision to words, pictures, and narrative. - Can provide quantitative and qualitative research strengths. - Researcher can generate and test a grounded theory. - Can answer a broader and more complete range of research questions because the researcher is not confined to a single method or approach. - A researcher can use the strengths of an additional method to overcome the weaknesses in another method by using both in a research study. - Can provide stronger evidence for a conclusion through convergence and corroboration of findings.	- The data are based on the participants' own categories of meaning. - It is useful for studying a limited number of cases in depth. - It is useful for describing complex phenomena. - Provides individual case information. - Can provide cross-case comparisons and analysis. - Provides understanding and descriptions of people's personal experiences of phenomena (i.e. the "emic" or insider's view point). - Can describe, in rich detail, phenomena as they are situated and embedded in local contexts. - The researcher identifies contextual and setting factors as they relate to the phenomenon of interest. - The researcher can study dynamic process (i.e. documenting sequential patterns and change). - The researcher can use the primary qualitative method of "grounded theory" to generate inductively but explanatory theory about phenomenon. - Can determine how participants interpret "constructs" (e.g. self-esteem, IQ). - Data are usually collected in naturalistic settings in qualitative research. - Qualitative approaches are responsive to local situations, conditions, and stakeholders'

	large number of people.		needs.
Weaknesses	- The researcher's categories that are used may not reflect local constituencies' understandings. - The researcher's theories that are used may not reflect local constituencies' understandings. - The researcher may miss out on phenomena occurring because of the focus on theory or hypotheses testing rather than on theory or hypothesis generation (called the confirmation bias). - Knowledge produced may be too abstract and general for direct application to specific local situations, contexts, and individuals.	- Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team. - Researcher has to learn about multiple methods and approaches and understand how to mix them appropriately. - Methodological purists contend that one should always work within either a qualitative or a quantitative paradigm. - More expensive. - More time consuming. - Some of the details of mixed research remain to be worked out by research methodologists (e.g. problems of paradigm mixing, how to qualitatively analyse quantitative data, how to interpret conflicting results).	- Knowledge produce may not generalise to other people or other settings (i.e. findings may be unique to the relatively few people included in the research study). - It is difficult to test hypotheses and theories. - It is difficult to make quantitative predictions. It may have lower credibility with some administrators and commissioners of programs. - It generally takes more time to collect the data when compared to quantitative research. - Data analysis is often time consuming. - The results are more easily influenced by the researcher's personal biases and idiosyncrasies.

Source: Johnson and Onwuegbuzie (2004, pp. 19-21)

3.1.4 Selection of Research Design

Researchers need to consider multiple criteria in order to select an appropriate research design. However, scholars may have different views of what criteria or factors are important in selecting a research design. For example, Walter (2006) suggests that three criteria need to be considered when selecting an appropriate research design: (1) understanding a wide range of research designs, (2) acknowledging that all research designs have strengths and weaknesses, and (3) selecting the research design to suit the research project. Selecting an appropriate research design effectively needs to have a good understanding of available research

designs and their elements, but this does not mean that a researcher needs to be an expert in all research designs (Walter, 2006).

Creswell (2009, p. 18) extends the discussion of selection of research design by Walter (2006) by emphasising three other criteria influencing a researcher's choice of a research design. These are: (1) research problem, (2) personal experiences, and (3) audience, in addition to world view, strategy, and methods. The first criterion, a research problem, refers to an issue that leads to the need for research; particular research problems call for particular research designs. To illustrate, a quantitative research design is best to use for the following: testing a theory or explanation, the identification of factors that influence an outcome, the utility of intervention, or understanding the best predictors of outcomes. Conversely, a qualitative research design is useful when the researcher does not know the important variables to examine because the topic is new and has never been investigated. When either quantitative or qualitative design is inadequate to best understand a research problem, a mixed methods research design is useful.

The next criterion that influences a researcher's choice of a research design is personal experience. A researcher who is familiar with statistics, scientific writing, statistical programs, and quantitative journals tends to use quantitative research design. Conversely, a researcher who has experiences in personal interviews, qualitative method training, and literary writing would most likely choose qualitative research design. A researcher who is familiar with both qualitative and quantitative research designs and has sufficient time and budget would most likely choose mixed methods research design. Finally, audience is another criterion that influences a researcher's choice of research design. The experiences of audiences such as graduate committees and journal editors can influence a researcher's choice (Creswell, 2009).

The different criteria proposed by scholars should be seen as complementary in selecting an appropriate research design. Other important criteria such as the skills of researchers and their limitations in terms of time and budget should also be

considered because the success of research can depend on how well researchers design and conduct research within available time and budget constraints.

Which research design is superior? "Arguing one is better or more valid is like arguing which is the most genuine and useful part of an egg, the white or the yolk" (Walter, 2006, p. 23). Even mixed methods research is not inherently superior to mono-method research. Success of which research design is used depends on some factors or criteria as previously suggested by Walter (2006) and Creswell (2009, p. 18).

3.1.5 Why Quantitative Research Design, Not the Others?

The research design for this study was selected based on the criteria previously outlined. Gaining an understanding of the range of research designs available and their inherent strengths and weaknesses, as well as the criteria suggested by Walter (2006) and Creswell (2009, p. 18), led to the selection of the most appropriate research design. The research design selected for this study was quantitative research.

Quantitative research design offers more strengths than weaknesses for this study than the other research designs. The following are the reasons for choosing quantitative research design, not qualitative or mixed methods approach.

First, this approach is considered more appropriate to address the research problem and questions of this study. Determining the adequacy of a research design for answering research questions is a first step in selection of research design (Horn et al., 2009, p. 261) and the research questions being asked determine the appropriate research design (Sackett & Wennberg, 1997). The research problem and questions require answers from a representative sample of participants to generalise results to the population of public junior secondary schools in Lampung Province. For the purpose of generalisation, this study needs a large sample. Survey questionnaires were used in this study to collect the data from the large number of participants (555) from six selected districts from a total of 14 districts in Lampung Province. The 14 districts are: Bandar Lampung, Metro, Lampung Selatan, Lampung Tengah,

Lampung Barat, Lampung Timur, Lampung Utara, Tanggamus, Pesawaran, Tulang Bawang, Tulang Bawang Barat, Pringsewu, Way Kanan, and Mesuji. The six selected districts are: Bandar Lampung, Lampung Tengah, Lampung Selatan, Pesawaran, Pringsewu, and Tanggamus. These six districts were selected because of the diversity of school culture and of demographic diversity, and of geographical location. However, employing qualitative, let alone mixed methods, research design would be less effective. To illustrate, qualitative research would involve a large number of interviews for the large participants spreading out in the six districts. It would be quite difficult to envisage developing a discussion guide, booking interviews, and doing the in-depth interviews. This would take considerable time even if research assistants were hired—how many assistants would be required and whether they were available for such jobs. Hiring these people would be relatively expensive.

Second, addressing the research questions requires a range of techniques to establish the outcomes: relationships between variables, cause-and effect relationships, and differences between groups. Such questions were considered more appropriate to address using quantitative methods such as descriptive, t-test, ANOVA, Pearson correlation, and multiple regression. Such statistical techniques helped the researcher to do relatively quick data analyses and presentation of results. The techniques also offered objective interpretation. By contrast, establishing the outcomes using qualitative or mixed methods would not be easy and time-consuming. Transcribing the interviews, analysing the data, presenting the results in a qualitative approach would take a long time. Additionally, the interpretation of data would carry a greater degree of subjectivity which could cloud inferences of results because the results were more easily affected by the researchers' personal biases (Johnson & Onwuegbuzie, 2004). Mixed method research design would be more complicated and more time-consuming even though it could compensate the subjectivity. Time and other resource limitations led to the other approaches being rejected.

Third, one important strength of the quantitative approach related to this study is that it may provide higher credibility with many people in power (e.g. administrators, politicians, and people who fund programs (Johnson & Onwuegbuzie, 2004).

Credibility of results is required because one of the potential outcomes is that the results may become the basis for education decision-makers to improve effective school leadership throughout Indonesia, requiring that this study be able to be easily replicated in other districts. More precisely, the results of this study will provide an important basis for education leaders in Indonesia, particularly Lampung Province, to make educational policies (e.g. leadership training for principals and other education leaders) to help improve effective school leadership and help meet teacher job satisfaction. In turn, teacher job satisfaction can contribute to high quality graduates. In contrast, qualitative approach may have lower credibility. This could be overcome by mixed method approach but it is more expensive and more time-consuming (Johnson & Onwuegbuzie, 2004).

Finally, quantitative research offered important implications for timetable and budget. The approach helped the researcher to complete the thesis with available time and budget constraints. Employing a qualitative approach, let alone mixed methods approach, for this study would be more time-consuming and more expensive. This would lead to completing the thesis beyond the expected time and budget.

In conclusion, reasons for choosing a quantitative approach and not taking the research designs have been outlined. A quantitative research design was considered the most appropriate approach for this study in terms of the adequacy for understanding the research problem, the effective use of quantitative methods for establishing the credibility of the outcomes, and positive implications for the researcher's timetable and budget constraints. However, further research could include a qualitative research component to complement quantitative findings to obtain in-depth information on leadership behaviours in association with teacher job satisfaction and the associated variables.

3.2 Data Collection Method

This section discusses the data collection method for this study focused on definition of data collection method, survey method, and survey questionnaires.

3.2.1 Definition of Data Collection Method

Data collection is an essential part of a research study. A data collection method is the technique a researcher uses to physically gain data to be analysed in a research study. In this stage, a researcher needs to select measuring instruments that provide the best and most accurate measure of variables to be investigated (Gray, 2004). This thesis investigates leadership styles, decision-making styles, and teacher job satisfaction; hence, this study needs a good measure of the three topics. Reliability and validity must be considered when selecting and using a measurement instrument.

Gray (2004, p. 161) strongly suggests considering using an already constructed (standardised) instrument for the topics of interest because reliability and validity are usually available as long as the standardised instrument is available. If an already developed data-collection instrument is not available, a new test or another type of data collection instrument (such as a questionnaire or an interview protocol) has to be constructed. However, that takes a lot of time and effort to do properly. Therefore, standardised instruments are considered the best alternative to be used for data collection in this study.

As quantitative research design based on survey has been selected for this study, the discussion focuses on survey method.

3.2.2 Survey Method

Survey method is the collection and analysis of participants' answers to the same set of structured questions. Surveys are perhaps the most widely used research method. Surveys allow researchers to investigate a wide range of topics (Walter, 2010, p. 152) and can be distributed to a large number of people, thereby resulting in the

collection of a huge amount of data in a relatively short period of time (Hassan, Khaled, & Kaabi, 2010, p. 14).

The format of a survey (e.g. questionnaire) is very important. A survey design should follow a standard format that appears in theses and scholarly journals. The standard format of a survey design as shown in Table 3.2-1 is suggested by Creswell (2009).

Table 3.2-1 A checklist of questions for designing a survey method

Is the purpose of a survey design stated?
Are the reasons for choosing the design mentioned?
Is the nature of the survey (cross-sectional vs longitudinal) identified?
Are the population and its size mentioned?
Will the population be stratified? If so, how?
How many people will be in the sample? On what basis was this size chosen?
What will be the procedure for sampling these individuals (e.g. random, non-random)?
What instrument will be used in the survey? Who developed the instrument?
What are the content areas addressed in the survey? The scales?
What procedure will be used to pilot or field test the survey?
What is the time line for administering the survey?
What are the variables in the study?
How do these variables cross-reference with the research questions and items on the survey?
What specific steps will be taken in data analysis to:
(a) analyse returns?
(b) check for response bias
(c) conduct a descriptive analysis
(d) collapse them into scales
(e) check for reliability of scales
(f) run inferential statistics to answer the research questions?
How will the results be interpreted?

Source: Creswell (2009, p. 147)

Table 3.2-1 shows a checklist of questions as a general guideline to help a researcher design a survey.

Survey method is a non-experimental research method of asking questions to people. These questions can be presented in the form of either questionnaires or interviews.

Questionnaires and interviews are different. Questionnaires are usually paper-and-pencil instruments that the participant completes, while interviews are completed by the interviewer based on what the participant says. “Sometimes, it's hard to tell the difference between a questionnaire and an interview. For instance, some people think that questionnaires always ask short closed-ended questions while interviews always ask broad open-ended ones. But you will see questionnaires with open-ended questions (although they do tend to be shorter than in interviews) and there will often be a series of closed-ended questions asked in an interview” (Trochim, 2006).

Survey questionnaires were chosen as the instruments for this study, as they enable the collection of enough data for statistical analyses (Luoma-aho, 2008, p. 452).

3.2.3 Survey Questionnaires for this Study

Survey questionnaires are appropriate for this study. This thesis examines the relationships between principal leadership styles and decision-making styles and their possible use as indicators to predict teacher job satisfaction in public secondary schools in Lampung Province, Indonesia. The purpose of this survey is to generalise from the sample to the population of the public junior secondary schools in Lampung Province, Indonesia to yield inferences mainly about principal leadership styles, principal decision-making styles and teacher job satisfaction and the relationships between principal leadership styles and decision-making styles as well as their impact on teacher job satisfaction. This special-purpose survey is undertaken to provide data that are needed and are not available elsewhere (Fowler, 2002, p. 3).

In addition to meeting needs for data, a properly executed survey provides three potential properties of data: (1) probability sampling, (2) standardised measurement, and (3) a special-purpose survey. Probability sampling allows one to be confident that the sample is not a biased one and to estimate how accurate the data are likely to be. Standardised measurement is consistent across all participants, thus it ensures that comparable data are gained about everyone who is described. With standardised measurement, meaningful statistics can be produced. A special-purpose survey may

be the only way to ensure the availability of the data needed for an analysis and the data can be related (Fowler, 2002, p. 3).

Questionnaires are one of the most widely used techniques to gather primary data in the business and educational worlds. Gray (2004) suggests the use of questionnaires, when they fit research objectives and standardised questions are required, is ideal to administer to a relatively large sample of participants, in particular, to explore relationships between variables. However, for a case study investigating the in-depth opinions and perspectives of a small number of participants, a questionnaire might be inappropriate

Questionnaires have weaknesses. For example, the response rate can be depressingly low, in particular, if questionnaires are too long. Therefore, questionnaires should not be too long—they should be limited in length to four to six pages, otherwise the return rate may be adversely affected (Gilham, 2000, in Gray, 2004, p. 188).

However, questionnaires have more strengths than weaknesses. Some of their strengths are as follows:

1) They are cheap in terms of time and money. As opposed to interview, questionnaires can be sent to hundreds even thousands of participants at relatively little cost.
2) The inflow of data is quick and from many people.
3) Participants can complete questionnaires at a time and place that suits them. In contrast, it is sometimes difficult to find convenient times for an interview with a participant.
4) Data analysis of closed questions is relatively simple, and questions can be coded quickly.
5) Participants' anonymity can be assured.
6) There is a lack of interviewer bias. There is evidence that different interviewers get different answers because of the way in which they place different emphasis on individual words in questions and because of the different probes (additional questions) that they follow up with (Gilham, 2000, in Gray, 2004, p. 188).

The type of survey used in this study is cross-sectional. The data were collected at one point in time from a sample selected to describe the population of public junior secondary schools in Lampung Province. This survey can be used to describe and determine relationships between variables (Babbie, 1990, p. 56). Gellis (2001, p. 24) argues that one disadvantage of cross-sectional data is that the data preclude any demonstration of causality in the relationships examined. However, one advantage of regression techniques is that the effect of the reliabilities on the relationships between variables can be accounted for, thus increasing confidence in the results.

The survey for this study is self-administered questionnaire. The survey questionnaires were distributed by hand delivery to the participants in person in their natural setting (workplace) either individually or in a group meeting. Questionnaires were accompanied by an information sheet. This information sheet contained information on the invitation to participants to take part in this study voluntarily, the aims of the study, its importance (e.g. to school leadership), length of questionnaire completion, assurance of confidentiality, the name of the researcher and supervisors, details of how to return the questionnaires, possible use of data for future research, and a note of thanks for participants' participation. The completed questionnaires were collected by the researcher in person from the participants at an appointed time (at the participants' request), otherwise one week after the delivery.

This section discussed data collection methods with a particular focus on the survey questionnaires for this study. Survey questionnaires were deemed to have more strengths than weaknesses for this study. In particular, survey questionnaires were selected because these instruments are appropriate in addressing the research problem and the nine research questions of this study effectively and have the advantages of being more effective in the use of time and budget than other methods (Creswell, 2009).

3.2.3.1 Survey Questionnaires and their Validity and Reliability

This subsection discusses the survey questionnaires of this study, their validity and reliability (including the Indonesian versions).

Validity and reliability of the collected data are very central in social research concerns. Validity refers to the extent to which the data or results measure what it is intended to measure; while, reliability refers to the consistency of the collected data. It indicates the same results if data collection and analysis are repeated (Walter, 2006). Hence, research instruments for this study need to have acceptable validity and reliability.

There are four questionnaires used in this study. They are (1) self-designed demographic questionnaire, (2) Multifactor Leadership Questionnaire (MLQ) Form 5X-Short (Bass & Avolio, 2004), (3) General Decision-making Style (GDMS) questionnaire (Scott & Bruce, 1995), and (4) Job Satisfaction Survey (JSS) (Spector, 1985). These four questionnaires were used to measure different variables. The following sections describe each of the four questionnaires.

Demographic Questionnaire

The Demographic Questionnaire was developed specifically for this study and is used to describe participants' demographics: gender, marital status, certification, age group, last education, tenure, job level and school location.

Leadership Questionnaire

The Multifactor Leadership Questionnaire (MLQ) Form 5X-Short is the most recent MLQ version used to describe leadership styles. These leadership styles, as identified in Subsection 2.3.3.3, include transformational leadership style, transactional leadership styles, and laissez-faire non-transactional leadership style. The range of effective and ineffective leadership behaviours in the MLQ is typically much broader than in other leadership surveys.

The most widely used instrument in the world to assess transformational and transactional leadership is the MLQ. It was originally developed by Bass (1985, 1995) and is applicable to organisations (Northouse, 2007; Tejeda et al., 2001). However, after the initial widespread use of the MLQ, results of different studies revealed that the earlier MLQ version might not always be consistent due to its

psychometric properties. Therefore, there have been several revisions to strengthen its validity and reliability (Antonakis et al., 2003; Northouse, 2007; Tejeda et al., 2001).

The earlier version of the MLQ was Bass' (1985) conceptualization of transactional and transformational leadership. It initially consisted of seven leadership factors: charismatic behaviour, inspirational leadership, intellectual stimulation, individualised consideration, contingent reward, management-by-exception and laissez-faire leadership. These seven factors were then reduced into six factors by merging charismatic behaviour and inspirational leadership into a single charisma factor due to being empirically indistinguishable despite their unique constructs. However, a number of researchers found the six leadership factors could not be replicated. Therefore, they recommended revisions of the model (Avolio, Bass, & Jung, 1999, p. 441).

MLQ Form 5X-Short is the new version of an earlier MLQ which was developed based on previous research and revised in response to criticisms. The MLQ Form 5X-Short consists of 45 items—36 items represent nine leadership factors, originally six factors as previously mentioned, (i.e. each leadership scale comprises four items), and nine items measure three leadership outcome scales. The nine leadership factors are:

- five transformational leadership factors: (1) idealised influence (attributes), (2) idealised influence (behaviour), (3) inspirational motivation—these three factors previously labelled charisma, (4) intellectual stimulation, and (5) individualised consideration;
- three transactional leadership factors: (1) contingent reward, (2) management-by-exception active, and (3) management-by-exception passive—these last two factors previously labelled management-by-exception; and
- one non-transactional laissez-faire leadership factor (Antonakis et al., 2003, p. 265).

The three outcomes of leadership profile are:

- extra effort,
- effectiveness, and
- satisfaction.

The MLQ Form 5X-Short is evaluated on a five-point Likert scale that ranges from 0 to 4. Participants' choices associated with these scales are:

- 0 = Not at all,
- 1 = Once in a while,
- 2 = Sometimes,
- 3 = Fairly often, and
- 4 = Frequently, if not always (Bass & Avolio, 2004).

For scoring, the MLQ scale scores are average scores for the items on the scale. The score can be derived by summing the items and dividing by the number of items that make up the scale. If an item is left blank, the total for that scale is divided by the number of items answered. All of the leadership style scales have four items, Extra Effort has three items, Effectiveness has four items, and Satisfaction has two items. The scores in the rating ranged from 0 to 4 (Bass & Avolio, 2004, p. 108).

There have been studies whose findings indicate the consistency of the MLQ Form 5X-Short, one of which is research results of Antonakis et al. (2003). They revealed consistent evidence that the nine factors best represented the factor structure underlying the MLQ Form 5X-Short instrument. An earlier study conducted by Avolio, Bass et al. (1999), supported the findings that the instrument had a high degree of consistency in estimates of reliability, factor loadings and interrelationships among factors.

More importantly, using Confirmatory Factor Analysis (CFA) with 2003 normative samples when testing the nine factor model, Bass and Avolio (2004, p. 79) indicated conclusive results for examining a broader and fuller range of leadership styles. The nine factor model involves the following: (1) Idealised Influence (Attribute) or II(A), (2) Idealised Influence (Behaviour) or II (B), (3) Inspirational Motivation or

IM, (4) Intellectual Stimulation or IS, (5) Individualised Consideration or IC, (6) Continent Reward or (CR), (7) Management-by-Exception (Active) or MBEA, (8) Management-by-Exception (Passive) or MBEP, and Laissez-Faire (LF). The nine factor model has resulted in the best fit and has a clear pattern of consistency across the respective findings by region and participant.

Reliabilities for the total items and for each leadership factor scale ranged from 0.74 to 0.94. All the reliabilities of the scales were generally high, exceeding standard cut-offs for internal consistency recommended in the literature (Bass & Avolio, 2004, p. 48). A common rule of thumb is that an alpha (α) of 0.60–0.70 indicates acceptable reliability (Wikipedia, 2011; Yellen & Cella, 2007, p. 63; Yellen, Cella, Webster, Blendowski, & Kaplan, 1997).

This is supported by Muenjohn and Armstrong (2008, pp. 9-10) who reported the acceptable reliability of the original MLQ Form 5X-Short (Cronbach alpha = 0.86) and the Thai MLQ version (Cronbach alpha = 0.87), and the acceptable construct validity of the instrument. They suggest that the MLQ Form 5X-Short is successful in adequately capturing the full leadership factor constructs of transformational leadership theory. This provides researchers with confidence in using the MLQ Form 5X-Short to measure the nine leadership factors representing transformational, transactional, and non-leadership (laissez-faire) behaviours.

In a more recent comparative study, Fukushige and Spicer (2011) conducted a survey employing the questionnaire that contained leadership scales from Bass and Avolio's (2000) MLQ Form 5X-Short to compare Japanese and British followers' leadership preferences. The British sample consisted of 97 males and 28 females and the Japanese sample consisted of 207 males and 59 females. Thirty-two items were employed from the original 36 items of the full-range leadership styles, where four items assigned to laissez-faire leadership style were removed from the instrument as these items were found to not receive support in previous research (see Fukushige and Spicer, 2007). The British participants completed the English version of the questionnaire and the Japanese participants completed the Japanese version. The original five-point scale ranging from Not at all (0), Once in a while (1), Sometimes

(2), Fairly often (3), to Frequently if not always (4) was modified to Strongly agree (1), Agree (2), Neither agree nor disagree (3), Disagree (4), and Strongly disagree (5).

Internal consistency was explored using Cronbach's α for Bass and Avolio's (2000) leadership scales. The results for the Japanese sample showed low reliability for Idealized Influence Attributed, Contingent Reward, Management-by-Exception Active, and Management-by-Exception Passive. The variables did not meet the acceptable scores of Cronbach's α (0.6). The results did not support Bass's (1996) claim that the scales are a universal construct. For the British case, only two scales, Idealized Influence Attributed and Intellectual Stimulation, did not reach an acceptable level (0.6; Price and Mueller, 1986). Using independent samples t-test for leadership scales between the Japanese and British samples, they found that followers' leadership preferences differed between Japan and the UK.

For this thesis, internal consistency for the MLQ, GDMS, and JSS was checked using Cronbach's α and item-total correlations. The Cronbach's α coefficients for the entire questionnaires reached above 0.7, and the values of the item-total correlations mostly above 0.3. This suggests that the instruments reached the acceptable scores of Cronbach's α. The results are further outlined at the end of this subsection (under *Internal Consistencies of the Questionnaires in Indonesian Versions).*

Decision-making Questionnaire

Scott and Bruce's (1995) GDMS instrument was used to describe decision-making styles. This instrument, as identified in Subsection 2.5.2.1, comprises five decision-making styles. These styles are:

- rational (e.g. "I make decisions in a logical and systematic way"),
- dependent (e.g. "I use the advice of other people in making important decisions"),
- intuitive (e.g. "When making decisions, I rely upon my instincts"),
- spontaneous (e.g. "I generally make snap decisions"), and
- avoidant (e.g. "I postpone decision-making whenever possible").

The total number of the items is 25, with five items identified for each style. These decision-making styles are measured on a five-point Likert scale as below.

- 1 = Strongly disagree,
- 2 = Somewhat disagree,
- 3 = Neither agree nor disagree,
- 4 = Somewhat agree, and
- 5 = Strongly agree.

Experience has shown consistent findings and reported the validity and reliability of the GDMS instrument. Consistency was found in that the five different styles are not mutually exclusive and the pattern of their interrelationships corresponds to the original findings (Scott & Bruce, 1995).

Scott and Bruce (1995) validated the GDMS using a sample of 1943 participants, including content validity, concurrent validity, and construct validity. The sample included soldiers, students, engineers and technicians. Scott and Bruce (1995) reported acceptable internal consistency (alpha ranging from 0.68 to 0.94). More precisely, Scott and Bruce (1995) reported internal reliabilities for the five scales on their original instrument as having the following ranges in four validation studies: rational (0.77–0.85), intuitive (0.78–0.84), avoidant (0.93–0.94), dependent (0.68–0.86), spontaneous (0.87) (Galotti et al., 2006, p. 633).

Other researchers reported acceptable validity and reliability of the GDMS Instrument. Spicer and Sadler-Smith (2005) supported the construct validity, Baiocco, Laghi, and D'Alessio (2008) supported the convergent validity, and Gambetti et al. (2008) supported the concurrent validity of the GDMS instrument.

Thunholm (2004, 2008), Spicer and Sadler-Smith's (2005), Baiocco, Laghi, and D'Alessio (2008), and Gambetti et al. (2008) reported that the GDMS instrument showed a quite adequate internal-consistency reliability. The cronbach's alpha ranged:

- between 0.65 and 0.86 for rational decision-making style,
- between 0.72 and 0.81 for intuitive decision-making style,

- between 0.70 and 0.84 for dependent decision-making style,
- between 0.77 and 0.84 for spontaneous decision-making style, and
- between 0.77 and 0.86 for avoidant decision-making style.

Job Satisfaction Questionnaire

Job Satisfaction Survey (JSS) is a job satisfaction instrument which is applicable particularly to non-profit, public, and human service organisations including schools. It was developed by Spector in 1985. JSS is a 36-item survey instrument designed to measure nine sub-scales of employee job satisfaction as identified in Subsection 2.5.3.1. They are:

- pay (e.g. "I feel I am being paid a fair amount for the work I do"),
- promotion (e.g. "I am satisfied with my chances for promotion"),
- supervision (e.g. "I like my supervisor"),
- fringe benefits (e.g. "I am not satisfied with the benefits I receive"),
- contingent rewards (e.g. When I do a good job, I receive the recognition for it that I should receive"),
- operating conditions (e.g. "Many of our rules and procedures make doing a good job difficult"),
- co-workers (e.g. "I like the people I work with"),
- nature of work (e.g. "I sometimes feel my job is meaningless"), and
- communication (e.g. "Communications seem good within this organisation").

JSS is measured on a six-point Likert scale and is designed to yield a good measure of overall satisfaction. A participant is asked to circle one of the six numbers corresponding to his/her agreement/disagreement about each item as follows:

- 1 = Disagree very much,
- 2 = Disagree moderately,
- 3 = Disagree slightly,
- 4 = Agree slightly,
- 5 = Agree moderately, and
- 6 = Agree very much.

In terms of validity, Spector (1997) in Lin (2003) reported that evidence of validity for JSS is demonstrated by studies that compared different scales with one another on the same employees. In one example, five of its subscales (pay, promotion, supervision, co-workers, and the nature of work) are well correlated with corresponding subscales of Job Descriptive Index (JDI); the correlation ranged from 0.61 for co-workers to 0.80 for supervision. JDI, developed by Smith et al. (1969), is one of several carefully validated instruments to measure job satisfaction. Similarly, Saane, Sluiter, Verbeek, and Frings-Dresen (2003) reported convergent validity of JSS ranged from 0.61 to 0.80 with JDI as the comparative instrument.

In terms of reliability, Spector (1997) in Lin (2003) reported that the internal consistence of the JSS ranged from 0.60 (for subscale of co-workers) to 0.91 (for the total scale) using Cronbach alpha coefficients. Saane et al. (2003) reported JSS reliability with internal consistency of 0.91 and test-retest of 0.71. Terranova and Henning (2011, p. 314) reported that the Cronbach alpha for the nine subscales ranged from 0.63 to 0.93, ensuring that each of the subscales of the JSS demonstrated acceptable internal consistency. Kim, Murrmann, and Lee (2009, p. 615) reported an acceptable internal consistence of the total of the facets (Cronbach alpha = 0.83). Yelboga (2009, pp. 1066-1069) reported face validity and construct validity of the JSS. The reliability of the JSS used Cronbach alpha coefficient for each scale ranging from 0.63 to 0.88, and overall the reliability estimate for the total scale (composite) is 0.78. Finally, Spector (1994a) reported that internal consistency reliabilities (coefficient alpha) based on a sample of 2,870 ranged from 0.62 to 0.82 for individual facets, 0.91 for total of all facets (composite). A composite for JSS is important in this study because this study uses total job satisfaction in the analyses using the composite reliability.

The three standard questionnaires are well validated. This is an important reason that these questionnaires were used to help address the research problem and the nine research questions of this thesis in an Indonesian school context.

Internal Consistencies of the Questionnaires in Indonesian Versions

Internal consistencies of the MLQ, GDMS, and JSS (Indonesian versions) were explored using Cronbach's α coefficient and item-total correlation. A value of Cronbach's α of 0.70 is generally considered adequate (Nunally, 1978). More specifically, George and Mallery (2003 p. 231) provide the following rules of thumb: < 0.5–unacceptable, ≥ 0.5–poor, ≥ 0.6–questionable, ≥ 0.70–acceptable, ≥ 0.80–good, and ≥ 0.90–excellent. There is no agreement about the acceptable values of item-total correlations (Kanste, Miettunen, & Kyngäs, 2007, p. 205). According to Streiner and Norman (1995), a value of 0.20 is adequate. Nunally (1978) suggests that values above 0.30 are considered good.

The results showed support for the internal consistency of the three questionnaires (MLQ, GDMS, and JSS). Cronbach's α for leadership subscales ranged from 0.84 to 0.86, and 0.85 for the total scale (composite). Item-total correlations were that 25 items were good (> 0.30), three items were adequate (> 0.2), and eight items were inadequate (< 0.2). The inadequate items could have been deleted; however, deletion of these items did not contribute to a large increase in Cronbach's α but only from 0.84 to 0.86. Hence, the items were retained.

As for the GDMS, Cronbach's α for decision-making subscales ranged from 0.72 to 0.76, and 0.75 for the total scale. Item-total correlations were that 14 items were good (> 0.30), three items were adequate (> 0.2), and eight items were inadequate (< 0.2). The inadequate items could have been removed; however, removal of these items did not contribute to adding a large Cronbach's α but only from 0.75 to 0.76. Thus, the items were retained.

As for the JSS, Cronbach's α for job satisfaction subscales ranged from 0.87 to 0.88, and was 0.87 for the composite. Item-total correlations were that 29 items were good (> 0.30), three items were adequate (> 0.2), and four items were inadequate (< 0.2). The inadequate items could have been deleted; however, deletion of these items did not contribute to a large increase in Cronbach's α but only from 0.87 to 0.88. Thus, the items were retained.

The three standard questionnaires in Indonesian versions have adequate internal consistencies. All the reliabilities for the leadership subscales, the decision-making subscales, and the job satisfaction subscales exceeded the standard cut-offs.

3.2.3.2 Translations of Survey Questionnaires into Indonesian

The four sets of questionnaires were translated from English into Indonesian. The demographic questionnaire was translated by the researcher. The Indonesian version of the MLQ 5X-Short was provided by the Mind Garden Inc. and validated by an expert from Indonesia.

The GDMS and JSS were translated by two independent experts from Indonesia. The first expert is a professor in education; he holds a Master degree from an American University under the prestigious Fulbright Scholarship and a PhD degree from an Australian University. The second independent expert holds a Masters and a PhD degree from Australian universities. The questionnaires were translated from English into Indonesian by one expert. The translated questionnaires were then sent to the second translator for back-translation into English. The translated English versions were then compared to the original English versions. This translation process was recommended by the developer of JSS (Spector, 2009).

Permissions to translate and use the standard questionnaires were gained from the developer (JSS) and from the publishers (MLQ Form 5X-Short and GDMS) (see Appendix 14a to Appendix 16).

3.2.3.3 Pilot Study

The Indonesian versions of the survey questionnaires were pilot tested on selected participants. The purpose of this pilot study was to confirm the feasibility to conduct the main study using these standard instruments. The standard instruments have established their validity and reliability as previously mentioned in Subsection 3.2.2.1. The pilot study was undertaken in the same fashion as intended for the main

study and directed at a representative sample of the target population (Babbie, 1990, p. 226).

The pilot study was undertaken in Lampung Province from 11 November 2009 to 14 January 2010. This pilot study was preceded by seeking research permits from education offices. Research permits were gained from Lampung Province Education Office and Education Quality Assurance Institute (LPMP) as well as from the six selected districts of Lampung Province: Bandar Lampung, Lampung Tengah, Lampung Selatan, Pesawaran, Pringsewu, and Tanggamus. The research permits are essential to conduct the pilot study and the main study (see Appendix 17).

The pilot study was conducted in five public secondary schools of three districts: one school in Bandar Lampung, one school in South Lampung, and three schools in Pringsewu. The total number of participants involved in the pilot study was 55 (five principals and 50 teachers). However, only 50 participants returned the questionnaires (five principals and 45 teachers); the other five teachers did not return the questionnaires.

Instrument delivery to participants (principals and teachers) in the pilot study was initially tried using three modes: email delivery, post delivery, and hand/physical delivery. The first two modes did not work well—no responses were received from the participants. The third mode did work well—participants felt valued when physically met. However, they did not want to complete the questionnaires directly, they requested to complete them in their own time instead; so, the questionnaires were collected at a later appointed time. Therefore, for the main study, the mode of physical/hand delivery would be used.

After completing the questionnaires, the principals and five of the teachers were interviewed as to whether they had any difficulty in understanding the statements and directions. In general, they understood the statements and directions. However, there were a few trivial changes to the standard instruments; the changes did not affect the instruments' established reliability and validity but helped them fit into the school

context. For example, the word “organisation” was changed into “school”, and “advisor” into “principal.”

Principal participants needed approximately 30 minutes to complete the three sets of questionnaires containing nine items of demographic data, 45 items of leadership styles (MLQ Form 5X-Short) and 25 items of decision-making styles (GDMS). Teacher participants took approximately 40 minutes to complete the four sets of questionnaires containing nine items of demographic data, 45 items of leadership styles, 25 items of decision-making styles, and 36 items of job satisfaction (JSS).

There are many interesting points about this pilot study. However, the most interesting thing is during the process of seeking permits from the local governments (e.g. the six education district offices) and then schools. The local governments, principals and teachers were very welcoming of this pilot study. To illustrate, a head of one of the education district offices strongly supported this study and affirmed that it should be the responsibility of education offices and other associated offices to conduct this sort of study because this study is important to help schools improve leadership effectiveness. He hoped the study results could be used as a basis to make educational policies in terms of school leadership.

At school level, principals and teachers also strongly supported this study. For example, a female principal said that this study on leadership was very important because the results could be used as feedback on how effective her leadership was. She hoped this study could be followed-up by leadership training for principals and teachers. Another example, a teacher stated that he was pleased to take part in this study because he could contribute to helping his school improve leadership effectiveness.

The pilot study has been discussed. The implementation of the pilot study confirmed feasibility to conduct the main study. As a results of this pilot study, minor changes were made to the instruments to better suit them to the school context in Indonesia. These revised versions were used in the main study. The hand/physical delivery mode was used in the main study because the mode is considered a more effective

way to obtain a high response rate. More interestingly, Lampung local governments and schools support this study because they are aware that this study can help improve school leadership and thus school effectiveness. In general, this thesis is important for education to help improve human resources for economic growth.

Due to the constraints of time and budget, the main study sampled 555 participants (37 principals and 518 teachers) from 37 schools. The main study was conducted from 28 April to 21 July 2010 in public junior secondary schools in the six selected districts in Lampung Province.

The range of research designs and their components, criteria of selecting research design, and selected design for this study have been discussed. On balance, inherent strengths and weaknesses of the research designs were compared. These comparisons and the criteria of selecting research design suggest that quantitative research based on survey questionnaires is appropriate for this study. In particular, this approach was selected because it is considered the most appropriate to address the research problem and the nine research questions of this study, may provide credible results that can be used as the basis for making educational policies in Indonesia, and is effective in the use of time and budget. The implementation of the pilot study confirmed the feasibility to conduct the main study using the standard questionnaires to sample 555 expected participants in public junior secondary schools in the six selected districts in Lampung Province.

3.3 Population and Sampling

Prior to conducting research, a researcher needs to have an understanding of the population and its characteristics to determine sample design and selection process of individuals for a representative sample. The next discussion is on the definitions of population and sampling.

3.3.1 Definitions of Population and Sampling

Population

A research population is a particular area or group or the collection of all the units to which the conclusions from the research will apply. The research population needs to be investigated to answer research questions. Because the research population is usually quite large, a subset of the population general enough to be applicable to the whole, called a sample, will be studied. In order to select the sample, the total number of subjects in the research population must first be identified. It is essential to guarantee that the selection of the sample can give a representative view of the research population (Howell, 2007).

Sampling

Sampling refers to the process of selection of the observations to be studied with the following steps: (1) defining the population, (2) selecting an appropriate sampling frame, (3) selecting a method of sampling, and (4) deciding on an appropriate sample size and selecting sample. Sampling is done for twofold reasons: (1) surveying all members of a given population is generally not practicable and (2) selecting a sample using probability sampling enables a researcher to draw accurate inferences from the sample and generalise these to the entire population of interest (Walter, 2006, p. 196).

The basis of sampling can be either probability or non-probability. Probability sampling, which consists of random, systematic, and stratified random, and cluster, gives each member of a research population an equal chance of being selected. In contrast, in non-probability sampling (convenience/accidental, purposive, and quota), the population does not have an equal chance of being selected (Howell, 2007). The selection process for individuals, particularly, from large samples through a random sample is more desirable, than a non-probability sample, and is an extremely powerful technique and the primary method because it ensures representativeness of sample from a population; randomisation provides the ability to generalise to a population (Creswell, 2009; Walter, 2006). Finding a way to give all (or nearly all)

population members the same chance of being selected and to use probability methods for choosing the sample is the key to good sampling (Fowler, 2002).

Sampling design can be either single stage or multistage (clustering). “A single-stage sampling procedure is one in which the researcher has access to names in the population and can sample the people (or other elements) directly. In a multi-stage or clustering procedure, the researcher first identifies a cluster (groups or organisations), obtains names of individuals within those clusters, and then samples within them” (Creswell, 2009, p. 148).

3.3.2 Population and Sampling for this Study

The study area has a population of 11,401 principals and teachers (Kemdiknas, 2009a) employed within 623 public junior secondary schools in Lampung Province (Kemdiknas, 2009b) throughout the fourteen districts in Lampung Province.

In this study, multistage sampling was used to select prospective participants randomly. This includes three stages: geographic areas/districts (primary units), schools (secondary units), and participants (tertiary units).

At first, a sample of six districts from a total of 14 districts in Lampung Province was selected. Then, a sample of 37 schools was selected in the six districts. Last, a sample of 15 participants (principal and 14 teachers) was selected in each of the selected schools. Therefore, there are 555 expected participants (37 principals and 418 teachers) to be surveyed. This sample size (with a population of 11,401) is greater than the sample size recommended by Gray, that is, for a population of 10,000, the recommended sample size is 370, based on 95 per cent confidence level (Gray, 2004, p. 218).

The contact details of potential participants were accessed from the Education Quality Assurance Institution (LPMP) Office or Education Office in Lampung Province. Participants were initially contacted either in person or through a phone call to request their voluntary participation in this study.

Definitions of populations and sampling, both in general and for this study, have been presented. In particular, multistage sampling was used to collect the data from the 555 expected participants in the six districts in Lampung Province.

3.4 Data Analysis

This section discusses data preparation for analysis, descriptive statistics, statistical analysis techniques, research questions, and data analysis techniques for this study.

3.4.1 Data Preparation for Analysis

Data preparation including data classification and data entry for data analysis is important because it can function as guidance for analysis using a computer and an appropriate software application for statistical analysis such as SPSS.

Data Classification

Data/variable classification is important because statistical tests used for data analysis depend on the type of data. Gray (2004) classifies data into two types: (1) categorical and (2) quantifiable. Other scholars such as (Pallant, 2001) labelled the two types “categorical variables” and “continuous variables” which mean the same things as categorical and quantifiable data. Categorical data are divided into nominal data and ordinal data because they cannot be quantified numerically. Conversely, quantifiable data can be measured numerically and are classified into interval data and ratio data. Data classification is used for different analysis purposes (Gray, 2004). Data classification is shown in Figure 3.4-1.

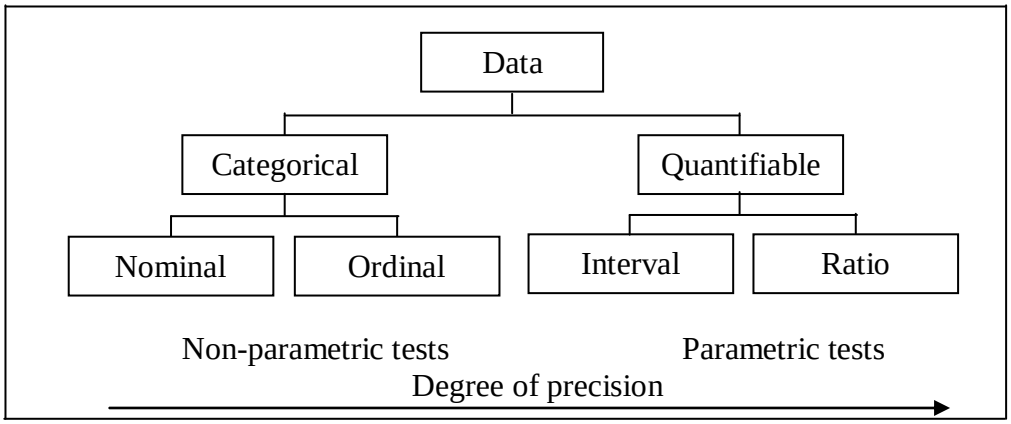

Figure 3.4-1 Types of categorical and quantifiable/continuous data
Source: Gray (2004, p. 286)

Nominal data are a name value or category with no order or ranking implied. Nominal data use a nominal scale to build up a simple frequency count of how often the nominal category occurs. Ordinal data are an ordering or ranking of values but the intervals between the ranks are not intended to be equal. Ordinal data use an ordinal scale for questions that rate the quality of something and agreement. Interval data are numerical values that are assigned along an interval scale with equal intervals as opposed to an ordinal scale, but there is no zero point where the trait measured does not exist. Like interval data, ratio data are numerical values and have an interval scale, but there is an absolute zero that represents some meaning, for example, scores on an achievement test (Gray, 2004). The next stage is data entry.

Data Entry

Data entry involves several steps. It starts with cleaning the data to ensure that the data analysis is reliable. The second step is data coding and layout. Data coding can be done by allocating a number to data. Data layout usually uses tables in the form of a data matrix. The next step is dealing with missing data. The best approach is not to have one (Oppenheim, 1992, in Gray, 2004, p. 292). Thus, a researcher should ensure data collection from all of the sample and minimise non-response to avoid potential bias (Gray, 2004).

In this study, the qualitative (ordinal) data were collected using the survey questionnaires, and the variables were measured on Likert scales. These measures

were rescaled into quantitative data based on prior researchers such as Bass and Avolio (2004), Spector (1985, 1994b, 1994c), and Thunholm (2009).

After data are well prepared, the data are ready for performing specific techniques to address research questions (Pallant, 2001). When the data preparation is done, the next stage is descriptive statistics.

3.4.2 Descriptive Statistics

Descriptive statistics is used to describe the basic characteristics of the data; it depicts what the data are (Gray, 2004). Pallant (2001, p. 51) mentions three uses of descriptive statistics. They are: (1) to describe the characteristics of the sample in the method section, (2) to check variables for any violation of the assumptions underlying the statistical techniques used to address research questions, and (3) to address specific research questions. In particular, descriptive statistics was used to address RQs 1-3 in this study.

Descriptive statistics including frequency, mean, standard deviation, range of scores, kurtosis, and skewness to collect information can be used to describe subjects in studies (Pallant, 2001). "Probably the most often used descriptive statistic is the mean" (StatSoft, 2011). This technique is considered appropriate to be used to address RQs 1-3, where results from addressing these research questions are interpreted based on the means and standard deviations of each variable used.

Descriptive statistics is often accompanied by the use of graphical analysis to communicate the data in readily accessible formats, but the types of graphs rely on the types of data. Therefore, classification needs to be initially prepared because not all types of graphs are compatible for all types of data (Gray, 2004) as shown in Table 3.4-1. In similar line, Pallant (2001) affirms that obtaining descriptive statistics depends on variables. Categorical variables are used with frequencies that tell, for example, how many people give each response. Conversely, continuous variables are used with descriptive statistics that tell, for example, mean, standard deviation, median, kurtosis, and skewness.

Table 3.4-1 Appropriate use of charts/graphs for frequency

Variable / Graph/Chart	Nominal	Ordinal	Interval	Ratio
Bar Graph	√	√		
Pie Chart	√			
Histogram			√	√
Frequency Polygon			√	√

Source: Adapted from Black (1999, p. 306) in (Gray, 2004, p. 294)

In addition to providing useful information on the sample and variables, some aspects are better explored visually through the use of such graphs as bar graph, pie chart, histogram, frequency polygon, scatterplot, boxplot, and line graph. In particular, scatterplot can be used to explore the relationships between two continuous variables prior to calculating correlation to indicate whether variables are related in a linear or curvilinear fashion and also indicate magnitude and direction of relationships (Pallant, 2001).

3.4.3 Statistical Analysis

The statistical analysis for this thesis focuses on two things: (1) relationship between variables and (2) differences between groups. In particular, appropriate statistical analysis techniques were chosen to address RQs 4-9, while descriptive statistics has been chosen to address RQs 1-3.

3.4.3.1 Statistical Analysis: Relationships between Variables

There are different techniques such as Pearson correlation, partial correlation, multiple regression, and factor analysis that can be used to examine relationships. These techniques are often used in survey research (Pallant, 2001). The following is an overview of these techniques.

Pearson correlation is a type of parametric statistics used to explore the strength and direction between two continuous variables: both continuous, or one continuous

and the other dichotomous (two values). There are several things to know regarding Pearson correlation.

- The assumptions underlying this technique include level of measurement, related pairs, independence of observation, normality, linearity, and homoscedasticity.
- The scale of measurement for the variables should be two continuous (interval or ratio) variables or one continuous variable and one dichotomous independent variable (two values: e.g. sex) with roughly the same number of people or cases.
- Subjects must be related pairs—each subject provides a score on both variable X and variable Y.
- Each observation or measurement must be independent of the other, not influenced by any other observation or measurement.
- Each variable should provide normally distributed scores (normality). Histogram of each variable score can be used to check this normality.
- The relationship between the two variables should be linear. A scatterplot of scores should indicate a roughly straight line, not a curve.
- The variability in scores for variable X should be similar at all values of variable Y. Scatterplot can be used to check the homoscedasticity.

An alternative technique if the assumptions are not fulfilled is a non-parametric statistic, called Spearman's Rank Order Correlation (Pallant, 2001).

Correlation coefficients can range from -1.00 to +1.00. The correlation coefficient contains two pieces of information: one piece is the sign (positive or negative), indicating the kind or type of relationship, NOT the strength of the relationship), and the other piece is the number itself. Pearson's product moment coefficient (r) which is the most often used and most precise coefficient can be used to measure continuous variables as well as the relationship between a dichotomous and a continuous variable (Pallant, 2001).

Partial correlation is an extension of Pearson correlation; it is used to explore strength and direction of relationship between two variables, while statistically controlling (getting rid of) the effect of another variable that may influence the relationship. Thus, there are three variables: two variables are explored and the other

one is controlled. The assumptions for partial correlation are the same as those for Pearson correlation (Pallant, 2001).

Multiple regression is a more sophisticated extension of Pearson correlation/bivariate correlation. It is used to explore the predictive ability of a set of independent variables on one continuous dependent variable—how well the independent variables predict the dependent variable, which one is the best predictor, and whether the independent variables are still able to predict a significant amount of the variance in the dependent variable. In other words, multiple regression indicates how much of the variance in the dependent variable can be explained by the independent variables. Tests can provide the statistical significance of the results for the model and the individual variables. At least three variables are needed for exploration: one continuous dependent variable and two or more continuous independent variables, or dichotomous (categorical) independent variables (e.g. males = 1, females = 2). However, the categorical variables must be coded dummy variables (Pallant, 2001, 2007).

There are three major regression models: standard or simultaneous, hierarchical or sequential, and stepwise regression (Coakes, Steed, & Price, 2008; Pallant, 2001, 2007). Standard multiple regression is a model in which all independent (predictor) variables are entered into the model simultaneously without considering the order. This model is used to determine how much variance each of the independent (predictor) variables explains in a dependent variable. Hierarchical multiple regression is a model in which independent (predictor) variables are entered into the model in the order of importance in predicting a dependent variable. This model is used to determine how much each independent (predictor) variable adds to the prediction of the dependent variable after the previous variables are controlled for. Stepwise multiple regression is a model in which a researcher provides SPSS with a list of independent (predictor) variables and then allows the SPSS to select which variables it will enter and in which order they go into the model on the basis of statistical criteria. This approach has three different versions: forward selection, backward deletion, and stepwise regression. This approach has a number of problems

and there is controversy in the literature concerning their use and abuse (Pallant, 2001, pp. 135-136, 2007, pp. 146-165).

Factor analysis is used to identify a small set of factors that represents the underlying relationships among a group of related continuous variables, and is often used to develop scales and measures to identify the underlying structure. The assumptions of this technique include sample size, factorability of the correlation matrix, linearity, and outliers among cases. Ideal sample size should be over 150 and there should be a ratio of at least five cases for each variable. The correlation matrix should show at least some correlation of $r = 0.03$ or greater. The Bartlett's test of sphericity should be statistically significant at $p < 0.05$ and the Kaiser-Meyer-Olkin value should be 0.06 or above. The relationship between variables should be linear. Finally, the outliers among cases should be checked in initial data screening phase and either removed or alternatively recoded to less extreme value (Pallant, 2001).

Other analysis techniques that can be used to explore the relationship are Chi-square test, discriminant factor analysis, logistic regression, canonical correlation, and structural equation modelling.

Pearson correlation, partial correlation, multiple regression, and factor analysis have been discussed. These statistical analysis techniques can be used to examine relationships between variables.

3.4.3.2 Statistical Analysis: Differences between Groups

There are different techniques such as t-test, one-way analysis of variance (ANOVA), two-way ANOVA, multivariate analysis of variance (MANOVA), analysis of covariance (ANCOVA) that can be used to investigate significant difference among a number of groups. The following is an overview of these techniques.

T-test is "the most commonly used method to evaluate the differences in means between two groups" (StatSoft, 2011). It is used to determine if there is a significant

difference between two sets of the mean scores (of two variables: one categorical, independent variable and one continuous, dependent variable) (Pallant, 2007, p. 232). Three main types of t-test are: (1) one-sample, (2) independent-samples, and (3) repeated-measures or paired or dependent-samples. One-sample t-test is used to determine significance between two sets of the mean scores—the mean scores of a single sample of participants compared to the mean scores of the population from which the sample is drawn. Independent-samples t-test is used to determine whether there is a statistically significant difference in the mean scores for the two groups. Finally, dependent-samples t-test is used to determine whether there is a significant difference in the mean scores measured on two different occasions (Pallant, 2001, 2007). The following assumptions are generic to all types of t-tests: (1) level of measurement: should be at the interval or ratio level of measurement, (2) random sampling: the scores should be randomly sampled from the population of interest, and (3) normality: the scores should be normally distributed (Coakes et al., 2008).

One-way ANOVA is used to determine whether there is a significant difference in the mean scores on continuous dependent variable across three or more distinct categories (e.g. age group) of one categorical independent variable. Post-hoc tests can be used to explore where these differences lie. There are several post-hoc tests, for example, the Scheffe test and Tukey's honestly significant difference (HSD) test. The Scheffe test allows every possible comparison to be made but is tough on rejecting the null hypothesis. Conversely, HSD test is more lenient but the types of comparison are restricted (Coakes et al., 2008; Pallant, 2001, 2007, pp. 242-243).

Two-way ANOVA is used to examine the impact of two categorical independent variables (e.g. sex and age group) on one continuous dependent variable. It also identifies any interaction effect, for example, sex differences in dependent variable, differences in dependent variable for age group, and the interaction of these two variables, for example, whether there is a difference in the effect of age on dependent variable for males and females (Pallant, 2001).

One-way MANOVA is an extension of ANOVA; it is used to compare two or more groups in terms of their means on continuous dependent variables. This technique

needs one categorical, independent variable (e.g. sex) and two or more continuous, dependent variables. MANOVA can be extended to two-way and higher order designs involving two or more categorical, independent variables (Coakes et al., 2008; Pallant, 2001).

ANCOVA is an extension of ANOVA; it is used to determine differences between groups while statistically controlling an additional (continuous) variable, called a covariate. A covariate is a variable that might influence scores on the dependent variable. Regression procedures are used to remove the variation in the dependent variable due to the covariate and perform the normal ANOVA techniques on the corrected or adjusted scores. Consequently, ANCOVA can increase the power or sensitivity of the F-test; it can increase the likelihood to be able to detect differences between groups. There are at least three variables involved in ANCOVA: one categorical independent with two or more levels, one continuous dependent variable, and one or more continuous covariates (Johnson & Christensen, 2004 ; Pallant, 2001).

T-tests, ANOVA, two-way ANOVA, MANOVA, and ANCOVA have been discussed. These analysis techniques can be used to examine significant differences between groups.

The uses of the analysis techniques both for examining relationships between variables and for examining significant differences between variables suggest that the four statistical analysis techniques have been confirmed appropriate to address the nine research questions of this study.

3.4.4 Research Questions (RQs)

The nine research questions of this study are:

1) What leadership style(s) do the principals mostly exhibit as perceived by the teachers?
2) What decision-making style(s) do the principals mostly exhibit as perceived by the teachers?

3) What job satisfaction facet(s) do the teachers mostly prefer as perceived by themselves? How satisfied are they?
4) What are the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction?
5) Can leadership styles and decision-making styles significantly predict teacher job satisfaction? If they can, which variable best predicts teacher job satisfaction?
6) Can the model (or the set of predictor variables) still significantly predict teacher job satisfaction after the possible effects of last education, tenure with current principal, and school location of participants are controlled for?
7) How does teacher job satisfaction vary with tenure (number of years) with current principal, total tenure, qualifications (last education), and job level?
8) How does teacher job satisfaction vary with gender, marital status, certification, and school location?
9) How do self-perceived principal leadership styles compare with teacher-perceived principal leadership styles?

3.4.5 Data Analysis Techniques for this Study

The data analysis techniques used in this study include: (1) descriptive, (2) one-way ANOVA, (3) independent-samples t-test , (4) Pearson correlation,, and (5)multiple regression (standard and hierarchical). These data analyses are considered the most appropriate ways to address the research questions of this study. The following is an overview of these techniques.

Descriptive analysis was used to explore information on subjects such as frequency, percentage, mean, standard deviation, skewness, and kurtosis. In this study, descriptive analysis was performed for two purposes: (1) particularly for addressing RQs 1-3, and (2) for describing variables prior to conducting statistical analyses including multiple regression, ANOVA, and t-test to address RQs 4-9.

One-way ANOVA analysis was used to address RQ 4. When any significant differences in teacher job satisfaction by last education, tenure (number of years) with current principal, total tenure, or job level existed, a Tukey HSD post-hoc

analysis was used to test in which group of last education, tenure (number of years) with current principal, total tenure, or job level the differences lie in teacher job satisfaction. However, the magnitude of the differences between groups was not obtained from ANOVA. Effect size statistics was used to indicate the magnitude of the differences between groups. One of most commonly used effect size statistics is eta squared. Eta squared ranges from 0 to 1 with the following formula:

$\eta^2 = \frac{SS_M}{SS_T}$ (Sum of squares between-groups is divided by total sum of squares).

(Field, 2005, p. 357; Pallant, 2007, p. 247).

The interpretation of the effect size value is proposed by Cohen as the following:
0.01 = small effect,
0.06 = moderate effect, and
0.14 = large effect (Cohen, 1988, pp. 284-287, in Pallant, 2007, pp. 235-236).

Independent samples t-test analysis was used to address RQs 5-6. When any significant differences in teacher job satisfaction by gender, certification, marital status, or school location existed, a Tukey HSD post-hoc analysis was used to test in which group of gender, certification, marital status, or school location the differences lie in teacher job satisfaction. However, the magnitude of the differences between groups was not obtained from t-test as well as ANOVA. Effect size statistics was used to indicate the magnitude of the differences between groups. One of most commonly used effect size statistics is eta squared. Eta squared ranges from 0 to 1 with the following formula:

$\text{Eta squared} = \frac{t^2}{t^2 + (N1 + N2 - 2)}$, where t = t value, N1 = number of group one, and N2 = number of group two.

The interpretation of the eta squared value is proposed by Cohen (1988, pp. 284-287) as the following:
0.01 = small effect,
0.06 = moderate effect, and
0.14 = large effect (Pallant, 2001, pp. 180-181, 2007, pp. 235-236).

The formula can be simplified into the following:

$\eta^2 = \frac{t^2}{t^2 + df}$, where df = degree of freedom (N1 + N2 – 2).

Pearson correlation (also generated by multiple regression in the table labelled Correlations) was used to address RQ 7 to see the relationships between the variables. However, correlation does not establish an obvious cause-effect relationship—it is only limited to possibility (Pallant, 2001). That is why multiple regression analysis was used.

Multiple regression analysis was used to address RQs 8-9. Two models of multiple regression were used in this study: standard and hierarchical. Standard multiple regression was used to address RQ 8. Hierarchical multiple regression was used to address RQ 9 (Pallant, 2001, pp. 134-149, 2007, pp. 146-164).

Data preparation for analysis, descriptive statistics, statistical analysis techniques, research questions and data analysis techniques for this study have been discussed. Prior to performing descriptive statistics, the data were prepared. The descriptive statistics were used in this study to address RQs 1-3 and to describe the variables prior to performing statistical analysis techniques. The statistical analysis techniques used in this study were multiple regression (standard and hierarchical), one-way ANOVA, and independent-samples t-test to address RQs 4-9. As the magnitude of the differences between groups was not obtained from t-test as well as ANOVA, an effect size statistics technique, eta squared, was used to calculate the magnitude.

The next section presents the research context issues with respect to Indonesia and schools.

3.5 Context Issues: Indonesia and Schools

The research boundary of this thesis is an Indonesian school context. This section focuses on two main themes: (1) Indonesian geography, demography and governance, and (2) Indonesian formal education.

3.5.1 Indonesian Geography, Demography, and Governance

Indonesian geography, demography, and governance are important as an indication of the complexity within which schools operate.

In terms of geography, Indonesia is the largest archipelago in the world and is situated between two continents (Asia and Australia) and between two oceans (the Pacific and the Indian oceans). It has over 17,500 islands; 6,000 are inhabited; 1,000 are permanently settled (US Department of State, 2009). The five largest islands are Java, Sumatra, Kalimantan (the Indonesian part of Borneo), Papua (formerly known as Irian Jaya) or New Guinea (shared with Papua New Guinea), and Sulawesi. The island of Java is the most populous island in the world with a population of 124 million based on 2005 estimate (US Department of State, 2009). Indonesia shares land borders with Malaysia on the islands of Borneo and Sebatik, Papua New Guinea on the island of New Guinea, and East Timor on the island of Timor. Indonesia also shares borders with Singapore, Malaysia, and the Philippines to the north and Australia to the south across narrow straits of water. The capital, Jakarta, is on Java and is the nation's largest city, followed by Surabaya, Bandung, Medan, and Semarang (Wikipedia, 2009).

In terms of demography, Indonesia is the fourth-most populous nation in the world (after China, India, and USA) with a population of over 240 million based on a July 2009 estimate (US Department of State, 2009) and over 245 million based on a July 2011 estimate (CIA, 2011), with a huge school student population of over 25 million persons (Muslim, 2002, in Atwell, 2006).

In terms of governance, Indonesia is divided into 33 provinces, five of which (Jakarta, Aceh, Yogyakarta, Papua, and West Papua) have special status, and 489 districts (Department of Foreign Affairs and Trade, 2009). Each province has its own political legislature and governor. The provinces are subdivided into districts called regencies (*kabupaten*) and cities (*kota*), which are further subdivided into subdistricts (*kecamatan*), and again into village groupings (either *desa* or *kelurahan*) (Wikipedia,

2009). Districts have become important in education development because of the empowerment of local communities through Educational Council (*Dewan Sekolah*) at district level, and the participation of community members is through a school committee at school level.

Lampung Province is the research setting of this thesis.

3.5.1.1 Lampung Province in Brief

Lampung is one of the 33 provinces in Indonesia. It is located in the southern-most part of the Sumatera Island and borders the provinces of Bengkulu and South Sumatera. It has a population of over six million (2000 census) and 3,000 ethnic groups. The school population is divided into fourteen districts: Bandar Lampung, Metro, Lampung Selatan, Lampung Tengah, Lampung Barat, Lampung Timur, Lampung Utara, Tanggamus, Pesawaran, Tulang Bawang, Tulang Bawang Barat, Pringsewu, Way Kanan and Mesuji (Wikipedia, 2009). Lampung population is diverse in ethnicity, languages, values, religions, and cultures. For example, Lampung consists of 65% outsiders such as Javanese, Sundanese, Madurese, Balinese, and others; only 35% of the population are native Lampung people. Most outsiders (78%) speak their mother tongues (Katubi, 2006).

Lampung reflects the diversity of Indonesia and has similar characteristics as those in other provinces. Accordingly, the school population in Lampung also reflects those characteristics.

3.5.2 Indonesian Formal Education

This subsection presents the Indonesian formal education system focused on School-based Management (SBM) for education quality, SBM impacts, Indonesian school leadership, and Indonesian school leadership studies. However, the structure of Indonesian formal education is initially introduced.

Based on Law No. 20/2003, Indonesian formal education consists of basic education, secondary education, and higher education. The basic education includes primary schools (six years) and junior high schools (three years). The nine-year basic education is compulsory for all Indonesian children to commence at age 7. The secondary education (three years) comprises general senior high schools and senior vocational schools. The higher education consists of diploma, bachelor, master, and doctorate programs. Prior to the formal primary schools, there are two types of education: early childhood education and kindergarten (Republic of Indonesia, 2003; The World Bank, 2007).

3.5.2.1 School-based Management (SBM) for Education Quality

The quality of education in the past has largely been unsatisfactory. There are three main factors that have hampered the improvement of Indonesia's quality of education: (1) the national education delivery policy, (2) the delivery of education, and (3) the participation of the community. The national education policy on Indonesian schooling emphasised the inputs and products, but not the process of education. Education was delivered in a centralised manner. Consequently, schools throughout Indonesia strongly depended on bureaucratic decision-making and often the central government conveyed policies that were too general and not relevant to local needs. Schools became powerless and there resulted in a lack of initiative, creativity and independence. Community participation was limited to students' parents, and their participation in education was limited to providing financial support (Ministry of National Education, 2005, pp. 15-16).

However, education needs community members to participate in the education process, in decision-making, monitoring, evaluation and accountability. SBM is believed to be able to improve the quality of Indonesian schooling and accordingly student achievement (Ministry of National Education, 2005).

Within SBM, the decision-making authority is decentralised to the school level. However, Richardson, Vandenberg, Blum, and Roman (2002, p. 218) argue that "While decentralisation may reside at the core of many contemporary practices and

research, the extent to which organisational-level performance gains are actually achieved via a decentralised decision-making authority remains unclear."

Conceptually, SBM is the transfer of authority from the Indonesian central government to the school level. "School-based management is the systematic decentralisation to the school level of authority and responsibility to make decisions on significant matters related to school operations within a centrally determined framework of goals, policies, curriculum, standards, and accountability" (Caldwell, 2005, p. 1). In SBM, the decision-making over school operations is transferred to school-level actors including principals, teachers, sometimes students, parents and other school community members.

However, the school operations have to comply with policies established by the central government. School stakeholders such as principals, teachers, parents, and other community members (school committees or school councils) are responsible for school operations. The decision-making for operating school programs is transferred to the stakeholders. These programs are:

- budget allocation,
- hiring and firing of teachers and other school staff,
- curriculum development,
- textbook and other educational material procurement,
- infrastructure improvement,
- setting the school calendar to better meet the specific needs of the local community, and
- monitoring and evaluation of teacher performance and student learning outcomes.

Decision-making at the local level is important to determine education polices according to local needs. In general, the objectives of the school programs include the following:

- empowering principals and teachers,
- improving quality and efficiency of schooling, thus raising student achievement levels,

- increasing the participation of parents and communities in schools, and
- building local level capacity (The World Bank, 2009).

Before 1999, the Indonesian education system was highly centralised. Most course contents, authorization of textbooks, teaching hours, and other matters associated with public school governance were centrally determined and teachers did not have much autonomy in curriculum design and teaching methods. This type of school management could not meet local needs.

The decentralisation of education in Indonesia was formally established in 1999 through Law 22/1999 on Regional Governance, enacted after the collapse of the Suharto regime in 1998. Under this law, education constitutes an area for decentralisation. Leadership at a local level within a decentralised education system enables community members to participate in school decision-making to accommodate local needs. In 2001, SBM was introduced nationally. Since then the managerial and financial authorities for public schools have been delegated to the district level. The school budget from government subsidies is determined by its immediate district bureau. Schools must formulate annual plans and implementation programs. The annual plans are initially submitted to the county offices, and then to the district bureaus (Nakay & Suwa, 2001, in Shoraku, 2008).

SBM is relatively new to Indonesian communities. It will take some time for the concept to be understood because of the diverse range of ethnicities, beliefs, cultures, areas, languages, and economic and social backgrounds. School leadership plays a critical role in facilitating the participation of community members in education (Hallinger, 2011, p. 137).

In conclusion, school reform in pursuit of improved school effectiveness has led to the implementation of SBM in schools in Indonesia. Participation of school stakeholders including teachers, parents and other community members in school improvement for student success is strongly encouraged.

3.5.2.2 SBM Impacts

Several researchers have focused their research on Indonesian schools that have implemented SBM since 1999. Most research has focused on how SBM was implemented and its effects on school improvement.

Studies on the effects of SBM implementation have produced controversial results. On the one hand, some results indicated positive effects. Bandur (2008) conducted his research using survey and focus group interviews of school council members (principals, teachers, parents, local community, and local government) in primary schools of Ngada District on the island of Flores. He reported that the implementation of SBM in Flores resulted in school improvement and enhanced student achievements. In a similar line, The Mitchell Group (2007) carried out the Managing Basic Education (MBE) Project on SBM, community participation, and teacher training in 23 districts in three provinces (East Java, Central Java, and NAD) and Jakarta, and found that the project had positive impressive impacts on school management, community participation, and on the teaching and learning processes.

On the other hand, some results indicated negative effects. A study conducted by Sumintono (2006) to examine SBM in the municipality of Mataram, Lombok, Indonesia found that the SBM policy as stated in the decree lacked clarity on such matters as SBM implementation guidelines, the particular model of SBM, establishing regulation at the district level, and the devolution of authority. Consequently, SBM remained superficial in its impact and has failed to fulfil its original intention of improving the quality of Indonesian education.

In a similar line, Arze del Granado, Fengler, Ragatz, and Yavuz (2007) reported that the challenges in Indonesian schooling included improving the quality of education services and improving the efficiency of education expenditures, for example, by reallocating teachers from oversupplied regions (urban and rural areas) to undersupplied regions (remote areas). This distribution inefficiency is addressed by the government's policy of doubling the base salary for teachers working in remote schools.

Irawan et al. (2004, p. 71) conducted their research in Jakarta and argue that SBM did not contribute to school effectiveness. Their key findings were:

- The implementation of SBM was still top-down.
- The SBM policy was not clearly understood by teachers and community.
- There was an increase in school tuition.
- The community and school committee were not encouraged to be engaged in the school revenue budget and spending.
- There was school corruption.

Similarly, Kristiansen and Pratikno (2006) investigated the impacts of the dramatic decentralisation reform in Indonesia on access to and quality of primary and secondary education. Their key findings were:

- The administration of educational services was without transparency and accountability.
- Household expenditures on children's education were high and increasing.
- Huge social and geographical disparities existed.

They conducted their research using qualitative and quantitative data from interviews, focus group discussions and household surveys in four districts: Bantul in the province of Yogyakarta, Mataram in the province of Nusa Tenggara Barat (NTB), Kutai Kartanegara in the province of Kalimantan Timur, and Ngada on the island of Flores in the province of Nusa Tenggara Timur (NTT).

Toi (2010) supports Kristiansen and Pratikno's (2006) findings, particularly in relation to the disparity between regions, and affirms that disparity between regions or schools is an adverse effect of decentralisation. Toi analysed data from 5,000 junior secondary schools in Indonesia using covariance structure analysis to identify the effects of factors related to the educational environment upon educational outcome, and to make a comparison between before and after the introduction of decentralisation. The main finding shows that the increase in the school budget improves the quality of the educational environment and leads to higher test scores and lower dropout rates. However, these positive results are less significant during

the period after decentralisation has started. This is particularly for schools whose budget level was relatively small.

In conclusion, it may be too early for the investigation of the impacts of the SBM implementation because SBM is a new concept in Indonesian schools. SBM needs about five years to yield fundamental changes at the school level and about 8 years to yield changes in test scores because students need to have been exposed to SBM for at least five years to enjoy the potential benefits of the school reform (Barrera-Osorio, Fasih, Patrinos, & Santibáñez, 2009, p. 12). However, studies of the impacts of SBM could provide a good feedback for the improvement of SBM implementation and of educational outcomes.

The conflicting results of the studies suggest the need for a more definitive investigation of the impact of SBM implementation in Indonesian schools. The implementation of SBM in schools substantially depends on the principals. Therefore, schools need good principals.

3.5.2.3 Indonesian School Leadership

School leadership is very important. "There are, to my knowledge, no recorded examples of schools which have been turned around in the absence of good leadership. Nor I do know of any published reports of schools achieving better than expected results with students from diverse and disadvantaged backgrounds without such leadership" (Leithwood, 2008a, p. 110).

In schools that implement SBM where decision-making policy is transferred or decentralised to the school level, school leadership becomes more critical because principals as school leaders need to be able to encourage stakeholders such as teachers to participate in school decision-making and to help teachers achieve their job satisfaction. The role of leadership in SBM is also essential in making effective decisions to enable schools to meet their competency in providing students with opportunities in a meaningful and authentic context (Wong, 2003, p. 246).

This decentralised decision-making needs an effective school leader. Transformational leaders, as Bass (1999) reported, foster decentralisation and challenging work and become increasingly crucial to subordinates' job satisfaction. While, transactional leadership alone could not provide job satisfaction (Bass, 1999).

3.5.2.4 Indonesian School Leadership Studies

Only two case studies on Indonesian school leadership were found in the literature but they have different settings and objectives.

First, Atwell (2006) conducted a case study to investigate the impact of a leadership program in three impoverished rural school communities in Central Lombok, Indonesia. The study reported positive impacts; there was a shift of school leadership style from authoritarian, hierarchical leadership to a style that was shared, dispersed and open to all stakeholders within the school community. The new school leadership style was able to be maintained during the research project.

Second, Raihani (2008) conduced case studies in three successful public senior secondary schools in Yogyakarta with the following two criteria: (1) schools which, on the basis of the provincial-wide test and examination results, could be shown to be improving their performance at an exceptional rate; and (2) schools where the principal had been in place for at least two years. The principals from the three successful schools in Yogyakarta demonstrated ability in developing the school vision, setting strategies, building capacity, and establishing a broader network to achieve the benefits of school improvement. These two studies on school leadership in different schools and areas both indicated positive results.

In terms of the impacts of SBM implementation in Indonesian schools, the studies produced conflicting results. Positive results were found in the studies conducted by Bandur (2008) and The Mitchell Group (2007). Negative results were found in the studies conducted by Sumintono (2006), Arze del Granado, Fengler, Ragatz, and Yavuz (2007), Irawan et al. (2004), Kristiansen and Pratikno, (2006), and Toi (2010).

These results suggest the need for further investigation of the impact of SBM implementation in Indonesian schools.

In terms of Indonesian school leadership, the studies conducted by Atwell (2006) and Raihani (2008) in different schools and areas in Indonesia both indicated positive results but the results are specific to the investigated schools and cannot be generalised. Therefore, a further investigation of school leadership including leadership styles is needed in a large number of schools in other areas.

This thesis focused on principal leadership styles, rather than SBM impacts, in association with decision-making styles, and teacher job satisfaction in Indonesian schools with the specific context of public junior secondary schools in Lampung Province. This is because leadership styles are the most important determinant of effective leadership (Proctor, 2004) for effective SBM which covers vision, missions, and goals (Wong, 2003, p. 243). Lampung Province has been chosen as the research setting because most of the previous studies have been conducted on areas in Java and around Bali, particularly Lombok.

In general, there is limited literature focused on the relationships between leadership styles, decision-making styles, and job satisfaction, particularly in an Indonesian school context, and particularly in the context of pubic junior secondary schools in Lampung Province.

3.6 Conclusion

The research methodology in association with research design, data collection method, population and sampling, and data analysis has been discussed to provide the theoretical lens through which research was designed and conducted (Walter, 2006, p. 18) to collect the data to be used to answer the research questions (Perry, 2002, p. 28). In particular, the research methodology has been discussed to justify what research design, research method, and data analysis technique were considered

the most appropriate for this study. The research context issues with respect to Indonesia and schools were also introduced.

After considering the strengths and weaknesses of the three research designs (quantitative, qualitative, and mixed-methods approaches), the choice of research design was quantitative research with survey questionnaires. In particular, the reasons are that this research approach (1) is the most appropriate to address the problem and the nine research questions, (2) may provide credible results to use as the basis for making educational policies in Indonesia, and (3) has the advantages of being more effective in the use of time and budget.

The implementation of the pilot study was undertaken in the same fashion as intended for the main study; it confirmed the feasibility to conduct the main study using the standard questionnaires to collect the data from a sample of 555 participants in public junior secondary schools in the six selected districts in Lampung Province.

After considering the uses of the analysis techniques both for examining relationships between variables and for examining significant differences between variables, five statistical analysis techniques were deemed appropriate for addressing the research problem and the nine research questions of this study. These five analysis techniques are: descriptive statistics, one-way ANOVA, independent-samples t-test, Pearson correlation, and multiple regression (standard and hierarchical). Descriptive statistics was used to address RQs 1-3. One-way ANOVA was used to address RQ 4. Independent-samples t-test was used to address RQs 5-6. Pearson correlation was used to address RQ 7. Multiple regression was used to address RQs 8-9. Finally, an effect size statistics technique, eta squared, was used to indicate the magnitude of the differences between groups which was not obtained from t-test as well as ANOVA.

The next chapter presents data analyses, results, and discussions of the results from addressing the nine research questions.

IV. ANALYSES, RESULTS, AND DISCUSSIONS

4.0 Introduction

Chapter 3 reviewed research methodology including criteria for judging research design and the associated research methods, population and sample, data collection, and data analyses. A quantitative research approach using survey questionnaires as well as the five different data analysis techniques was justified as the most appropriate approach to address the nine research questions.

This chapter presents three major themes: analyses of the survey data collected from the Indonesian schools, results from addressing the research questions using the associated techniques, and discussions of the results.

The five analysis techniques using SPSS version 18 are used to address the nine research questions. The analysis techniques with the associated research questions are: (1) descriptive analysis to address RQs 1-3, (2) one-way between-groups ANOVA to address RQ 4, (3) independent-samples t-test analysis to address RQs 5-6, (4) Pearson correlation to address RQ 7, and (5) multiple regression analysis (standard and hierarchical) to address RQs 8-9.

Results and discussions of the results are presented in association with the analysis techniques and the research questions. In discussions, the results are explained within the context of this study as well as prior studies reviewed in Chapter 2. Significance of test results is reported in the ways suggested by Alghabban (2001, 2004) based on p the probability level:

- not significant (symbolised as NS): $p > 0.05$,
- significant (symbolised as *) : $p < 0.05$,
- highly significant (symbolised as **): $p < 0.01$, and
- very highly significant (symbolised as ***): $p < 0.001$.

Alghabban affirms that a p-value < 0.05 suggests that the probability of the result occurring by chance is 1 in 20; whereas, when p < 0.01, the chance is 1 in 100, and likewise if p < 0.001, the chance is 1 in 1000 (Alghabban, 2001, 2004, p. 397). All probabilities reported are based on two-tailed tests as each comparison has two possible directions (Perry, 2002, p. 34).

4.1 Descriptive Analysis

This section presents a descriptive analysis. The data analysed were obtained from the (main) study conducted in public junior secondary schools in six districts out of the fourteen districts in Lampung Province, Indonesia. These six districts are Bandar Lampung, Lampung Tengah, Lampung Selatan, Pesawaran, Pringsewu, and Tanggamus. This study was carried out between 28 April and 21 July 2010.

The data were prepared prior to analyses. In this preparation stage, the data were initially coded. The codebooks are included in the Appendices (from Appendix 1 to Appendix 4). The data were then entered into SPSS, cleaned for errors, and checked for missing data. Finally, the ordinal or qualitative data obtained from the standard questionnaires required for the statistical analyses were rescaled into continuous data based on the manuals from the developers and prior researchers such as Bass and Avolio (2004), Spector (1985, 1994b, 1994c), and Thunholm (2009). After data were well prepared, it was in readiness for describing the participants and the variables, and, in particular, for performing specific statistical techniques to address the research questions (Pallant, 2001).

This study sampled 37 principals and 518 teachers in 37 schools from six districts, Lampung Province, Indonesia. Thirty-six principals and 475 teachers completed the questionnaires (MLQ Form 5X-Short, GDMS, and JSS, and demographic), which represents a 92% response rate.

Survey questionnaires were administered to the participants in their natural setting (schools) in person. Participation was voluntary; participants were encouraged to

answer as honestly as possible, and they were assured that their answers would remain confidential.

The survey questionnaires were four types:

- demographic questionnaire consisting of 9 questions,
- MLQ Form 5X-Short consisting of 45 questions,
- GDMS consisting of 25 questions, and
- JSS consisting of 36 questions.

These survey questionnaires were administered to participants (teachers and principals), except the JSS was not administered to principal participants because this study focused on teacher job satisfaction. The participants spent 30 to 40 minutes completing the questionnaires.

For the demographic questionnaire, all participants were asked to circle the one number for each question that best described their situation.

For MLQ Form 5X-Short, the participants were asked to answer 45 questions by circling the one number for each question that came closest to reflecting their opinion on whether they agreed or disagreed with each statement. Responses were made on a five-point Likert scale ranging from "not at all" to "frequently, if not always." The teachers rated their principals and the principals rated themselves.

For GDMS, the participants were asked to answer 25 questions by circling the one number for each question that came closest to reflecting their opinion on whether they agreed or disagreed with each statement. Responses were made on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The teachers rated their principals and the principals rated themselves.

For JSS, the teachers were asked to answer 36 questions by circling the one number for each question that came closest to reflecting their opinion on whether they agreed or disagreed with each statement. Responses were made on a six-point Likert scale ranging from "disagree very much" to "agree very much."

The descriptive analysis in this study was used to present demographic descriptions of participants and variables. In particular, as suggested by Pallant (2001, p. 51), one of the uses of these descriptive statistics is to address research questions. In this study, descriptive statistics were used to answer RQs 1-3. The next subsection presents demographic description of participants.

4.1.1 Description of Participants

The participants' demographics surveyed include gender, marital status, certification, school location, age group, last education, tenure, and job level. The descriptive statistics for the demographics of principal participants is presented in Appendix 7, Appendix 8, and Appendix 9. However, the following are the descriptive statistics of teacher participants in terms of frequency and percentage as shown in Table 4.1-1.

Table 4.1-1 Descriptive statistics of teachers' demographics (n = 475)

Demographics	Frequency	Per cent
Gender:		
Male	207	43.6
Female	268	56.4
Marital Status:		
Single	24	5.1
Married	451	94.9
Certification:		
Yes (Certified)	245	51.6
No (Uncertified)	230	48.4
Age Group in Years:		
<20	1	0.2
20-29	43	9.1
30-39	89	18.7
40-49	251	52.8
50-59	87	18.3
>59	4	0.8
Last Education:		
Diploma	102	21.5
Undergraduate	363	76.4
Master	10	2.1
Tenure (number of years) with current principal:		
1-2 years	285	60.0

3-4 years	126	26.5
5-6 years	26	5.5
>6 years	38	8.0
Total Tenure:		
<5 years	44	9.3
5-9 years	51	10.7
10-14 years	103	21.7
15-19 years	58	12.2
20-24 years	109	22.9
>24 years	110	23.2
Job Level:		
II	19	4.0
III	268	56.4
IV	188	39.6
School Location:		
Urban	205	43.2
Rural	270	56.8

Source: Analysis of survey data

Table 4.1-1 highlights the descriptive statistics (frequency) for demographics of the 475 teachers who responded in this study. Results were:

- gender – there were slightly more female teachers (56.4%) than male teachers (43.6%);
- marital status – there were many more married teachers (94.9%) than single teachers (5.1%);
- certification – there were slightly more certified teachers (51.6%) than uncertified teachers (48.4%);
- age group – the teachers with an age of less than 20 were the smallest number (0.2%), and teachers with an age of more than 59 were the second smallest number (0.8%); in contrast, teachers with an age of 40-49 were the largest number (52.8%);
- last education – most teachers in the sample held undergraduate degrees (76.4%); there were some (21.5%) holding diplomas, and 2.1% holding masters, but no teachers held doctorates;
- tenure (number of years) with current principal – more than half the sampled teachers (60%) had been working with their current principal for 1-2 years; there were 26.5% of the teachers working with their current principal for 3-4

years, 8% working with their current principal for > 6 years, and 5.5% working with their principal for 5-6 years;

- total tenure – the teachers working for more than 24 years were the highest number (23.2%), followed closely by those working for 20-24 years (22.9%); in contrast, the teachers working for less than 5 years were the lowest number (9.3%);
- job level – most teachers were in Job Level III (56.4%), followed by teachers in Job Level IV (39.6%), with fewest teachers in Job Level II (4%); the teachers in higher level were paid better; and
- school location – there were slightly more teachers working in rural schools (56.8%) than in urban schools (43.2%).

4.1.2 Description of Variables

Teacher participants' demographics have been outlined. The descriptive statistics of the main variables used in this study are:

- Teacher-perceived principal leadership styles:
  - transformational,
  - transactional, and
  - laissez-faire.
- Teacher-perceived decision-making styles:
  - rational,
  - intuitive,
  - dependent,
  - avoidant, and
  - spontaneous.
- Total teacher job satisfaction.

The descriptive statistics in this study are used to describe the characteristics of the variables. These characteristics, as shown in Table 4.1-2, are:

- mean,
- standard deviation,
- skewness, and
- kurtosis.

Table 4.1-2 Descriptive statistics for variables as perceived by teachers (n = 475)

Variables[1]	M	SD	Skewness	Kurtosis
Teacher-perceived principal leadership styles:				
Transformational	2.509	0.560	-0.406	-0.091
Transactional	2.040	0.490	-0.261	-0.365
Laissez-faire	0.819	0.674	0.642	-0.423
Leadership outcomes:				
Satisfaction	2.581	0.950	-0.668	0.117
Effectiveness	2.612	0.983	-0.589	-0.234
Extra efforts	2.482	0.797	-0.415	-0.094
Teacher-perceived principal decision-making styles:				
Rational	22.145	3.176	-1.267	1.233
Intuitive	13.648	5.437	0.024	-1.006
Dependent	18.842	4.146	-0.479	-0.294
Avoidant	10.263	4.323	0.666	-0.266
Spontaneous	13.987	4.469	0.036	-0.521
Teacher job satisfaction facets:				
Pay	17.722	3.997	-0.332	-0.308
Promotion	17.282	3.689	-0.126	-0.251
Supervision	19.728	4.058	-0.896	0.151
Fringe benefits	16.160	3.907	-0.028	-0.292
Contingent reward	17.322	4.191	-0.152	-0.807
Operating conditions	16.114	4.051	0.196	-0.406
Co-workers	19.983	2.868	-0.463	-0.023
Nature of work	19.924	2.976	-0.507	0.134
Communication	19.103	4.195	-0.580	-0.539
Total teacher job satisfaction	163.339	23.199	-0.166	-0.643

Note: [1]Transformed values of variables
Source: Analysis of survey data

Table 4.1.2 lists the measures (M, SD, skewness, and kurtosis) that serve as a basis to interpret results. Research questions 1-3 are interpreted based on mean and standard deviation, that is, whether a variable has a higher mean than another—the higher the mean figure, the more the variable exhibited or preferred as perceived by the participants. In this thesis, the variables are measured on a Likert scale: (1) a five-point scale ranging from 1 = strongly disagree to 5 = strongly agree for decision-making styles, (2) a six-point scale ranging from 1 = disagree very much to 6 = agree very much for job satisfaction, and (3) a five-point scale ranging from 0 = not at all to 5 = frequently if not always for leadership styles. Skewness and kurtosis are used to test normal distribution of data. Data are said to be normally distributed when skewness and kurtosis values are within the +2 to -2 range (Garson, 2010).

These descriptive variables were used with associated statistical analysis techniques to address the nine research questions. Results are presented and discussed in the following sections:

- Results regarding RQs 1-3 are presented and discussed in Section 4.1.
- Results regarding RQ 4 are presented and discussed in Section 4.3.
- Results regarding RQs 5-6 are presented and discussed in Section 4.4.
- Results regarding RQ 7 are presented and discussed in Section 4.5.
- Results regarding RQs 8-9 are presented and discussed in Section 4.6.

4.1.3 Research Questions 1-3

RQ 1: What leadership style(s) do the principals mostly exhibit as perceived by the teachers?

RQ 2: What decision-making style(s) do the principals mostly exhibit as perceived by the teachers?

RQ 3: What job satisfaction facet(s) do the teachers mostly prefer? How satisfied are they in general?

4.1.3.1 Results

Research Question 1

The variables used in RQ 1 are teacher-perceived principal leadership styles. The teacher-perceived principal leadership styles in this study are three: (1) transformational, (2) transactional, and (3) laissez-faire. As shown in Table 4.1-2, mean of transformational leadership style as perceived by teachers was the highest (M = 2.51, SD = 0.56), followed by mean of transactional leadership style (M = 2.04, SD = 0.49) and laissez-faire leadership style (M = 0.82), SD = 0.67). The scores in the rating ranged from 0 to 4 (Bass & Avolio, 2004).

According to the teachers' perceptions as measured by the MLQ 5X-Short and identified using descriptive statistics, the principals exhibited the three leadership styles. However, they mostly exhibited transformational leadership style.

It is also important to note that these principal leadership styles resulted in high leadership outcomes (satisfaction, effectiveness, and extra efforts). Mean of effectiveness was the highest (M = 2.61, SD = 0.98), followed by mean of satisfaction (M = 2.58, SD = 0.95) and mean of extra efforts (M = 2.48, SD = 0.80) respectively. These outcomes are all associated with the three leadership styles: transformational, transactional, and laissez-faire.

However, in this study, these leadership styles, as well as decision-making styles, were further examined to see whether they can be used as indicators to predict overall teacher job satisfaction (see Section 4.6). This overall job satisfaction was derived from the participants' responses to Spector's (1985) JSS.

Referring to RQ 1, these results suggest that, according to the teachers' perceptions, the principals mostly exhibit transformational leadership style.

Research Question 2

The variables used in RQ 2 are teacher-perceived principal decision-making styles. The teacher-perceived principal decision-making styles in this study are: rational,

intuitive, dependent, avoidant, and spontaneous. As shown in Table 4.1-2, mean of rational decision-making style as perceived by teachers was the highest (M = 22.15, SD = 3.18), followed by mean of dependent decision-making style (M = 18.84, SD = 4.15), spontaneous decision-making style (M = 13.99, SD = 4.47), intuitive decision-making style (M = 13.65, SD = 5.44), and avoidant decision-making style (M = 10.26, SD = 4.32). The scores in the rating ranged from 5 to 25 (Thunholm, 2009).

According to the teachers' perceptions as measured by the GDMS and identified using descriptive statistics, the principals exhibited the five decision-making styles. However, they mostly exhibited rational decision-making style.

Like the principal leadership styles, the decision-making styles are further examined to see whether they can be used as indicators to predict overall teacher job satisfaction (see Section 4.6).

Referring to RQ 2, these results suggest that, according to the teachers' perceptions, the principals mostly exhibit rational decision-making style.

Research Question 3

The variable used in RQ 3 is total teacher job satisfaction. The nine teacher job satisfaction facets used in this study are: pay, promotion, supervision, fringe benefits, contingent reward, operating conditions, co-workers, nature of work, and communication. For the four-item subscales/facets with a range from 4 to 24, scores of 4 to 12 are dissatisfied, 16 to 24 are satisfied, and between 12 and 16 are ambivalent. For the 36-item total job satisfaction where possible scores range from 36 to 216, the ranges are 36 to 108 for dissatisfaction, 144 to 216 for satisfaction, and between 108 and 144 for ambivalent (Spector, 1994c, p. 188).

As shown in Table 4.1-2, means of the facets ranged from 16.11 (SD = 4.05) for operating conditions to 19.98 (SD = 2.87) for co-workers, all in the range between 16 and 24 for satisfaction. However, mean of co-workers was very similar to that of nature of work (M = 19.92, SD = 2.98), supervision (M = 19.73, SD = 4.06), and communication (M = 19.10, SD = 4.20) respectively. While, the other four facets had

M and SD as the following: pay (M = 17.72, SD = 4.00), contingent reward (M =17.32, SD = 4.19), promotion (M = 17.28, SD = 3.69), and fringe benefits (M = 16.16, SD = 3.91). Mean of overall job satisfaction was 163.34 (SD = 23.20) in the ranges between 144 and 216 for satisfaction.

According to the teachers' perceptions, as measured by the JSS and identified using descriptive statistics, the teachers had all the nine facets of job satisfaction. However, they mostly preferred the four following facets out of the nine: co-workers, nature of work (teaching), supervision, and communication. Overall, the teachers were just slightly satisfied (M = 163.34, SD = 23.20).

Total teacher job satisfaction in this study is further examined to see whether it can be predicted by the principal leadership styles and the principal decision-making styles (see Section 4.6).

Referring to RQ 3, these results suggest that the teachers mostly prefer co-workers, nature of work (teaching), supervision, and communication facets. Overall, the teachers are just slightly satisfied.

4.1.3.2 Discussions

Research Question 1

Findings from addressing RQ 1 were that, according to the teachers' perceptions as measured by the MLQ 5X-Short and identified using descriptive statistics, the principals exhibited the three leadership styles: transformational (M = 2.51, SD = 0.56), transactional (M = 2.04, SD = 0.49), and laissez-faire (M = 0.82), SD = 0.67). These findings suggest that principals in public junior secondary schools in Lampung Province exhibit slightly more transformational leadership style than transactional leadership style but exhibit much more transformational leadership style than laissez-faire leadership style. However, the principals mostly exhibited transformational leadership style.

The findings indicate that, according to the teachers' perceptions, the principals are hardly likely to exhibit laissez-faire leadership style. Northouse (2007) argues that laissez-faire leadership style is basically non-leadership. A laissez-faire leader does not care whether his/her followers do something or do nothing as well as who does something who does nothing. When the followers do something, the laissez-faire leader does not emphasise results; he/she is not aware of his/her followers' performance. In other words, a laissez-faire leader avoids making decisions, gives no feedbacks, abdicates responsibility, makes little efforts to help subordinates satisfy their needs and does not use their authority. Laissez-faire is the most passive and ineffective form of leadership (Antonakis et al., 2003; Northouse, 2007). It is likely that the principals in Lampung behave more actively and more effectively than a laissez-faire leader.

The findings indicate that, according to the teachers' perceptions, the principals are less likely to exhibit transactional leadership style than transformational leadership style. Transactional leadership refers to an exchange process between a leader and his/her followers based on job descriptions to complete clear and specific goals. When the responsibilities or requirements are successfully completed, the leader gives his/her followers a reward in return, yet punishment when the followers deviate from the standard (Antonakis et al., 2003; Bryant, 2003). Completing the requirements means completing the transaction (Bromley & Kirschner-Bromley, 2007). Whether the leader gives a reward or a discipline to his/her subordinates relies on whether or not the followers perform adequately. In transactional leadership, leaders and followers commit to a transaction for a reward. The leader rewards or disciplines the followers depending on the adequacy of the followers' performance. That the principals are less likely to exhibit transactional leadership style than transformational leadership is likely due to requirements to be met by the teachers in order to get promoted. This makes sense because transactional leadership is the leadership on which transformational leadership builds (Antonakis et al., 2003; Bass & Avolio, 1994).

In terms of transformational leadership style, the findings indicate that the principals are more likely to exhibit transformational leadership style. Transformational

leadership is an augment of transactional leadership. Effective leaders exhibit both more emphasis on transformational leadership and less on transactional leadership.

These findings are consistent with previous findings such as Sarros, Gray, and Densten (2001, p. 9) who surveyed executives in the AIM–Monash, Australia. They found that the executives in the AIM–Monash survey considered that they all used transformational leadership styles as well as the transactional style of contingent reward fairly often. In contrast, the transactional leadership styles of MBE (active) and MBE (passive) were perceived as being used less frequently while laissez faire was considered to be hardly used at all.

The findings also support the Japanese case to some extent. In their study, Fukushige and Spicer (2007) explored Japanese followers' leadership preferences and the suitability of Bass and Avolio's (1997) full-range leadership model in Japan. The followers were asked what type of leaders they preferred to work with. Overall, the findings were that the followers preferred transformational leaders to transactional leaders. More specifically, with respect to transformational factors, individualized consideration was mostly preferred (by 11 of the 51 participants), followed by intellectual stimulation with seven positive participants, but the other transformational leadership factors (idealised influence attributed, idealised influence behaviour, and inspirational motivation) individually received one support. Regarding transactional leadership factors, contingent reward was in the third position with five participants, followed by management-by-exception active with two, but management-by-exception passive and laissez-faire received no support.

These findings also support the claims by Bass (1997), and Jung, Bass, and Sosik (1995) in Bass (1997) that transactional-transformational leadership paradigm was universally applicable; the transactional-transformational leadership paradigm transcend organisational and national boundaries (Bass, 1997, p. 130). Jung, Bass, and Sosik (1995) in Bass (1997) took a similar line that although this transactional-transformational leadership paradigm originated from a culturally individualistic country (United States of America), it seemed more likely to be relevant to culturally collectivistic countries (e.g. those within Asia) and in fact transformational

leadership was said to emerge more readily in these culturally collectivistic societies (Jung, Bass, & Sosik, 1995, in Bass, 1997). These findings have closed some gaps in leadership styles in the Indonesian school context.

These findings suggest that, as perceived by the teachers, the principals exhibit all the leadership styles, but mostly exhibit transformational leadership style. These findings, to some extent, are consistent with findings of other studies in the literature.

Research Question 2

Findings from addressing RQ 2 were that, according to the teachers' perceptions as measured by the GDMS and identified using descriptive statistics, the principals exhibited all the five decision-making styles. However, the principals mostly exhibited rational decision-making style.

These findings suggest that principals in public junior secondary schools in Lampung Province exhibit rational decision-making style more often than the other decision-making styles. In other words, these findings suggest that the principals exhibit various decision-making styles, but they mostly exhibit rational decision-making style.

These findings make sense because, as previously mentioned, teachers mostly exhibited transformational leadership to which rational decision-making style is related (Tambe & Krishnan, 2000). To illustrate, prior to making a decision, a transformational leader uses a comprehensive or rational decision-making style; he/she considers more information and more alternatives and listens to more people. In contrast, a transactional leader tends to use more limited information and fewer alternatives. Here, rational decision-makers are those who behave in ways that can maximise outcomes (e.g. job satisfaction). These ways, according to Robbins (2003), included six steps. They are:

- define the problem,
- identify the decision criteria,
- allocate weights to the criteria,
- develop the alternatives,

- evaluate the alternatives, and
- select the best alternative.

These steps suggest that rational decision-making needs a long process using significant amounts of information to make an objective and logical decision. However, although the rational decision might be more desirable to analyse a problem rationally, the intuitive decision is also required to face situations quickly. A manager tends to put greater weight on the intuitive decision than to the analytic reasoning when the problems became more complicated (Yang, 2003). Hence, to some extent, the principals in Lampung are likely to be effective decision-makers.

These findings are consistent with prior findings such as Scott and Bruce (1995), Spicer and Sadler-Smith (2005), and Baiocco, Laghi, and D'Alessio (2008). Scott and Bruce (1995) validated GDMS with sample 2 (84 MBA students), sample 3 (229 undergraduate students), and sample 4 (189 engineers and technicians). In their natural settings (classroom and workplace), participants were voluntarily encouraged to give honest responses that would be kept confidential. They found that in general the test indicated consistent and stable results. The five decision-making styles were not mutually exclusive, and individuals did not rely on a single decision-making style. Rational and avoidant decision-making were negatively correlated, and avoidant decision-making style was characterised by relatively passive personalities and attempts to avoid decision-making.

Despite practicing one dominant style, people were likely to use various decision-making styles (Spicer & Sadler-Smith, 2005). Baiocco, Laghi, and D'Alessio (2008) found that, among adolescents, older adolescents tended to exhibit more rational decision-making style and less intuitive, avoidant and spontaneous styles than the younger ones. They also revealed positive relationships between higher school achievement and rational decision-making style, but negative relationship between the number of absences from school and spontaneous and avoidant styles.

The Lampung Province study findings suggest that, as perceived by the teachers, the principals exhibit all the decision-making styles, but mostly exhibit rational decision-

making style. These findings are consistent with prior findings (Baiocco et al., 2008; Gambetti et al., 2008; Loo, 2000; Scott & Bruce, 1995; Thunholm, 2004) and provide confirmation within an Indonesian school context.

Research Question 3

Findings from addressing RQ 3 were that, according to the teachers' perceptions as measured by the JSS and identified using descriptive statistics, the teachers had all the nine facets of job satisfaction: pay (M = 17.72, SD = 4.00), promotion (M = 17.28, SD = 3.69), supervision (M = 19.73, SD = 4.06), fringe benefits (M = 16.16, SD = 3.91), contingent reward (M =17.32, SD = 4.19), operating conditions (16.11, SD = 4.05), co-workers (19.98, SD = 2.87), nature of work (M = 19.92, SD = 2.98), and communication (M = 19.10, SD = 4.20). Mean of overall teacher job satisfaction is 163.34 (SD = 23.20).

These findings suggest that the teachers are least satisfied with operating conditions and fringe benefits but most satisfied with co-workers, nature of work (teaching), supervision, and communication. Overall, the teachers in public junior secondary schools in Lampung Province are just slightly satisfied.

Teacher job satisfaction is very important because as Judge, Thoresen, Bono, and Patton (2001) argue in Klassen and Chiu (2010, p. 742), job satisfaction is associated with higher levels of job performance. Subordinates with high satisfaction could outperform; in contrast, those with low satisfaction underperform. The findings of the Lampung study suggest that the teachers are slightly satisfied. Therefore, leaders should lead in ways that motivate and inspire their subordinates, build effective communication, establish a culture of collaboration across the organisation, and help their subordinates reach personal growth in order to help achieve their job satisfaction (Loveren, 2007).

In relation to prior studies, these findings

- Partially support Bond, Gallinsky, and Swanberg's (1997, p. 121) affirmation and Chen, Yang, Shiau, and Wang's (2006) findings.

- Bond, Gallinsky, and Swanberg (1997, p. 121) affirm that facets of pay and fringe benefits are often considered key determinants of teacher job satisfaction. This may be true, but this is not always the case. The findings of RQ 3 in this thesis placed pay in lower level of satisfaction and both fringe benefits and operating conditions in the lowest level of satisfaction. This suggests that the teachers are likely to demand higher pay and much better fringe benefits and operating conditions. In the Indonesian school context, operating conditions are likely to be one of the key determinants of job satisfaction as well.
- Chen, Yang, Shiau, and Wang's (2006) research on teacher job satisfaction in college teachers in developed countries—Europe and America—indicated similar findings. Both European and American college teachers emphasised welfare, fair promotion systems, and high salaries. The findings of RQ 3 in this thesis placed pay or salaries and promotion in lower level of satisfaction and both fringe benefits (likely the same as welfare) and operating conditions in the lowest level of satisfaction. This suggests that the teachers are likely to demand higher pay, better promotion, and much better welfare and operating conditions. As previously mentioned, in the Indonesian school context, operating conditions are likely to be one of the key determinants of job satisfaction to be emphasised as well.

- Are consistent with Boeve's (2007) findings. Boeve (2007) administered a webpage instrument using JDI job satisfaction factors to physician assistant (PA) faculty members from Eastern Michigan University. He uncovered that faculty members were more satisfied than dissatisfied with their jobs in general, with education experience as their significant predictor for overall job satisfaction. The PA faculty members reported the greatest satisfaction in co-worker relation, followed by the work itself. However, in particular they were least satisfied with salaries they obtained and advancement opportunities. In the findings of RQ 3 in this thesis, the teachers reported the greatest satisfaction in co-workers, nature of work, supervision, and communication; while, they were least satisfied with fringe benefits and operating conditions. Unlike in schools in Indonesia, operating

conditions of schools in developed countries such as European and American schools are likely as expected by the teachers.

It is important to emphasise though that good pay and welfare or fringe benefits do not always necessarily produce satisfaction; many employees do not work only for money.

These findings suggest that the teachers have all the facets of job satisfaction, but they prefer co-workers, nature of work, supervision, and communication. Overall, the teachers are just slightly satisfied with their job. These findings, to some extent, are consistent with prior findings.

4.2 General Assumptions

This section presents general assumptions of a parametric test. These assumptions are essential because certain assumptions must be true for data to be parametric. Results are likely to be inaccurate if a parametric test is used when the data are not parametric. Hence, before deciding which parametric/statistical test is appropriate, these assumptions need to be checked (Field, 2009, p. 132). The following are some general assumptions applying to all parametric tests. Additional assumptions are associated with specific parametric tests.

The general assumptions for a parametric test as categorised by Pallant (2007, p. 203) include: (1) continuous measures, (2) random sampling, (3) normal distribution, (4) independence of observations, and (5) homogeneity of variance. However, according to Field (2009, p. 133), the general assumptions of parametric data include those general assumptions but he does not specify the second assumption. Assumptions (1), (2), and (4) are dealt with before collecting data.

- The first assumption, continuous measures (interval or ratio level), for this analysis was met. The data obtained from the standard questionnaires were rescaled from qualitative into continuous variables following the methods in the

literature such as Bass and Avolio (2004) for leadership styles, Thunholm (2009) for decision-making styles, and Spector (1994b) for job satisfaction.

- The second assumption, random sampling, is used to obtain scores from the population. In real-life research, random sampling is not often the case (Pallant, 2007, p. 203). For this study, random sampling was ensured during the research design phase.

- The third assumption, normal distribution, is "a tricky and misunderstood assumption because it means different things in different contexts. …the rationale behind the hypothesis testing relies on having something that is normally distributed (in some cases it's the sampling distribution, in others the errors in the model) and so if this assumption is not met the logic behind the hypothesis is flawed" (Field, 2009, p. 132). It may mean that the third assumption depends on the parametric tests used. For example, in multiple regressions, normality of the dependent variable is based on residuals. In social sciences, scores on the dependent variable are not normally distributed. Fortunately, most of the techniques are reasonably "robust" or tolerant of violations of this assumption. With large enough sample sizes (30+), the violation of this assumption should not cause any major problems (Pallant, 2007, p. 204). The normal distribution assumption for the main data of this study was tested using skewness and kurtosis, whose values are shown in Table 4.1-2.

- The fourth assumption, independence of observations, means that the observations must be independent of one another—each observation must not be affected by any other observation (Pallant, 2007, p. 203). This assumption, like that of normal distribution, depends on the parametric tests used (Field, 2009, p. 133). The fourth assumption is associated with the specific tests (e.g. t-test, ANOVA, and multiple regression).

- The fifth assumption, homogeneity of variance, means that "the variances should be the same throughout the data" (Field, 2009, p. 133). Levene's test for equality for variances can be used to test this assumption (Field, 2005, p. 736).

Normality

Normality can be tested visually using graphs (e.g. histogram, Q-Q plot, and boxplot) and with numbers using skewness, kurtosis, Kolmogorov-Smirnov and Shapiro-Wilk tests (Field, 2009). However, for simplicity and accuracy, normality of the data in this study was quantitatively assessed with skewness and kurtosis.

The skewness value indicates the symmetry of the distribution, while kurtosis indicates information about the peakedness of the distribution. A skewness and kurtosis value of 0 is perfectly normal. Positive skewness values indicate clustering to the left at the low values and vice versa. Positive kurtosis values indicate rather peaked distribution, with long thin tails. Kurtosis values below 0 indicate a relatively flat distribution (too many cases in the extremes) (Pallant, 2007, p. 56). "Skew should be within the +2 to -2 range when the data are normally distributed. Some authors use +1 to -1 as a more stringent criterion when normality is critical" (Garson, 2010). However, the analysis for this thesis used the criterion within the +2 to -2 range.

Table 4.1-2 shows skewness and kurtosis of all the variables used in this study, in addition to mean and standard deviation. The data showed a normal distribution, because the skewness and kurtosis values are within the +2 to -2 range (Garson, 2010). The skewness values ranged from -0.896 to +0.666, with the exception of the rational decision-making variable (-1.267). The kurtosis values ranged from -0.807 to +0.151, with exception of rational variable (+1.233). In other words, there were no values greater than an absolute value of one, with the exception of the rational decision-making style. Hence, the normality assumption for this study was confirmed.

Homogeneity of Variances

Homogeneity of variances can be assessed using Levene's test. Its null hypothesis tells that the variances in different groups are equal, that is, the difference between the variances is zero. Levene's test is significant at $p \leq 0.05$. It means that if Levene's test is ≤ 0.05, the variances are significantly different; hence, the assumption of homogeneity of variances is not confirmed. In contrast, if Levene's

test is ≥ 0.05, the variances are roughly equal; hence, the assumption of homogeneity of variances is confirmed. Levene's test can work by doing ANOVA and using the *explore* menu (Field, 2009, pp. 150-151). In this analysis, ANOVA is applied due to its simplicity and elegance. The results of the Levene's test using ANOVA are shown in Table 4.2-1.

Table 4.2-1 Test of homogeneity of variances

Variable	Levene Statistic	df1	df2	p
Transformational leadership	0.28	1	473	0.60
Transactional leadership	0.08	1	473	0.77
Laissez-faire leadership	1.36	1	473	0.24
Rational decision-making style	1.33	1	473	0.25
Intuitive decision-making style	0.62	1	473	0.43
Dependent decision-making style	0.79	1	473	0.37
Avoidant decision-making style	0.21	1	473	0.65
Spontaneous decision-making style	1.80	1	473	0.18
Total teacher job satisfaction	1.65	1	473	0.20

Source: Analysis of survey data

Table 4.2-1 indicates the summary of testing the homogeneity of variances. The variances were equal for participants in public secondary schools in Lampung, F (1, 473) ≥ 0.05, NS, for all the variables. Hence, assumption of homogeneity of variance for this study was confirmed.

Some general assumptions applying to all parametric tests (level of measurement, random sampling, normal distribution, independence of observations, and homogeneity of variance) have been met. The data are now ready to employ the following statistical analyses: one-way between-groups ANOVA, independent-samples t-test, Pearson correlation, and multiple regression.

4.3 One-way Between-groups ANOVA

This section presents a one-way between-groups ANOVA analysis. As pointed out in Chapter 3, this ANOVA technique was used because it is the appropriate technique to determine whether any significant differences exist in the means on one

continuous dependent variable across three or more distinct categories or groups of one categorical independent variable. The one-way between-groups ANOVA analysis in this study was used to analyse data to address RQ 4. Results are presented below.

4.3.1 Research Question 4

RQ 4: How does teacher job satisfaction vary with tenure (number of years) with current principal, total tenure, qualifications, and job level?

4.3.1.1 Results

In this analysis, teacher job satisfaction is the continuous dependent variables. Last education, tenure (number of years) with current principal, total tenure, and job level are the categorical independent variables, labelled as factors in SPSS, with three or more categories or groups.

These independent variables have at least three groups.

- Last education has three groups:
  - diploma,
  - undergraduate, and
  - master.
- Tenure (number of years) with current principal has four groups:
  - 1-2 years,
  - 3-4 years,
  - 5-6 years, and
  - > 6 years.
- Total tenure has six groups:
  - < 5 years
  - 5-9 years
  - 10-14 years
  - 15-19 years
  - 20-24 years, and

- > 20 years.

- Job level has three groups:
  - level II
  - level III, and
  - level IV.

In the analysis, the means between the two groups of the individual independent variable were compared to determine the significant difference in the means of the groups on teacher job satisfaction. More precisely:

- The means between the three groups of last education were compared to determine the significant differences in the means on teacher job satisfaction.
- The means between the four groups of tenure (number of years) with current principal were compared to determine the significant differences in the means on teacher job satisfaction.
- The means between the six groups of total tenure were compared to determine the significant differences in the means on teacher job satisfaction.
- The means between the three groups of job level were compared to determine the significant differences in the means on teacher job satisfaction.

Tukey's honestly significant difference (HSD) test, a post-hoc test, was used to explore where these differences in the means lie, or which groups differed from each other.

However, the magnitude of the differences between groups cannot be obtained from ANOVA. Effect size statistics is used to indicate the magnitude of the differences between groups. One of the most commonly used effect size statistics is eta squared. Eta squared ranges from 0 to 1 with the following formula:

$\eta^2 = \frac{SS_M}{SS_T}$ (Field, 2005, p. 357; Pallant, 2007, p. 247).

The interpretation of the effect size value is proposed by Cohen as the following:
0.01 = small effect,
0.06 = moderate effect, and
0.14 = large effect (Cohen, 1988, pp. 284-287, in Pallant, 2007, pp. 235-236).

Results of a one-way between-groups ANOVA analysis to examine significant differences in teacher job satisfaction by last education, tenure (number of years) with current principal, total tenure, and job level are summarised in Table 4.3-1.

Table 4.3-1 One-way between-groups ANOVA analysis results for significant differences

Dependent variable	Significant differences ($p \leq 0.05$) by			
	Last education	Tenure with current principal	Total tenure	Job level
Teacher job satisfaction (TJS)	Yes	Yes	No	No

Source: Analysis of survey data

Table 4.3-1 shows that

- There were significant differences at $p \leq 0.05$ in scores of teacher job satisfaction by last education and by tenure (number of years) with current principal.
- There were no significant differences at $p \leq 0.05$ in scores of teacher job satisfaction by total tenure and by job level.

In detail, these one-way between-groups ANOVA and Tukey HSD test results are presented below.

(1) Teacher job satisfaction by last education. ANOVA and Tukey HSD test results are shown in Table 4.3-2.

Table 4.3-2 Teacher job satisfaction by last education

Last Education		N	M	SD	Tukey HSD
1	Diploma	102	166.05	22.23	1 > 3*
2	Undergraduate	363	163.13	23.26	2 > 3*
3	Master	10	143.40	22.49	3 < 1*, 3 < 2*

TJS	SS	df	MS	F	p	η^2
Between groups	4741.10	2	2370.55	4.47*	0.012	0.01859
Within groups	250353.33	472	530.41			
Total	255094.43	474				

*$p < 0.05$

Source: Analysis of survey data

Table 4.3-2 shows that:

- There was a statistically significant difference at $p \leq 0.05$ in scores of teacher job satisfaction for the three categories of last education (diploma, undergraduate, and master): $F(2, 472) = 4.5$, $p = 0.012$.
- Post-hoc comparisons using the Tukey HSD test indicated that
  - Diploma ($M = 166.05$, $SD = 22.23$) was significantly different from master ($M = 143.40$, $SD = 22.49$).
  - Undergraduate ($M = 163.13$, $SD = 23.26$) was significantly different from master ($M = 143.40$, $SD = 22.49$).
  - However, diploma ($M = 166.05$, $SD = 22.23$) was not significantly different from undergraduate ($M = 163.13$, $SD = 23.26$).
- Overall, the differences represented a very small effect ($\eta^2 = 0.01859$).

(2)Teacher job satisfaction by tenure (number of years) with current principal. ANOVA and Tukey HSD test results are shown in Table 4.3-3.

Table 4.3-3 Teacher job satisfaction by tenure with current principal

Tenure with principal	N	M	SD	Tukey HSD
1 1-2 years	285	161.47	22.31	1 < 2*
2 3-4 years	126	167.82	25.15	2 > 1*, 2 > 3*
3 5-6 years	26	152.81	23.14	3 < 2*, 3 < 4*
4 >6 years	38	169.74	18.97	4 > 3*

TJS	SS	df	MS	F	p	η^2
Between groups	7965.29	3	2655.10	5.06**	0.002	0.03122
Within groups	247129.14	471	524.69			
Total	255094.43	474				

*p < 0.05, **p < 0.01
Source: Analysis of survey data

Table 4.3-3 shows that:

- There was a statistically significant difference at $p < 0.05$ in scores of teacher job satisfaction for the four categories of tenure (number of years) with current principal.
- Post-hoc comparisons using the Tukey HSD test indicated that

- Tenure with principal for 1-2 years (M = 161.47, SD = 22.31) was significantly different from tenure with principal for 3-4 years (M = 167.82, SD = 25.15).
- Tenure with principal for 3-4 years (M = 167.82, SD = 25.15) was significantly different from tenure with principal for 5-6 years (M = 152.81, SD = 23.14).
- Tenure with principal for 5-6 years (M = 152.81, SD = 23.14) was significantly different from tenure with principal for more than 6 years (M = 169.74, SD = 18.97).
- All the other comparisons of means were not significantly different.

o Overall, the differences represented a small effect ($\eta^2 = 0.03122$).

(3) Teacher job satisfaction by total tenure. ANOVA results are shown in Table 4.3-4.

Table 4.3-4 Teacher job satisfaction by total tenure

Total tenure		N	M	SD		
1	<5 years	44	163.07	23.90		
2	5-9 years	51	162.31	20.83		
3	10-14 years	103	164.33	25.70		
4	15-19 years	58	167.53	24.15		
5	20-24 years	109	161.06	22.63		
6	>24 years	110	163.04	21.67		
TJS		SS	df	MS	F	p
Between groups		1753.04	5	350.61	0.65	0.662
Within groups		253341.39	469	540.17		
Total		255094.43	474			

Source: Analysis of survey data

Table 4.3-4 shows that there were no statistically significant differences at $p < 0.05$ in scores of teacher job satisfaction for the six categories of total tenure.

(4) Teacher job satisfaction by job level. ANOVA results are shown in Table 4.3-5.

Table 4.3-5 Teacher job satisfaction by job level

Job level		N	M	SD
1	II	19	165.37	24.08
2	III	268	163.47	24.25
3	IV	188	162.95	21.64

TJS	SS	df	MS	F	p
Between groups	111.78	2	55.89	0.10	0.902
Within groups	254982.65	472	540.22		
Total	255094.43	474			

Source: Analysis of survey data

Table 4.3-5 shows that there were no statistically significant differences at $p < 0.05$ in scores of teacher job satisfaction for the three categories of job level.

Referring to RQ 4, these results suggest that there are significant differences at $p < 0.05$ in scores of teacher job satisfaction by last education and by tenure (number of years) with current principal. However, there are no significant differences at $p < 0.05$ in scores of teacher job satisfaction by total tenure and by job level.

4.3.1.2 Discussions

Findings from addressing RQ 4 using one-way between-groups ANOVA were that:

- There were significant differences at $p < 0.05$ in scores of teacher job satisfaction by last education and by tenure (number of years) with current principal.
- Post-hoc comparisons using the Tukey HSD test were used to determine which groups differed from each other and the results indicated two things.
  - Mean scores for diploma and undergraduate were significantly different from master. However, diploma was not significantly different from undergraduate.
  - Mean score for tenure (number of years) with current principal for 1-2 years was significantly different from tenure with principal for 3-4 years. Tenure with principal for 3-4 years was significantly different from tenure with principal for 5-6 years. Tenure with principal for 5-6 years was significantly

different from tenure with principal for more than 6 years. All the other comparisons of means were not significantly different.

- On average, these differences had only a very small effect.
- There were no significant differences at $p < 0.05$ in scores of teacher job satisfaction by total tenure and job level.

These findings suggest that:

- Teachers with lower degrees appear to be more satisfied with their job than those with higher degrees. More precisely:
  - Teachers with diploma degrees appear to be more satisfied than teachers with undergraduate degrees
  - Teachers with undergraduate degrees appear to be more satisfied than teachers with master degrees.

Ideally, teachers with higher education should be more satisfied because they should have a higher chance to get promoted and receive better pay. It is likely that teachers with higher education may not get what they expect. In other words, it is likely that teachers with higher education have higher aspirations but schools cannot meet their desires so these teachers are dissatisfied because "Those with the strongest desires or highest aspirations are least happy with their job if the environment does not facilitate satisfaction of their needs" (Zembylas & Papanastasiou, 2004, p. 359).

These findings are inconsistent with Boeve's (2007) findings. Boeve (2007) administered a webpage instrument using JDI job satisfaction factors to physician assistant (PA) faculty members from Eastern Michigan University and found that faculty members were more satisfied than dissatisfied with their jobs in general, with education experience as their significant predictor for overall job satisfaction. This discrepancy may be due to the two different settings (Indonesia and USA) and different salary systems.

- Teachers with 3-4 years with current principal tend to be more satisfied than teachers with 1-2 years with their principal. Teachers with more than six years with their principals tend to be more satisfied than teachers with fewer than 6

years with principals. The exception is that teachers with 5-6 years tend to be less satisfied than teachers with any years with their principal. In general, teachers with more years with their principal tend to be more satisfied. However, this finding has not been previously described in the literature.

- How long teachers have been a teacher and what job levels they have achieved do not indicate significant differences in job satisfaction. These findings are unexpected. There should be significant differences by total tenure and job level because total tenure (as well as higher level of education) normally goes with job level—the longer the teachers' total tenure, the higher the job level they achieve, and in turn, their pay normally increases. These finding are inconsistent with those of the research on teacher job satisfaction in Cyprus by Zembylas and Papanastasiou (2004). They found that teachers with longer tenure tended to be more satisfied than those with shorter tenure.

These findings suggest that:

- Significant differences exist at $p < 0.05$ in scores of teacher job satisfaction by
  - Last education—where teachers with lower degrees appear to be more satisfied than teachers with higher degrees.
  - Tenure (number of years) with current principal—where in general teachers with more years with their principal tend to be more satisfied.
- However, these differences have only a very small effect
- No significant differences exist at $p < 0.05$ in scores of teacher job satisfaction by total tenure and by job level.

Findings in terms of last education are inconsistent with Boeve's (2007) findings, and findings in terms of tenure (number of years) with current principal have not been previously described in the literature

4.4 Independent-samples T-Test Analysis

This section presents an independent-samples t-test analysis. As pointed out in Chapter 3, this t-test was used because it is the most commonly used and appropriate

technique to compare the effects of means of two groups (of a categorical independent variable) on a given variable (continuous dependent variable) to determine whether any significant differences exist between the two groups (Pallant, 2007, p. 232; StatSoft, 2011). However, the magnitude of the differences between groups cannot be obtained from t-test as well as ANOVA. Effect size statistics was used to indicate the magnitude of the differences between groups. The independent-samples t-test analysis was used in this study to analyse data to address RQs 5-6.

Results of an independent-samples t-test analysis to address RQs 5-6 are summarised in Table 4.4-1.

Table 4.4-1 Independent-samples t-test results of significant differences

Variable	Gender	Marital status	Certification	School location	Perception
Teacher job satisfaction	No	No	No	Yes	-
Leadership styles					
- Transformational	-	-	-	-	Yes
- Transactional	-	-	-	-	Yes
- Laissez-faire	-	-	-	-	Yes

Source: Analysis of survey data

Table 4.4-1 shows that

- There were significant differences in teacher job satisfaction by school location, but there were no significant differences in teacher job satisfaction by gender, marital status, and certification.

There were significant differences in the three principal leadership styles as perceived by principals and as perceived by teachers.

4.4.1 Research Question 5

RQ5: How does teacher job satisfaction vary with gender, marital status, certification, and school location?

4.4.1.1 Results

In this analysis, teacher job satisfaction is the continuous dependent variable. Gender, marital status, certification, and school location are the categorical independent variables. These individual independent variables have two categories or groups: gender (male and female), marital status (single and married), certification (yes and no or certified and uncertified), and school location (urban and rural).

In the analysis, the means of the two groups of the individual independent variable were compared to determine the significant difference in the effect of the means of the two groups on teacher job satisfaction. More precisely,

- The means of male and female teachers were compared to determine the significant difference in the means on teacher job satisfaction.
- The means of single and married teachers were compared to determine the significant difference in the means on teacher job satisfaction.
- The means of certified and uncertified teachers were compared to determine the significant difference in the means on teacher job satisfaction.
- The means of urban and rural teachers were compared to determine the significant difference in the means on teacher job satisfaction.

Results regarding RQ 5 and discussions of the results are presented below.

*(1) Teacher job satisfaction by gender***.** Results of the independent-samples t-test analysis are shown in Table 4.4-2.

Table 4.4-2 Teacher job satisfaction by gender

Teacher	N		M		SD			
job satisfaction	Male	Female	Male	Female	Male	Female	t	p
TJS	207	268	165.36	161.78	22.28	23.81	1.67	0.095

Source: Analysis of survey data

Table 4.4-2 indicates that there was no significant difference in teacher job satisfaction scores between male teachers (M = 165.36, SD = 22.28) and female teachers (M = 161.78, SD = 23.81), t (473) = 1.67, p = 0.095 (2-tailed).

(2) Teacher job satisfaction by marital status. Results of the independent-samples t-test analysis are shown in Table 4.4-3.

Table 4.4-3 Teacher job satisfaction by marital status

Teacher	N		M		SD			
job satisfaction	Single	Married	Single	Married	Single	Married	t	p
TJS	24	451	161.46	163.44	25.72	23.08	-0.41	0.684

Source: Analysis of survey data

Table 4.4-3 indicates that there was no significant difference in teacher job satisfaction scores between single teachers (M = 161.46, SD = 25.72) and married teachers (M = 163.44, SD = 23.08), t (473) = -0.41, p = 0.684 (2-tailed).

(3) Teacher job satisfaction by certification. Results of the independent-samples t-test analysis are shown in Table 4.4-4.

Table 4.4-4 Teacher job satisfaction by certification

Teacher	N		M		SD			
job satisfaction	Certified	Uncertified	Certified	Uncertified	Certified	Uncertified	t	p
TJS	245	230	162.37	164.37	22.29	24.14	-0.94	0.347

Source: Analysis of survey data

Table 4.4-4 indicates that there was no significant difference in teacher job satisfaction scores between certified teachers (M = 162.37, SD = 22.29) and uncertified teachers (M = 164.37, SD = 24.14), t (473) = -0.94, p = 0.347 (2-tailed).

(4) Teacher job satisfaction by school location. Results of the independent-samples t-test analysis are shown in Table 4.4-5.

Table 4.4-5 Teacher job satisfaction by school location

Teacher	N		M		SD				
job satisfaction	Urban	Rural	Urban	Rural	Urban	Rural	t	p	η^2
TJS	205	270	158.52	167.00	22.60	23.02	-4.01***	0.000	0.03280

***p < 0.001
Source: Analysis of survey data

Table 4.4-5 indicates that there was a significant difference in teacher job satisfaction scores between urban teachers (M = 158.52, SD = 22.60) and rural teachers (M = 167.00, SD = 23.02), t (473) = -4.01, p = 0.000 (2-tailed), but the difference represented a small size effect (η^2 = 0.03280).

Referring to RQ 5, these results suggest that there are significant differences at p < 0.05 in teacher job satisfaction by school location. However, there are no significant differences in teacher job satisfaction by gender, marital status, and certification.

4.4.1.2 Discussions

Findings from addressing RQ 5 were that, using an independent-samples t-test analysis, there were significant differences at p < 0.05 in teacher job satisfaction by school location, but there were no significant differences in teacher job satisfaction by gender, marital status, and certification.

In terms of school location, the findings suggest that rural teachers are likely to be more satisfied than urban teachers even though this difference represented a small effect. The findings relating to the school location have not been previously described in the literature.

In terms of gender, the findings are consistent with Eckman's (2004) finding that no significant difference between male and female principals existed in job satisfaction. However, principal job satisfaction in three Midwestern states (Illinois, Minnesota, and Wisconsin) was positively related to tenure; both groups exhibited moderate levels of job satisfaction.

In terms of marital status and certification, the findings have not been previously described in the literature. However, contrary to expectations, the Lampung study did not find a significant difference in job satisfaction by certification. Certification determines level of pay, but this pay might be relatively insignificant, or there might an issue of delayed payment, or the teachers' satisfaction might not solely depend on the pay. Further (qualitative) research could be conducted to investigate why certified teachers and uncertified teachers are not significantly different in teacher job satisfaction.

These findings suggest that, there are significant differences at $p < 0.05$ in teacher job satisfaction by school location. However, there are no significant differences in teacher job satisfaction by gender, marital status, and certification. Findings in terms of gender are consistent to Eckman's (2004) finding, but findings in terms of school location, marital status, and certification have not been previously described in the literature.

4.4.2 Research Question 6

RQ 6: How do self-perceived principal leadership styles compare with teacher-perceived principal leadership styles?

4.4.2.1 Results

An independent-samples t-test was used to address RQ 6 because it is the most commonly used and appropriate technique to compare the effect of means of two groups (of a categorical independent variable) on a given variable (continuous dependent variable) to determine whether any significant differences exist between the two groups (Pallant, 2007, p. 232; StatSoft, 2011). A paired samples t-test was not used to address this question because it is used when a researcher has only one group of subjects and collect data from them on two different occasions (Pallant, 2001, 2007). For example, it is used to compare the mean test scores before (pre-test) and after (post-test) the subjects completed a test preparation course. It is used to see if the test preparation course improved people's score on the test. However, this

analysis used two independent samples: principals and teachers; hence, independent samples t-test is appropriate for this analysis to compare the mean scores between the two different groups.

In this analysis, the principal leadership styles (transformational leadership style, transactional leadership style, and laissez-faire leadership style) are the continuous dependent variables. Perception is the categorical independent variable which has two categories or groups: self-perception and teacher-perception.

In the analysis, the means of the two groups of the independent variable (perception) were compared to determine the significant difference in the effect of the means of the two groups on the individual dependent variables. More precisely,

- The means of self-perception and teacher-perception were compared to determine the significant difference in the means on transformational leadership style.
- The means of self-perception and teacher-perception were compared to determine the significant difference in the means on transactional leadership style.
- The means of self-perception and teacher-perception were compared to determine the significant difference in the means on laissez-faire leadership style.

Thirty-six principals rated themselves, while the 475 teachers rated their principals. These principal leadership styles were measured by the standard questionnaire MLQ Form 5X-Short. The principal leadership styles as perceived by themselves were compared with the principal leadership styles as perceived by the teachers, using an independent-samples t-test.

Descriptive statistics for teacher participants was described in Subsection 4.1.1. In particular, descriptive statistics for principals is shown in Appendix 7, Appendix 8, and Appendix 9. All the variables associated with principals used in this analysis met all the assumptions. Results regarding RQ 6 and discussions of the results are presented below. In particular, results of the independent-samples t-test analysis regarding RQ 6 are shown in Table 4.4-6.

Table 4.4-6 Principal leadership styles by perception (self-perception and teacher-perception)

Principal Leadership Styles	N		M		SD		t	p	η^2
	Principal	Teacher	Self-perception	Teacher-perception	Self-perception	Teacher-perception			
Transformational	36	475	2.98	2.51	0.34	0.56	7.49***	0.000	0.0993
Transactional	36	475	2.35	2.04	0.41	0.49	3.72***	0.000	0.0264
Laissez-faire	36	475	0.41	0.82	0.35	0.67	-6.22***	0.000	0.0706

***$p < 0.001$
Source: Analysis of survey data

Table 4.4-6 indicates that:

- There was a significant difference in scores for self-perceived principal transformational leadership style (M = 2.98, SD = 0.34) and for teacher-perceived principal transformational leadership style (M = 2.51, SD = 0.56), t (509) = 7.49, p = 0.0001 (2-tailed), and the difference represented a moderate size effect (η^2 = 0.09934).
- There was a significant difference in scores for self-perceived principal transactional leadership style (M = 2.35, SD = 0.41) and for teacher-perceived principal transactional leadership style (M = 2.04, SD = 0.49), t (509) = 3.72, p = 0.0001 (2-tailed), and the difference represented a small size effect (η^2 = 0.02641).
- There was a significant difference in scores for self-perceived principal laissez-faire leadership style (M = 0.41, SD = 0.35) and for teacher-perceived principal laissez-faire leadership style (M = 0.82, SD = 0.67), t (509) = -6.22, p = 0.0001 (2-tailed), and the difference represented a small size effect (η^2 = 0.07058).

Referring to RQ 6, these results suggest that the means of transformational leadership style and transactional leadership style perceived by principals are higher than those perceived by teachers. In contrast, the mean of laissez-faire leadership style perceived by principals is lower than that perceived by teachers. The differences in the means are significant ($p < 0.001$).

4.4.2.2 Discussions

Findings from addressing RQ 6 were that, using an independent-samples t-test analysis, there were significant differences ($p < 0.001$) in self-perceived principal leadership styles and teacher-perceived principal leadership styles. These differences represented a small to a moderate effect (η^2 ranged from 0.02641 to 0.09934).

Specifically, according to the teachers' perceptions and the principals' perceptions as measured by MLQ Form 5-X Short and the demographic questionnaire and analysed using an independent-samples t-test, results of how self-perceived principal leadership styles compare with teacher-perceived principal leadership styles are below:

- There was a significant difference at $p < 0.001$ in scores for self-perceived principal transformational leadership style and for teacher-perceived principal transformational leadership style, and the difference represented a moderate size effect.
- There was a significant difference at $p < 0.001$ in scores for self-perceived principal transactional leadership style and for teacher-perceived principal transactional leadership style, and the difference represented a small size effect.
- There was a significant difference at $p < 0.001$ in scores for self-perceived principal laissez-faire leadership style and for teacher-perceived principal laissez-faire leadership style, and the difference represented a small size effect.

These findings suggest that self-perceived principal leadership styles are significantly different from teacher-perceived principal leadership styles ($p < 0.001$). These findings suggest that both principals and teachers agree that the principals are more likely to exhibit transformational leadership style, less likely to exhibit transactional leadership style, and hardly likely to exhibit laissez-faire leadership style. However, the principals perceived that they exhibited more transformational, more transactional, and less laissez-faire leadership style than what the teachers perceived. These findings have not been previously described in the literature.

The preceding sections presented the data analyses and the associated results and discussed the results. The next section is a conclusion

4.5 Pearson Correlation

A Pearson correlation (which can also be generated by standard multiple regression analysis) was used to address RQ 7. Pearson correlation is used to generate two-way relationships between variables.

4.5.1 Research Question 7

RQ 7: What are the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction?

4.5.1.1 Results

Specifically, there are five relationships examined in this analysis as follows:

- relationships among teacher-perceived principal leadership styles,
- relationships among teacher-perceived principal decision-making styles,
- relationships between teacher-perceived principal leadership styles and principal decision-making styles,
- relationships between teacher-perceived principal leadership styles and teacher job satisfaction, and
- relationships between teacher-perceived principal decision-making styles and teacher job satisfaction.

Table 4.5-1 Relationship between variables

Variable	1	2	3	4	5	6	7	8	9
1. Total teacher job satisfaction	1								
2. Transformational leadership style	0.51***	1							
3. Transactional leadership style	0.43***	0.78***	1						
4. Laissez-faire leadership style	-0.39***	-0.33***	-0.23***	1					
5. Rational decision-making style	0.54***	0.44***	0.35***	-0.34***	1				
6. Intuitive decision-making style	-0.42***	-0.22***	-0.13**	0.23***	-0.31***	1			
7. Dependent decision-making style	0.19***	0.24***	0.24***	-0.11**	0.23***	-0.01	1		
8. Avoidant decision-making style	-0.50***	-0.27***	-0.21***	0.30***	-0.34***	0.46***	0.06	1	
9. Spontaneous decision-making style	-0.19***	0.03	0.09*	0.08*	-0.19***	0.35***	0.02	0.35***	1

*p < 0.05, **p < 0.01, ***p < 0.001

Table 4.5-1 shows the relationships between the variables. The relationships were mostly significant. This table has been further divided into Table 4.5-2, Table 4.5-3, Table 4.5-4, Table 4.5-5 and Table 4.5-6 according to the specified relationships.

(1) Relationships between teacher-perceived principal leadership styles. These relationships were significant (3 out of 3) as shown in Table 4.5-2.

Table 4.5-2 Relationships between principal leadership styles

Relationships	r
Transformational and transactional	0.78***
Transformational and laissez-faire	-0.33***
Transactional and laissez-faire	-0.23***

***p < 0.001
Source: Analysis of survey data

Table 4.5-2 shows results that:

- Transformational leadership style was
  - significantly and positively related to transactional leadership style (r = 0.78, p < 0.001), but

- significantly and negatively related to laissez-faire leadership style ($r = -0.33$, $p < 0.001$).

- Transactional leadership style was significantly and negatively related to laissez-faire leadership style ($r = -0.23$, $p < 0.001$).

(2) Relationships between teacher-perceived principal decision-making styles. These relationships were mostly significant (that is, 7 out of 10 were significant) as shown in Table 4.5-3.

Table 4.5-3 Relationship between principal decision-making styles

Relationships	r
Rational and intuitive	-0.31***
Rational and dependent	0.23***
Rational and avoidant	-0.34***
Rational and spontaneous	-0.19***
Intuitive and dependent	-0.01
Intuitive and avoidant	0.46***
Intuitive and spontaneous	0.35***
Dependent and avoidant	0.06
Dependent and spontaneous	0.02
Avoidant and spontaneous	0.35***

***$p < 0.001$
Source: Analysis of survey data

Table 4.5-3 shows results that:

- Rational decision-making style was
  - significantly and positively related to dependent decision-making style ($r = 0.23$, $p < 0.001$), but
  - significantly and negatively related to
    - intuitive decision-making style ($r = -0.31$, $p < 0.001$)
    - avoidant decision-making style ($r = -0.34$, $p < 0.001$), and
    - spontaneous decision-making style ($r = -0.19$, $p < 0.001$).
- Intuitive decision-making style was
  - insignificantly and negatively related to dependent decision-making style ($r = -0.01$), but
  - significantly and positively related to

- avoidant decision-making style ($r = 0.46$, $p < 0.001$) and
- spontaneous decision-making style ($r = 0.35$, $p < 0.001$).

- Avoidant decision-making style was significantly and positively related to spontaneous decision-making style ($r = 0.35$, $p < 0.001$).
- However, dependent decision-making style was insignificantly and positively related to
  - avoidant decision-making style ($r = 0.06$) and
  - spontaneous decision-making style ($r = 0.02$).

(3) Relationships between teacher-perceived principal leadership styles and teacher-perceived principal decision-making styles. These relationships were significant, except for the relationship between transformational leadership style and spontaneous decision-making style (that is, 14 out of 15 were significant) as shown in Table 4.5-4.

Table 4.5-4 Relationships between principal leadership styles and principal decision-making styles

Relationships	r
Transformational and rational	0.44***
Transformational and intuitive	-0.22***
Transformational and dependent	0.24***
Transformational and avoidant	-0.27***
Transformational and spontaneous	0.03
Transactional and rational	0.35***
Transactional and intuitive	-0.13**
Transactional and dependent	0.24***
Transactional and avoidant	-0.21***
Transactional and spontaneous	0.09*
Laissez-faire and rational	-0.34***
Laissez-faire and intuitive	0.23***
Laissez-faire and dependent	-0.11**
Laissez-faire and avoidant	0.30***
Laissez-faire and spontaneous	0.08*

*p < 0.05, ** p < 0.01, *** p < 0.001
Source: Analysis of survey data

Table 4.5-4 shows results that:

- Transformational leadership style was
  - significantly and positively related to
    - rational decision-making style ($r = 0.44$, $p < 0.001$) and
    - dependent decision-making style ($r = 0.24$, $p < 0.001$).
  - significantly and negatively related to
    - intuitive decision-making style ($r = -0.22$, $p < 0.001$) and
    - avoidant decision-making style ($r = 0.27$, $p < 0.001$).
  - insignificantly and positively related to spontaneous decision-making style ($r = 0.03$).
- Transactional leadership style was
  - significantly and positively related to
    - rational decision-making style ($r = 0.35$, $p < 0.001$), and
    - dependent decision-making style ($r = 0.24$, $p < 0.001$).
    - spontaneous decision-making style ($r = 0.09$, $p < 0.05$), but
  - significantly and negatively related to
    - intuitive decision-making style ($r = -0.13$, $p < 0.01$), and
    - avoidant decision-making style ($r = -0.21$, $p < 0.001$).

- Laissez-faire leadership style was
  - significantly and negatively related to
    - rational decision-making style ($r = -0.34$, $p < 0.001$),
    - dependent decision-making style ($r = -0.11$, $p < 0.01$), but
  - significantly and positively related to
    - intuitive decision-making style ($r = 0.23$, $p < 0.001$), and
    - avoidant decision-making style ($r = 0.30$, $p < 0.001$).
  - significantly and positively related to spontaneous decision-making style ($r = 0.08$, $p < 0.05$).

(4) Relationships between teacher-perceived principal leadership styles and teacher job satisfaction. These relationships were significant (3 out of 3) as shown in Table 4.5-5.

Table 4.5-5 Relationships between principal leadership styles and teacher job satisfaction

Relationships	r
Transformational and teacher job satisfaction	0.51***
Transactional and teacher job satisfaction	0.43***
Laissez-faire and teacher job satisfaction	-0.39***

*p < 0.05, ** p < 0.01, *** p < 0.001
Source: Analysis of survey data

Table 4.5-5 shows results that

- Transformational leadership style was significantly and positively related to teacher job satisfaction ($r = 0.51$, $p < 0.001$).
- Transactional leadership style was significantly and positively related to teacher job satisfaction ($r = 0.43$, $p < 0.001$).
- However, laissez-faire leadership style was significantly and negatively related to teacher job satisfaction ($r = -0.39$, $p < 0.001$).

(5) Relationships between teacher-perceived principal decision-making styles and teacher job satisfaction. These relationships were significant (5 out of 5) as shown in Table 4.5-6.

Table 4.5-6 Relationships between principal decision-making styles and teacher job satisfaction

Relationships	r
Rational and teacher job satisfaction	0.54***
Intuitive and teacher job satisfaction	-0.42***
Dependent and teacher job satisfaction	0.19***
Avoidant and teacher job satisfaction	-0.50***
Spontaneous and teacher job satisfaction	-0.19***

*** p < 0.001
Source: Analysis of survey data

Table 4.5-6 shows results that:

- Rational decision-making style was significantly and positively related to teacher job satisfaction ($r = 0.54$, $p < 0.001$).
- Intuitive decision-making style was significantly and negatively related to teacher job satisfaction ($r = -0.42$, $p < 0.001$).

- Dependent decision-making style was significantly and positively related to teacher job satisfaction ($r = 0.19$, $p < 0.001$).
- Avoidant decision-making style was significantly and negatively related to teacher job satisfaction ($r = -0.50$, $p < 0.001$).
- Spontaneous decision-making style was significantly and negatively related to teacher job satisfaction ($r = -0.19$, $p < 0.001$).

Referring to RQ 7, these results suggest that the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction are mostly significant (that is, 32 out of 36 relationships were significant).

4.5.1.2 Discussions

Findings from addressing RQ 7 were that the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction were mostly significant. Just as the relationships are specified into five, findings are specified into five.

(1) Relationships between teacher-perceived principal leadership styles. Findings were that the relationships between teacher-perceived principal leadership styles were significant ($p < 0.001$) as shown in Table 4.5-2. These findings suggest that:

- The strongest (and positive) relationship is between transformational leadership style and transactional leadership style,
- The next strongest but negative relationship is between transformational leadership style and laissez-faire leadership style, and
- The weakest and negative relationship is between transactional leadership style and laissez-faire leadership style.

Teachers in public secondary schools in Lampung Province are likely to desire their principals to display transformational leadership style and transactional leadership style but dislike laissez-faire leadership style.

These findings support Bass' (1985, 1999) augmentation effect theory and Judge and Piccolo's (2004, p. 755) findings. Bass' augmentation effect theory stipulates that transformational leadership adds to the effect of transactional leadership; transactional leadership cannot be replaced by transformational leadership style with more emphasis on transformational leadership style than on transactional leadership style to achieve effective leadership. In other words, to remain effective, leaders need to become less transactional and more transformational to a certain extent, but leaders need to avoid laissez-faire leadership style. Bass (1999) asserts that transformational leadership adds to the effectiveness of transactional leadership. Transformational leadership fosters autonomy and challenging work and has become increasingly important to followers' job satisfaction. Leaders who are more satisfying to their followers and who are more effective as leaders are less transactional and more transformational. While, laissez-faire leadership is strongly associated with followers' dissatisfaction, conflict, and ineffectiveness. Judge and Piccolo's (2004, p. 755) findings were that transformational leadership did add beyond the effect of transactional leadership. These findings also support Bass' view that transformational leadership and transactional leadership are different but they are not mutually exclusive (Judge & Piccolo, 2004).

Studies examining the relationship between transformational leadership style and transactional leadership style appear to result in consistent findings – a significant and positive relationship. Conversely, these two leadership styles tend to have negative relationships with laissez-faire leadership style which is actually non-leadership style.

(2) Relationships between teacher-perceived principal decision-making styles. Findings were that the relationships between the teacher-perceived principal decision-making styles were mostly significant as shown in Table 4.5-3. These findings suggest that

- Rational-decision-making style does not provide the strongest, but provides significant, relationships with other decision-making styles ($p < 0.001$) even though rational decision-making style is mostly exhibited by principals. Rational-decision-making style has

- positive relationship with dependent decision-making style only.
- negative relationships with the other three decision-making styles.

- The strongest and positive relationships are between intuitive decision-making style and avoidant decision-making style.
- The weakest and negative, insignificant relationship is between intuitive decision-making style and dependent decision-making style.

The finding that the relationship between rational decision-making style and avoidant decision-making style is negative is expected, but that this relationship is not the strongest is unexpected because these two decision-making styles are very different.

Teachers in public secondary schools in Lampung Province are likely to desire their principals to display much more rational decision-making style than dependent decision-making style and dislike the other decision-making styles (intuitive decision-making style, avoidant decision-making style, and spontaneous decision-making style).

These findings support previous findings. In particular, in terms of the relationship between rational decision-making style and avoidant decision-making style, rational decision-makers tend to approach rather than avoid problems. Rational and avoidant decision-making styles were negatively correlated. Avoidant decision-making style was characterised as relatively passive and as an attempt to avoid decision-making (Scott & Bruce, 1995). Thunholm (2004) found both that the five different styles were not mutually exclusive and that the pattern of their interrelationships corresponded to the findings reported by Scott and Bruce (1995).

These findings are also relatively consistent with Thunholm's (2008) research using a sample of 23 male Swedish Army majors to make decisions in two different military situations. He found that the five decision-making styles were not mutually exclusive, and individuals did not rely on a single decision-making style

Findings are conclusive that the five decision-making styles were exhibited by individuals. In particular, the findings were that rational decision-making style had a

positive relationship with dependent decision-making style and had negative relationships with the other three decision-making styles. These findings are consistent with those of prior studies (Baiocco et al., 2008; Gambetti et al., 2008; Scott & Bruce, 1995; Spicer & Sadler-Smith, 2005; Thunholm, 2004, 2009).

(3) Relationships between teacher-perceived principal leadership styles and teacher-perceived principal decision-making styles. Findings show that the relationships between teacher-perceived principal leadership styles and teacher-perceived principal decision-making styles were significant, except for the relationship between transformational leadership style and spontaneous decision-making style as shown in Table 4.5-4. These findings suggest that the strongest and positive relationship is between transformational leadership style and rational decision-making style. The second strongest and positive relationship is between transactional leadership style and rational decision-making style. The next strongest but negative relationship is between laissez-faire leadership style and rational decision-making style. The weakest but positive relationship is between transformational leadership style and spontaneous decision-making style.

Interestingly, transformational leadership style and transactional leadership style appear to produce positive relationships with rational decision-making style, dependent decision-making style, and spontaneous decision-making style, but negative relationships with intuitive decision-making style and avoidant decision-making style. In contrast, laissez-faire leadership style appears to produce negative relationships with rational decision-making style and dependent decision-making style, but positive relationships with intuitive decision-making style, avoidant decision-making style, and spontaneous decision-making style.

To some extent, these findings are consistent with prior findings, for example, Tambe and Krishnan (2000), Kao and Kao (2007), and Griffith (2004). Tambe and Krishnan (2000) found that there was a positive relationship between transformational leadership and rational decision-making style. They also found a negative relationship between transformational leadership and avoidant decision-making-style, while avoidant decision-making style moderated the relationship

between transformational leadership and rational decision-making style. Griffith (2004) found that effective school principals exhibited transformational leadership style, articulated goals clearly and effectively, delegated tasks to followers, and in particular encouraged others to participate in decision-making. In general, leadership styles were related to decision-making styles as reported by Kao and Kao (2007) who surveyed executives at Taiwanese-investment companies in Shanghai, China.

These findings also support Tatum et al.'s (2003, p. 1007) assumption that transformational, transactional, or laissez-faire leaders should gravitate to different decision-making styles. Transformational leaders should adopt a more integrative or comprehensive decision-making style, while transactional/laissez-faire leaders should adopt a less comprehensive decision-making style and reflect a style that restricts the amount of information that is processed. Transactional leaders should focus on the task at hand and try to solve immediate problems, and laissez-faire leaders try to avoid the problems.

It is likely that what decision-making style a leader displays depends on certain contextual variables. For example, when transformational leaders need to make a comprehensive decision by involving others to obtain much information, they tend to use rational decision-making style. In contrast, leaders with transactional and laissez-faire leadership styles tend to produce a less comprehensive decision; thus, such leaders are likely to exhibit spontaneous and even avoidant decision-making styles. However, teachers of public junior secondary schools in Lampung are likely to prefer their principals to exhibit more transformational leadership style and more rational decision-making style.

Leadership styles are associated with decision-making styles. In particular, relationships of transformational leadership style with rational decision-making style and avoidant decision-making style appear to result in consistent findings—a significant and positive relationship between transformational leadership style and rational decision-making style, but a significant and negative relationship between transformational leadership style and avoidant decision-making style. However,

findings of other relationships between leadership styles and decision-making styles are hard to find in the literature.

(4) Relationships between teacher-perceived principal leadership styles and teacher job satisfaction. Findings show that the relationships between teacher-perceived principal leadership styles and teacher job satisfaction were significant ($p < 0.001$) as shown in Table 4.5-5. As expected, these findings suggest that:

- The strongest and positive relationship is between transformational leadership style and teacher job satisfaction,
- The next strongest and positive relationship is between transactional leadership style and teacher job satisfaction, and
- The weakest and negative relationship is between laissez-faire leadership style and teacher job satisfaction.

These findings support previous studies, particularly the relationship between transformational leadership style and employee job satisfaction, for example, Ejimofor (2007), Elpers and Westhuis (2008), Erkutlu (2008, p. 721), Griffith (2004), and Walumbwa et al. (2005).

- In a school context, Griffith (2004) found that the transformational leadership style was related to staff (e.g. teacher) job satisfaction, and had an indirect impact on staff turnover (negative) and on school-aggregated student achievement progress (positive) through staff job satisfaction. The findings in this school context were supported by Ejimofor (2007) who found that principals' transformational leadership significantly influenced teachers' job satisfaction, and long-term principals perceived themselves more transformational than short-term principals.

- In other contexts, Walumbwa et al. (2005) found that transformational leadership had a positive and strong impact on job satisfaction and organisational commitment in both cultures (Kenyan and US financial firms). To some extent, Erkutlu (2008, p. 721) supports that transformational leadership was significantly related to both organisational and leadership effectiveness. The findings support

the idea that transformational leadership behaviours stimulated organisational commitment and job satisfaction. In general, Elpers and Westhuis (2008) affirm that organisational leadership influenced job satisfaction.

Leadership styles are associated with job satisfaction. In particular, studies of transformational leadership style and teacher job satisfaction appear to result in consistent findings—a significant and positive relationship. Although previous findings regarding the relationships between other leadership styles and teacher job satisfaction are difficult to find, a positive relationships between transactional leadership style and teacher job satisfaction as well as a negative relationship between laissez-faire leadership style and teacher job satisfaction are expected to result in consistent findings.

(5) Relationships between teacher-perceived principal decision-making styles and teacher job satisfaction. Findings show that the relationships between teacher-perceived principal decision-making styles and teacher job satisfaction were significant ($p < 0.001$) as shown in Table 4.5-6. These findings suggest that:

- The strongest and positive relationship is between rational decision-making style and teacher job satisfaction.
- The second strongest but negative relationship is between avoidant decision-making style and teacher job satisfaction.
- The third strongest relationship (negative) is between intuitive decision-making style and teacher job satisfaction.
- The weakest relationship is between dependent decision-making style and teacher job satisfaction (positive) as well as between spontaneous decision-making style and teacher job satisfaction (negative).

These findings suggest that decision-making styles are associated with job satisfaction.

Evidence supporting these findings is extremely little. However, there is one corroborating study in the literature. Kand and Rekor (2005) surveyed nurses in Estonia and found that perceived involvement in decision-making was a determinant

of job satisfaction; increasing the involvement in decision-making contributed to a positive influence on job satisfaction components (satisfiers and hygienists).

The finding that not only a positive but also the strongest relationship exists between rational decision-making style and teacher job satisfaction makes sense. Rational decision-making is through a long process to make a rational decision. For example, Robbins (2003) identified six steps to making a rational decision: (1) define the problem, (2) identify the decision criteria, (3) allocate weights to the criteria, (4) develop the alternatives, (5) evaluate the alternatives, and (6) select the best alternative.

Unlike rational decision-making style, other decision-making styles need a relatively shorter process so that these decision-making styles are unable to make a rational decision. Therefore, it appears reasonable that leaders (e.g. principals) who exhibit rational decision-making style would give more job satisfaction to subordinates (e.g. teachers) because they process more information and assess the long-term effect of their decisions compared with leaders who practice intuitive decision-making style, who simply make quick decisions with limited information.

However, in certain conditions, for example, a manager sometimes makes an intuitive decision (DuBrin et al., 1989). An intuitive decision is a decision made according to intuition or gut feeling with limited information to reach a decision quickly; it is an unconscious process based on experience. Although the rational decision might be more desirable to analyse a problem rationally, the intuitive decision is also required to face situations quickly. A manager tends to put greater weight on the intuitive decision than on analytic reasoning when the problems become more complicated (Yang, 2003).

These findings suggest that the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction are mostly significant. Principal decision-making styles are associated with teacher job satisfaction. Leaders exhibit various decision-making styles. In particular, examining rational decision-making style and teacher job satisfaction results in a consistent finding (a significant

and positive relationship), and the relationship between avoidant decision-making style and teacher job satisfaction results in a consistent finding (negative). However, there is a lack of corroborating evidence about these findings in the literature.

4.6 Multiple Regression Analysis

This section presents a multiple regression analysis. Two types of multiple regression analyses were used: standard multiple regression (to address RQ 8) and hierarchical multiple regression (to address RQ 9).

The teacher job satisfaction model is formulated as the following:

$$Y_{i} = B_{0} + B_{1}X_{1i} + \ldots + B_{8}X_{8i} + \varepsilon_{i}$$

The variables are defined as below:

Y = teacher job satisfaction

$_{i}$ = the $_{i}$ th participant

B = regression coefficients (B_0 = the intercept, B_1 = the coefficient of X_1)

X_1 = transformational leadership style

X_2 = transactional leadership style

X_3 = laissez-faire leadership style

X_4 = rational decision-making style

X_5 = intuitive decision-making style

X_6 = dependent decision-making style

X_7 = spontaneous decision-making style

X_8 = avoidant decision-making style

ε = a random disturbance (error) term assumed mean zero and constant finite variance and B's parameters.

Conceptually, addressing RQs 8-9 using this standard multiple regression follows a three-step procedure suggested by Pallant (2007, pp. 155-160). This procedure

includes checking assumptions, evaluating the model, and evaluating the predictor variables as presented below.

Checking multiple regression assumptions

There are two groups of assumptions. These are: (1) assumptions that need to be met prior to running analysis techniques (in research design, i.e. prior to collection of data), and (2) assumptions associated with analysis techniques, for example, as part of the multiple regression procedure.

The first group of assumptions in this study are sample size, continuous measure, and random sampling. These assumptions have been previously met. The sample size (of teacher participants) used in this analysis is 475. This number exceeds the acceptable sample size for multiple regression recommended by Tabachnick and Fidell (2007, p. 123). According to their formula, the sample size is $N \geq 50 + 8m$, where m is the number of independent variables (in this study m = 8); thus, the minimum sample size would be 114.

The second group of assumptions as part of multiple regression procedure are:

- multicollinearity and singularity,
- normality,
- linearity and homoscedasticity,
- independence of residuals, as well as
- outliers (Pallant, 2007, pp. 148-149).

These assumptions are presented below.

(1) Multicollinearity and singularity. This assumption is about relationships among independent (also known as predictor) variables. A good regression model is one without multicollinearity and singularity. Multicollinearity occurs with r = 0.9 or above (highly correlated), and singularity "occurs when one independent variable is actually a combination of other independent variables…." (Pallant, 2007, p. 149). However, Field (2005, p. 175) affirms that multicollinearity is from correlation of above 0.80 or 0.90.

The standard multiple regression analysis produced the relationships among the variables as shown in Table 4.6-1.

Table 4.6-1 Correlation matrix of the variables from the standard regression analysis

Variable	1	2	3	4	5	6	7	8	9
1. Total teacher job satisfaction	1								
2. Transformational leadership style	0.51***	1							
3. Transactional leadership style	0.43***	0.78***	1						
4. Laissez-faire leadership style	-0.39***	-0.33***	-0.23***	1					
5. Rational decision-making style	0.54***	0.44***	0.35***	-0.34***	1				
6. Intuitive decision-making style	-0.42***	-0.22***	-0.13**	0.23***	-0.31***	1			
7. Dependent decision-making style	0.19***	0.24***	0.24***	-0.11**	0.23***	-0.01	1		
8. Avoidant decision-making style	-0.50***	-0.27***	-0.21***	0.30***	-0.34***	0.46***	0.06	1	
9. Spontaneous decision-making style	-0.19***	0.03	0.09*	0.08*	-0.19***	0.35***	0.02	0.35***	1

*p < 0.05, **p < 0.01, ***p < 0.001
Source: Analysis of survey data

Table 4.6-1 shows an individual magnitude of the relationships among the predictor variables of less than 0.80. Hence, all these eight predictor variables were retained.

The problems which could not be detected by the correlation matrix could be detected by the collinearity diagnostics, i.e. Tolerance and VIF (Variance Inflation Factor). Collinearity diagnostics indicates two values (Tolerance and VIF) as part of the multiple regression procedure. It is useful to pick up problems with multicollinearity that may not be evident in the correlation matrix. Tolerance tells how much of the variability of a specified independent variable is not explained by the other independent variable in the model and is calculated using the formula 1-R squared for each variable. Tolerance values less than 0.1 indicate high multiple correlation with other variables. This suggests the possibility of multicollinearity. VIF is the inverse of the Tolerance value. VIF values greater than 10 indicate

multicollinearity (Pallant, 2007, p. 156). The tolerance and VIF values in this analysis are shown in Table 4.6-2.

Table 4.6-2 Coefficients with eight predictor variables

Model	Variable	B[1]	SE B	β[2]	t	p	Tolerance	VIF
1	Teacher job satisfaction (Constant)	115.06	7.867		14.625***	0.000		
	Transformational leadership style	7.332	2.311	0.177	3.173**	0.002	0.339	2.952
	Transactional leadership style	4.464	2.51	0.094	1.778	0.076	0.375	2.663
	Laissez-faire leadership style	-4.041	1.241	-0.117	-3.255**	0.001	0.813	1.231
	Rational decision-making style	1.793	0.287	0.245	6.246***	0.000	0.684	1.463
	Intuitive decision-making style	-0.634	0.164	-0.149	-3.871***	0.000	0.717	1.395
	Dependent decision-making style	0.372	0.193	0.067	1.927	0.055	0.887	1.128
	Avoidant decision-making style	-1.317	0.214	-0.245	-6.144***	0.000	0.662	1.512
	Spontaneous decision-making style	-0.033	0.190	-0.006	-0.173	0.862	0.785	1.273

*p < 0.05, **p < 0.01, ***p < 0.001
Note: [1]Unstandardised beta, [2]Standardised beta
Source: Analysis of survey data

Table 4.6-2 shows that all tolerance values in this analysis were greater than 0.10 and VIF values were less than 10. This means that the values did not violate the multicollinearity assumption. Hence, the multicollinearity and singularity assumption was met. The following is the assumption of normality of residuals.

(2) Normality of residuals. This assumption applies to the dependent variable (teacher job satisfaction). This assumption can be tested using histogram, normal probability plot, and the Kolmogorov-Smirnov and Shapiro-Wilk tests.

The histogram should look like a normal distribution, a bell-shaped curve for residuals to be said to be normally distributed (Field, 2005, p. 204). The histogram in this analysis is shown in Figure 4.6-1.

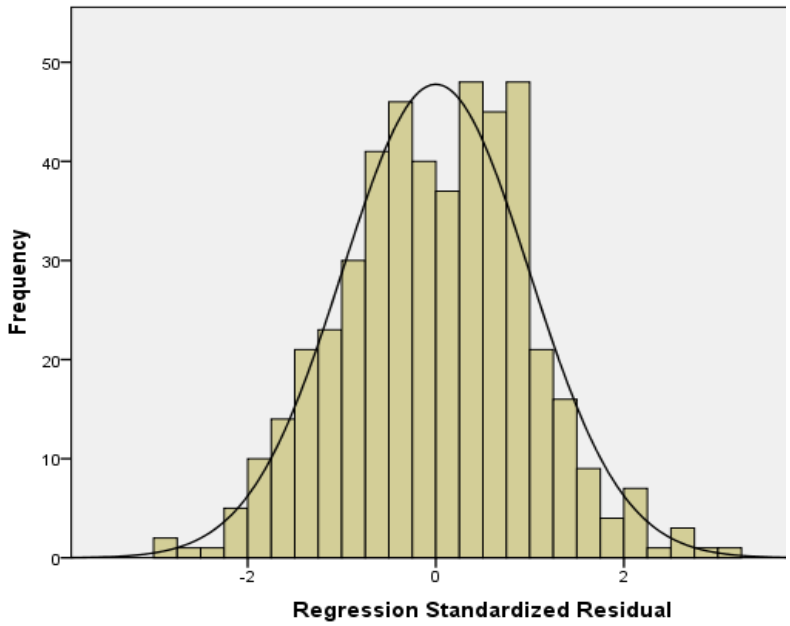

Figure 4.6-1 Histogram of standardised residuals of teacher job satisfaction
Source: Analysis of survey data

Figure 4.6-1 shows that the histogram looks symmetrical (a bell-shaped curve), indicating that the residuals were roughly normally distributed. This normality of residuals in this analysis was also tested with the normal probability plot as shown in Figure 4.6.2.

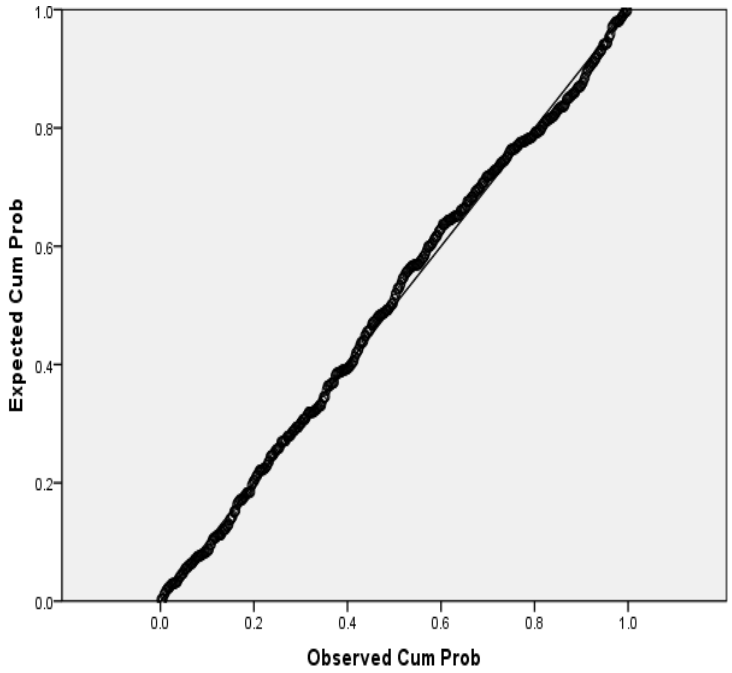

Figure 4.6-2 Normal probability plot of standardised residual of teacher job satisfaction

Source: Analysis of survey data

Figure 4.6-2 shows that the points lay in a reasonably straight diagonal line from bottom left to top right. This suggests no major deviation from normality, which corresponds to the results of the histogram of standardised residuals. The result of the Kolmogorov-Smirnov and Shapiro-Wilk tests for the standardised residual is shown in Table 4.6-3.

Table 4.6-3 Tests of normality of standardised residual of teacher job satisfaction

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	p	Statistic	df	p
Standardised Residual	0.036	475	0.183	0.996	475	0.357

Source: Analysis of survey data

Table 4.6-3 shows that the Kolmogorov-Smirnov and Shapiro-Wilk tests for the standardised residual were not significant ($p > 0.05$), suggesting normal distribution. The assumption of normality of residual of teacher job satisfaction was met.

(3) Linearity and homoscedasticity. Field (2005, p. 181) affirms that, in regression using SPSS, "it is worth plotting *ZRESID (y-axis) against *ZPRED (x-axis) because this plot is useful to determine whether the assumptions of random errors and homoscedasticity have been met. A plot of *ZRESID (y-axis) against *ZPRED (x-axis) will show up any heterocedasticity also." The *ZRESID is the standardised residuals, or errors; while, the *ZPRED is the standardised predicted values of the dependent variable based on the model. The plot of *ZRESID and *ZPRED produced the graph shown in Figure 4.6-3.

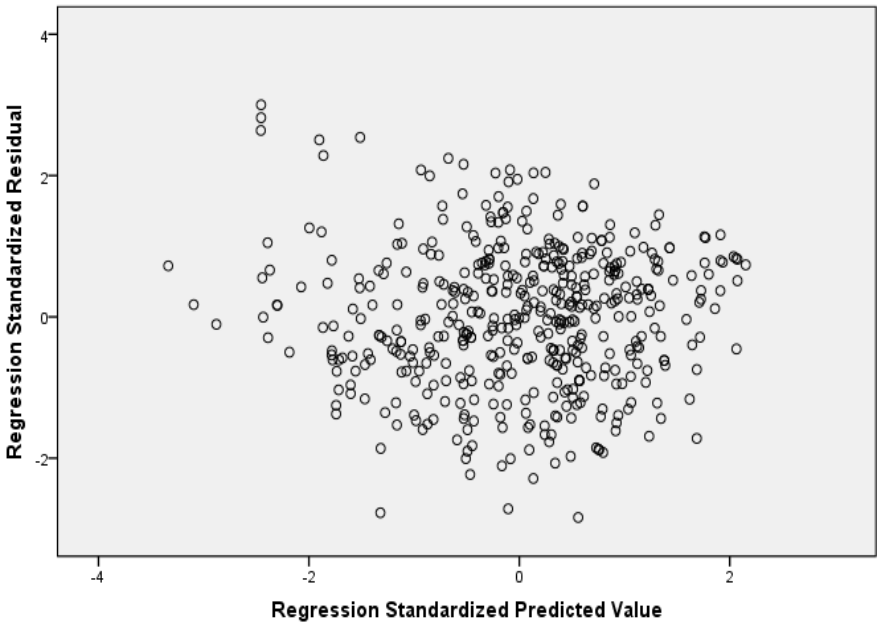

Figure 4.6-3 Scatterplot of standardised residual of teacher job satisfaction
Source: Analysis of survey data

Figure 4.6-3 shows that the residuals were randomly dispersed. Hence, the residuals can be treated as homoscedastic. This situation indicates that the assumptions of linearity and homoscedasticity have been met (Field, 2005, p. 203).

(4) Independence of residuals. The data used in this thesis were cross-sectional data. Even though Durbin-Watson is not meaningful for these data, it does not provide any information about serial correlation. However, "It is assumed that all of the values of the outcome variable are independent" (Field, 2005, p. 170).

(5) Outliers. Outliers are another important characteristic of data to be checked. Outliers are Mahalanobis distances presented in the SPSS data file (Mah_1) and are identified by determining the critical chi-square value. Tabachnick and Fiddel (2007) suggest using an alpha level of 0.001. Cases with much larger values may need to consider removing the cases from the analysis (Pallant, 2007, p. 158). The critical chi-square value is shown in Table 4.6-4.

Table 4.6-4 Chi-square statistics (df = 8, p = 0.001)

df	0.25	0.1	0.05	0.025	0.01	0.005	0.001
...	...	...	...	...	...	...	...
8	10.2188	13.3616	15.5073	17.5346	20.0902	21.955	**26.125**
...	...	...	...	...	...	...	...

Source: Tabachnick and Fiddel (2007)

Table 4.6-4 shows that the critical value for the eight independent variables (df = 8, p = 0.001) is 26.125. By Mahalanobis distance, only three cases (ID 316, ID 323, and ID 455) had values above the critical value. These values were 26.73, 28.52, and 32.91 respectively (see Appendix 5). However, the maximum value for Cook's distance is 0.029 (much below 1), suggesting no major outlier problems with the cases. It is to be noted that "If a point is a significant outlier on Y, but its Cook's distance is < 1, there is no real need to delete that point since it does not have a large effect on the regression analysis" (Field, 2005, p. 169).

It is true that the three values did not cause problems because subsequent regression analyses were conducted after deleting the three cases and the results did not make any significant differences to the individual regression coefficients. Hence, for simplicity, these outliers were not removed.

Unusual cases can also be identified in the casewise diagnostics table. The cases have standardised residual values above 3.0 or below -3.0. In a normally distributed sample, only 1% of cases fall outside this range (Pallant, 2007, p. 158). The casewise diagnostics in this analysis is shown in Table 4.6-5.

Table 4.6-5 Casewise diagnostics of teacher job satisfaction

Case Number	Std. Residual	Teacher job satisfaction	Predicted Value	Residual
509	3.001	172	122.75	49.25

Source: Analysis of survey data

Table 4.6-5 shows that case number 509 had a residual value of 3.001. This person recorded a total job satisfaction score of 172, but the model predicted a value of

122.75. It means that the model did not predict this person's score well; this person was less satisfied than the model predicted. However, this case had no undue influence on the results for the model as a whole because the value for Cook's distance was less than 1 (the maximum value for Cook's distance was 0.029 as shown in Appendix 5), suggesting no major problems (Pallant, 2007, p. 158). Hence, this case was not removed.

In conclusion, all the assumptions were met. Meeting these underlying assumptions is important for the model to fit the observed data and not to be influenced by a small number of cases. However, meeting the assumptions is not sufficient to generalise the model. Cross-validating the model is needed to assess whether the model does generalise (Field, 2005, p. 169). Therefore, the cross-validation of the model was conducted and is further discussed.

4.6.1 Research Question 8

RQ 8: Can principal leadership styles and principal decision-making styles significantly predict teacher job satisfaction? If they can, which variable best predicts teacher job satisfaction?

4.6.1.1 Results

A standard multiple regression analysis was used in this study to address RQ 8. As previously pointed out in Chapter 3, multiple regression analysis was used because it is a more sophisticated extension of Pearson correlation. Unlike Pearson correlation, multiple regression is not limited to generating relationships between variables. In particular, this standard multiple regression is used to know how much variance each of the independent (predictor) variables explains in a dependent variable. This analysis is appropriate to answer this research question, and it is most commonly used when no a priori hypotheses are made to determine the order of entry of the independent variables (Pallant, 2007, p. 147).

The three leadership styles and the five decision-making styles are the sets of the independent (predictor) variables. Teacher job satisfaction is the dependent variable.

The multiple regression analysis was employed up to four phases in an attempt to produce significant predictor variables at $p \leq 0.001$.

- The analysis was initially employed to test these eight predictor variables.

The analysis was stopped at the fourth phase when it produced five significant predictor variables at $p \leq 0.001$. These variables are: transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style (out of the eight predictor variables).

The four phases of the standard multiple regression analysis to produce significant predictor variables are summarised in Table 4.6-6.

Table 4.6-6 Phases of standard multiple regression for significant predictor variables

Variables	Phases											
	1			2			3			4		
	β	t	p	β	t	p	β	t	p	β	t	p
Teacher job satisfaction (Constant)		14.625	0.000		14.905	0.000		14.948	0.000		15.57	0.000
Transformational leadership style	0.177	3.173	0.000	0.177	3.171	0.000	0.249	6.585	0.000	0.262	7.011	0.000
Transactional leadership style	0.094	1.778	0.076	0.093	1.772	0.077						
Laissez-faire leadership style	-0.117	-3.255	0.000	-0.117	-3.254	0.000	-0.114	-3.161	0.000	-0.117	-3.225	0.001
Rational decision-making style	0.245	6.246	0.000	0.246	6.306	0.000	0.248	6.327	0.000	0.262	6.798	0.000
Intuitive decision-making style	-0.149	-3.871	0.000	-0.150	-4.019	0.000	-0.146	-3.903	0.000	-0.144	-3.842	0.000
Dependent decision-Making style	0.067	1.927	0.055	0.067	1.936	0.054	0.072	2.089	0.037			
Avoidant decision-making style	-0.245	-6.144	0.000	-0.247	-6.398	0.000	-0.25	-6.456	0.000	-0.237	-6.184	0.000
Spontaneous decision-making style	-0.006	-0.173	0.862									
	$R^2 = 0.508$ Adjusted $R^2 = 0.500$ F (8, 466) = 60.155, p = 0.000			$R^2 = 0.508$ Adjusted $R^2 = 0.501$ F (7, 467) = 68.888, p = 0.000			$R^2 = 0.505$ Adjusted $R^2 = 0.498$ F (6, 468) = 79.482, p = 0.000			$R^2 = 0.500$ Adjusted $R^2 = 0.495$ F (5, 469) = 93.832, p = 0.000		

Source: Analysis of survey data

Table 4.6-6 shows the summary of the four phases of standard multiple regression analysis used in this study in an attempt to produce significant predictor variables toward teacher job satisfaction.

In detail, these four phases (from Phase 1 to Phase 4) are presented below.

Phase 1: Total job satisfaction with eight predictor variables. This phase is shown in Table 4.6-6, Table 4.6-7, and Table 4.6-8.

Table 4.6-7 Model summary of teacher job satisfaction with eight predictor variables

Model	R	R^2	Adjusted R^2	SE of Estimate
1	0.713	0.508	0.500	16.410

Table 4.6-8 ANOVA of teacher job satisfaction with eight predictor variables

Model		SS	df	MS	F	p
1	Regression	129599.65	8	16199.956	60.155***	0.000
	Residual	125494.779	466	269.302		
	Total	255094.429	474			

***p < 0.001
Source: Analysis of survey data

The eight predictor variables were used in this initial standard multiple regression analysis (Phase 1) to examine whether they were able to predict teacher job satisfaction. These eight predictor variables produced an R^2 of 0.508, and an adjusted R^2 of 0.500, as shown in Table 4.6-6 and Table 4.6-7, with F (8, 466) = 60.155, p = 0.000 as shown in Table 4.6-8.

However, as shown in Table 4.6-6, three predictor variables (transactional leadership style, dependent decision-making style, and spontaneous decision-making style) did not produce significant regression coefficients ($\beta = 0.094$, t (473) = 1.778, p = 0.076; $\beta = 0.067$, t (473) = 1.927, p = 0.055; and $\beta = -0.006$, t (473) = -0.173, p = 0.862 respectively) at a significant level of 0.001.

Phase 2: Total job satisfaction with seven predictor variables. This phase is shown in Table 4.6-6, Table 4.6-9, and Table 4.6-10.

Table 4.6-9 Model summary of teacher job satisfaction with seven predictor variables

Model	R^2	Adjusted R^2	SE of Estimate
1	0.508	0.501	16.393

Source: Analysis of survey data

Table 4.6-10 ANOVA of teacher job satisfaction with seven predictor variables

Model		SS	df	MS	F	p
1	Regression	129591.549	7	18513.078	68.888***	0.000
	Residual	125502.881	467	268.743		
	Total	255094.429	474			

***p < 0.001
Source: Analysis of survey data

The predictor variable with the lowest non-significant regression coefficient (spontaneous decision-making style), as shown in Table 4.6-6, was removed. The number of predictor variables which were left was seven.

Another regression analysis (phase 2) was performed. These seven predictor variables produced an R^2 of 0.508, and an adjusted R^2 of 0.501, as shown in Table 4.6-6 and Table 4.6-9, with $F(7, 467) = 68.888$, $p = 0.000$, as shown in Table 4.6-10. The coefficients that resulted from this regression analysis are shown in Table 4.6-11.

Table 4.6-11 Coefficients of teacher job satisfaction with seven predictor variables

Model	Variable	B	SE B	β	t	p
1	(Constant)	114.784	7.701		14.905***	0.000
	Transformational leadership style	7.312	2.306	0.177	3.171**	0.002
	Transactional leadership style	4.415	2.492	0.093	1.772	0.077
	Laissez-faire leadership style	-4.033	1.239	-0.117	-3.254***	0.001
	Rational decision-making style	1.798	0.285	0.246	6.306***	0.000
	Intuitive decision-making style	-0.640	0.159	-0.150	-4.019***	0.000
	Dependent decision-making style	0.373	0.193	0.067	1.936	0.054
	Avoidant decision-making style	-1.326	0.207	-0.247	-6.398***	0.000

*p < 0.05, **p < 0.01, ***p< 0.001
Source: Analysis of survey data

Table 4.6-11 as well as Table 4.6-6 shows that the two predictor variables (transactional leadership style and dependent decision-making style) still did not produce significant regression coefficients ($\beta = 0.093$, $t(473) = 1.772$, $p = 0.077$ and $\beta = 0.067$, $t(473) = 1.936$, $p = 0.054$ respectively) at a significant level of 0.001.

Phase 3: Total job satisfaction with six predictor variables. This phase is shown in Table 4.6-6, Table 4.6-12, and Table 4.6-13.

Table 4.6-12 Model summary of teacher job satisfaction with six predictor variables

Model	R^2	Adjusted R^2	SE of Estimate
1	0.505	0.498	16.431

Source: Analysis of survey data

Table 4.6-13 ANOVA of teacher job satisfaction with six predictor variables

Model		SS	df	MS	F	p
1	Regression	128747.702	6	21457.95	79.482***	0.000
	Residual	126346.728	468	269.972		
	Total	255094.429	474			

***p < 0.001

Source: Analysis of survey data

The next predictor variable with the lowest non-significant regression coefficient (transactional leadership style), as shown in Table 4.6-6, was removed. The number of predictor variables which were left was six.

Another regression analysis (Phase 3) was performed. These six predictor variables produced an R^2 of 0.505, and an adjusted R^2 of 0.498, as shown in Table 4.6-6 and Table 4.6-12, with $F(6, 468) = 79.482$, $p = 0.000$ as shown in Table 4.6-13. The coefficients that resulted from this regression analysis are shown in Table 4.6-14.

Table 4.6-14 Coefficients of teacher job satisfaction with six predictor variables

Model	Variable	B	SE B	β	t	p
1	(Constant)	115.293	7.713		14.948***	0.000
	Transformational leadership style	10.316	1.567	0.249	6.585***	0.000
	Laissez-faire leadership style	-3.921	1.241	-0.114	-3.161**	0.002
	Rational decision-making style	1.808	0.286	0.248	6.327***	0.000
	Intuitive decision-making style	-0.622	0.159	-0.146	-3.903***	0.000
	Dependent decision-making style	0.402	0.193	0.072	2.089*	0.037
	Avoidant decision-making style	-1.340	0.208	-0.250	-6.456***	0.000

*p < 0.05, **p < 0.01, ***p < 0.001

Source: Analysis of survey data

Table 4.6-14 as well as Table 4.6-6 shows that one predictor variable (dependent decision-making style) still did not produce a significant regression coefficient (β = 0.072, t (473) = 2.089, p = 0.037) at a significant level of 0.001.

Phase 4: Total job satisfaction with five predictor variables. This phase is shown in Table 4.6-6, Table 4.6-15, and Table 4.6-16.

Table 4.6-15 Model summary of teacher job satisfaction with five predictor variables

Model	R^2	Adjusted R^2	SE of Estimate
1	0.500	0.495	16.49

Source: Analysis of survey data

Table 4.6-16 ANOVA of teacher job satisfaction with five predictor variables

Model		SS	df	MS	F	p
1	Regression	127569.158	5	25513.832	93.832***	0.000
	Residual	127525.271	469	271.909		
	Total	255094.429	474			

***p < 0.001
Source: Analysis of survey data

The next predictor variable with the lowest non-significant regression coefficient (dependent decision-making style), as shown in Table 4.6-6, was removed. The number of predictor variables which were left was five.

Final regression analysis (Phase 4) was performed. These five predictor variables produced an R^2 of 0.500, and an adjusted R^2 of 0.495, as shown in Table 4.6-6 and Table 4.6-15, with F (5, 469) = 93.832, p = 0.000 as shown in Table 4.6-16. The coefficients that resulted from this regression analysis are shown in Table 4.6-17.

Table 4.6-17 Coefficients with five predictor variables

Model	Variable	B	SE B	β	t	p
1	(Constant)	118.353	7.600		15.573***	0.000
	Transformational leadership style	10.866	1.550	0.262	7.011***	0.000
	Laissez-faire leadership style	-4.013	1.244	-0.117	-3.225***	0.001
	Rational decision-making style	1.917	0.282	0.262	6.798***	0.000
	Intuitive decision-making style	-0.614	0.160	-0.144	-3.842***	0.000
	Avoidant decision-making style	-1.273	0.206	-0.237	-6.184***	0.000

***$p < 0.001$
Source: Analysis of survey data

Table 4.6-17 shows that, in this final standard regression analysis, all these five significant predictor variables of teacher job satisfaction: transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style produced significant regression coefficients at a significant level of at least 0.001. Thus, the analysis was stopped at this phase because it produced significant predictor variables.

The teacher job satisfaction model is now as below:

$Y_i = B_0 + B_1X_{1i} + \ldots + B_5X_{5i} + \varepsilon_i$

The variables are defined as below:

Y = teacher job satisfaction

$_i$ = the $_i$ th participant

B = regression coefficients (B_0 = the intercept, B_1 = the coefficient of X_1)

X_1 = transformational leadership style

X_2 = laissez-faire leadership style

X_3 = rational decision-making style

X_4 = intuitive decision-making style

X_5 = avoidant decision-making style.

ε = a random disturbance (error) term assumed mean zero and constant finite variance and B's parameters.

Which predictor variables contribute to the prediction of teacher job satisfaction? Which best predicts teacher job satisfaction? The SPSS output box labelled coefficients provides this information as shown in Table 4.6-16. The standardised coefficients (β-values) are used to compare the different variables. The unstandardised coefficient values listed as B can be used to construct a regression equation (Pallant, 2007, p. 159).

To address RQ 8, this discussion is focused on the β-values. The greater the β-values, the stronger the contribution of the predictor variables to the teacher job satisfaction would be. The β-value of 0.262 was the largest β coefficient; this value was equally achieved by transformational leadership style and rational decision-making style. Ignoring any negative signs, the second largest β coefficient was -0.237 for avoidant decision-making style, followed by the β coefficients of -0.144 and -0.117 for intuitive decision-making style and laissez-faire leadership style respectively.

These five predictor variables gave a significant unique contribution to the prediction of teacher job satisfaction at a significant level of at least 0.001. In contrast, the other three predictor variables (transactional leadership style, dependent decision-making style, and spontaneous decision-making style) did not make a significant unique contribution to the prediction of teacher job satisfaction (each of their significant values is above 0.01). Among the five predictor variables, transformational leadership style and rational decision-making style achieved the largest β coefficients.

Referring to RQ 8, these results suggest that transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style can significantly predict teacher job satisfaction ($p < 0.001$). Transformational leadership style and rational decision-making style are the best predictors.

4.6.1.2 Discussions

Findings from addressing RQ 9 were that:

- The analysis using standard multiple regression which was initially employed to test the eight variables was stopped after phase four when it produced five significant variables (transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style). These five predictor variables had an R^2 of 0.500, and an adjusted R^2 of 0.495, with $F(5, 469) = 93.832$, $p = 0.000$. These five significant predictor variables produced significant regression coefficients ($p < 0.001$) as indicators to predict teacher job satisfaction.
- The β coefficients achieved by these predictor variables are:
  - The largest β coefficient (0.262) was achieved by transformational leadership style and rational decision-making style,
  - The second largest β coefficient was -0.237 achieved by avoidant decision-making style (ignoring any negative signs),
  - The smallest β coefficients of -0.144 and -0.117 were achieved by intuitive decision-making style and laissez-faire leadership style respectively.

These findings suggest that:

- These five predictor variables can significantly predict teacher job satisfaction ($p < 0.001$).
- Transformational leadership style and rational decision-making style best predict teacher job satisfaction.
- These five predictor variables jointly account for 50% of the variance in teacher job satisfaction. This means that there is another 50% of the variance unexplained and accounted for by other variables. These other variables may include the facets of job satisfaction and demographics of participants.

This model obtained a statistical significance of 0.000 (which means $p < 0.0001$) regarded as very highly significant (Alghabban, 2001, 2004, p. 397). The adjusted R^2 value was 0.495, very similar to the R^2 value of 0.500 (only 0.5% shrinkage). This is very little shrinkage. “This shrinkage means that if the model was derived from the

population rather than a sample it would account for approximately 0.5% less variance in the outcome. The adjusted R^2 provides some idea of how well this model generalises and ideally we would like its value to be the same, or very close to, the value of R^2" (Field, 2005, p. 188). Hence, the model is regarded a very good one in predicting teacher job satisfaction.

However, the adjusted R^2 derived from SPSS using Wherry's equation has been criticised. The Wherry's equation does not express how well the model can predict the scores of a different sample of data from the same population. To address this weakness, the cross-validation with adjusted R^2 using Stein's formula was performed. Stein's formula is one version of R^2 that can tell how well the model cross-validates (Field, 2005, p. 188). The formula is below.

$$\text{Adjusted } R^2 = 1 - \left\{\left(\frac{n-1}{n-k-1}\right)\left(\frac{n-2}{n-k-2}\right)\left(\frac{n+1}{n}\right)\right\}\left(1-R^2\right), \text{ where}$$

R^2 = the unadjusted value,
n = the number of cases, and
k = the number of predictors.

When the values of this model are used ($R^2 = 0.50$, $n = 475$, and $k = 5$), the Stein's formula produces an adjusted R^2 as below.

$$\text{Adjusted } R^2 = 1 - \left\{\left(\frac{475-1}{475-5-1}\right)\left(\frac{475-2}{475-5-2}\right)\left(\frac{475+1}{475}\right)\right\}\left(1-0.500\right)$$

$$= 1 - \{(1.001)\ (1.011)\ (1.002)\}\ (0.500)$$

$$= 1 - 0.512$$

$$= 0.488$$

This value of adjusted R^2 (0.488) is close to the observed value of R^2 (0.500). This indicates that the model has a very good cross-validity (Field, 2005, p. 188).

In addition to the information about this model from the β coefficients, other information can be obtained from the part correlation coefficients. A squared value of a part correlation coefficient value achieved by an independent variable indicates the contribution of that variable to the total R square—"how much of the total

variance in the dependent variable to the total R square is uniquely explained by that variable and how much R square value would drop if it wasn't included in the model." The total R square value for the model is unequal to all the squared part correlation because any overlap or shared variance is removed or partially out, particularly if two predictor variables are strongly correlated (Pallant, 2007, p. 159).

In this analysis, the values of part correlation coefficients as shown in Appendix 6 for the five predictor variables are below:

- A part correlation coefficient value of 0.229 for transformational leadership style with a squared value of 0.05 indicates that transformational leadership style uniquely explains 5% of the variance in the total job satisfaction.
- A part correlation coefficient value of -0.105 for laissez-faire leadership style with a squared value of 0.01 indicates that laissez-faire leadership style uniquely explains 1% of the variance in the total job satisfaction.
- A part correlation coefficient value of 0.222 for rational decision-making style with a squared value of 0.05 indicates that rational decision-making style uniquely explains 5% of the variance in the total job satisfaction.
- A part correlation coefficient value of -0.125 for intuitive decision-making style with a squared value of 0.02 indicates that intuitive decision-making style uniquely explains 2% of the variance in the total job satisfaction.
- A part correlation coefficient value of -0.202 for avoidant decision-making style with a squared value of 0.04 indicates that avoidant decision-making style uniquely explains 4% of the variance in the total job satisfaction.

The model equation of these five significant predictor variables of teacher job satisfaction is shown below.

$$\hat{Y}_i = \hat{B}_0 + \hat{B}_1 X_{1i} + ... + \hat{B}_5 X_{5i}$$

The model parameters for these five significant predictor variables of teacher job satisfaction are as shown in Table 4.6-17.

When the B-values are replaced with the parameter estimates (unstandardised coefficients), the model equation is defined as below.

$$TJS = B_0 + B_1TF + B_2LF + B_3Rat + B_4Int + B_5Avo$$
$$= 118.353 + 10.866TF + -4.013LF + 1.917Rat + -0.614Int + -1.273Avo$$

The B-value (coefficient) of each variable indicates what relationship that variable has with the dependent variable (teacher job satisfaction) (Lea, 1997). A positive B-value indicates a positive relationship, but a negative B-value indicates a negative relationship.

For these data, two predictor variables (transformational leadership style and rational decision-making style) indicated positive relationships. It means that:

- As transformational leadership style increases, teacher job satisfaction increases.
- As rational decision-making style increases, teacher job satisfaction increases.

In contrast, three predictor variables (laissez-faire leadership style, intuitive decision-making style, and avoidant decision-making style) indicated negative relationships. It means that:

- As laissez-faire leadership style increases, teacher job satisfaction decreases.
- As intuitive decision-making style increases, teacher job satisfaction decreases.
- As avoidant decision-making style increases, teacher job satisfaction decreases.

The B-values also indicates to what degree individual predictor variables influence teacher job satisfaction. For example:

- As transformational leadership style increases by one unit, teacher job satisfaction increases by 10.866 units.
- As laissez-faire leadership style increases by one unit, teacher job satisfaction decreases by 4.013 units.

However, these unstandardised coefficients (B) depend on the units of measurements of the variables, while the standardised coefficients (β) have been converted to the same scale—all are measured in standard deviation units so that they can be compared and easy to interpret (Field, 2005, p. 193; Pallant, 2007, p. 159). This

interpretation is true only if the effects of the other predictor variables are held constant.

The standardised coefficients (β) of the predictor variables as provided in Table 4.6-17 are as below.

- Transformational leadership style had a standardised β of 0.262. This value indicates that
  - As transformational leadership style increases by one standard deviation, teacher job satisfaction increases by 0.262 standard deviations. The standard deviation for teacher job satisfaction was 23.199 and so this constitutes a change of 6.078 (0.262 × 23.199). This interpretation is true only if the effects of the other predictor variables are held constant.

- Laissez-faire leadership style had a standardised β of -0.117. This value indicates that
  - As laissez-faire leadership style increases by one standard deviation, teacher job satisfaction decreases by 0.117 standard deviations. The standard deviation for teacher job satisfaction was 23.199 and so this constitutes a change of -2.714 (-0.117 × 23.199). This interpretation is true only if the effects of the other predictor variables are held constant.

- Rational decision-making style had a standardised β of 0.262. This value indicates that
  - As rational decision-making style increases by one standard deviation, teacher job satisfaction increases by 0.262 standard deviations. The standard deviation for teacher job satisfaction was 23.199 and so this constitutes a change of 6.078 (0.262 × 23.199). This interpretation is true only if the effects of the other predictor variables are held constant.

- Intuitive decision-making style had a standardised β of -0.144. This value indicates that
  - As intuitive decision-making style increases by one standard deviation, teacher job satisfaction decreases by 0.144 standard deviations. The standard deviation

for teacher job satisfaction is 23.199 and so this constitutes a change of -3.341 (-0.144 × 23.199). This interpretation is true only if the effects of the other predictor variables are held constant.

- Avoidant decision-making style had a standardised β of -0.237. This value indicates that
  - As avoidant decision-making style increases by one standard deviation, teacher job satisfaction decreases by 0.237 standard deviations. The standard deviation for teacher job satisfaction was 23.199 and so this constitutes a change of -5.498 (-0.237 × 23.199). This interpretation is true only if the effects of the other predictor variables are held constant.

These findings are consistent with previous findings to some extent.

- In terms of transformational leadership and job satisfaction, Ejimofor (2007), Elpers and Westhuis (2008), Erkutlu (2008, p. 721), Griffith (2004), and Walumbwa et al. (2005) found consistent findings that transformational leadership influenced job satisfaction.
  - Walumbwa et al.(2005) found that transformational leadership had a positive and strong impact on job satisfaction and organisational commitment in Kenyan and US Financial Firms.
  - Elpers and Westhuis (2008) found that organisational leadership influenced job satisfaction.
  - Erkutlu (2008, p. 721) found that transformational leadership was significantly related to both organisational and leadership effectiveness. The findings support the idea that transformational leadership behaviours stimulated organisational commitment and job satisfaction.
  - Griffith (2004) found that principal transformational leadership positively affected teacher job satisfaction. Then, through teacher job satisfaction, transformational leadership negatively affected teacher turnover and positively affected student achievement.
  - Ejimofor (2007) found that principals' transformational leadership significantly influenced teachers' job satisfaction, and long-term principals perceived themselves more transformational than short-term principals.

- In terms of decision-making and job satisfaction, Kand and Rekor (2005) surveyed nurses in Estonia and revealed that perceived involvement in decision-making was a determinant of job satisfaction; increasing the involvement in decision-making contributed to a positive influence on job satisfaction components (satisfiers and hygienists).

- In terms of leadership, decision-making, and job satisfaction, Loveren (2007) surveyed deans, development officers, central development staff, and unit development staff at the University of South Florida via email and found that perceptions of leadership, decision-making, and relationships were strongly related to the participants' perceived organisational outcomes such as job satisfaction, trust, and commitment.

This model (the set of five predictor variables) appears to account for 50% of the variance in the total job satisfaction. In other words, from the eight predictor variables, the findings suggest that

- Five predictor variables (transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style) give a significant unique contribution to the prediction of teacher job satisfaction at a significant level of less than 0.001 regarded as very highly significant (Alghabban, 2001, 2004, p. 397).

- Transformational leadership style and rational decision-making style, out of these five predictor variables, result in the largest unique contribution (the best predictors) with an individual β value of 0.262.

- The model has been cross-validated because the value of adjusted R^2 (0.488) produced by Stein's formula is close to the observed value of R^2 (0.500) (Field, 2005, p. 188).

These findings suggest that transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant

decision-making style can significantly predict teacher job satisfaction ($p < 0.001$). Transformational leadership style and rational decision-making style are the best predictors. These findings, to some extent, are consistent with findings of previous studies in the literature.

4.6.2 Research Question 9

RQ 9: Can the model (the set of five predictor variables) significantly predict teacher job satisfaction after the possible effects of last education, tenure with current principal, and school location of participants are controlled for?

4.6.2.1 Results

A hierarchical multiple regression analysis was used to address RQ 9. As previously pointed out in Chapter 3, multiple regression analysis was used because it is a more sophisticated extension of Pearson correlation. Unlike Pearson correlation, multiple regression is not limited to generating relationships between variables. It can be used to predict a set of independent variables on one continuous variable. In particular, this hierarchical multiple regression is used to determine how much each independent (predictor) variable adds to the prediction of the dependent variable after other variables are controlled for (Pallant, 2007, p. 147).

In employing the hierarchical multiple regression, these three controlled variables were entered into the first block; the five predictor variables were then entered in the second block. In this analysis, the possible effects of the controlled variables were removed to test whether the block of the five predictor variables were still able to predict a significant amount of the variance in teacher job satisfaction. In the previous analysis using standard multiple regression, the demographics were included so that whether or not these data had effects was unknown.

Two models were produced by this hierarchical multiple regression as shown in Table 4.6-18.

Table 4.6-18 Coefficients of hierarchical multiple regression

Model	Variable	B	SE B	β	t	p
1	(Constant)	162.429	5.784		28.084	0.000
	Last education	-3.709	2.379	-0.071	-1.559	0.120
	Tenure	1.210	1.164	0.047	1.039	0.299
	School location	7.821	2.138	0.167	3.658	0.000
2	(Constant)	119.408	8.441		14.147	0.000
	Last education	-2.115	1.722	-0.041	-1.228	0.220
	Tenure	0.249	0.842	0.010	0.295	0.768
	School location	3.063	1.578	0.065	1.941	0.053
	Transformational leadership	10.873	1.545	0.263	7.037	0.000
	Laissez-faire leadership	-4.182	1.242	-0.121	-3.367	0.001
	Rational decision-making style	1.883	0.282	0.258	6.680	0.000
	Intuitive decision-making style	-0.546	0.162	-0.128	-3.374	0.001
	Avoidant decision-making style	-1.242	0.206	-0.231	-6.041	0.000

*p < 0.05 **p < 0.01, ***p < 0.001
Source: Analysis of survey data

Table 4.6-18 shows that

- Model 1 consisted of the controlled variables entered in the first block.
- Model 2 consisted of all variables entered in the first and the second blocks.

The model summary is shown in Table 4.6-19 and the ANOVA results in Table 4.6-20.

Table 4.6-19 Model summary of teacher job satisfaction with two models

				Change Statistics				
Model	R^2	Adjusted R^2	SE of Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	0.041	0.035	22.793	0.041	6.666	3	471	0.000
2	0.507	0.498	16.435	0.466	87.995	5	466	0.000

Source: Analysis of survey data

Table 4.6-20 ANOVA of teacher job satisfaction with two models

Model		SS	df	MS	F	p
1	Regression	10390.057	3	3463.352	6.666	0.000
	Residual	244704.373	471	519.542		
	Total	255094.429	474			
2	Regression	129227.527	8	16153.441	59.805	0.000
	Residual	125866.903	466	270.101		
	Total	255094.429	474			

**p < 0.01, ***p < 0.001
Source: Analysis of survey data

Model 1 including the controlled variables and teacher job satisfaction as the dependent variable produced an R^2 of 0.041, and an adjusted R^2 of 0.035, with F (3, 471) = 6.666, p = 0.000 as shown in Table 4.6-19 and Table 4.6-20.

Model 2 including all the variables produced an R^2 of 0.507, and an adjusted R^2 of 0.498 (see Table 4.6-19), with F (8, 466) = 59.805, p = 0.000 as shown in Table 4.6-20.

Referring to RQ 9, these results suggest that the model (the set of five predictor variables) is still able to predict teacher job satisfaction significantly after controlling for last education, tenure with current principal, and school location.

4.6.2.2 Discussions

Findings from addressing RQ 9 were that model 1 which had an R^2 of 0.041 suggest that it accounts for 4.1% of the variance in teacher job satisfaction and model 2 (with an R^2 of 0.507) suggests that model 2 accounts for 50.7% of the variance in teacher job satisfaction.

These findings also suggest that the five predictor variables still significantly account for an additional 46.6% (50.7% - 4.1%) of the variance in teacher job satisfaction at a significance level of 0.000 when the effects of last education, tenure with current principal, and school location of participants are statistically controlled for.

These findings indicate that the model as a whole is significant, with $F(8, 466) = 59.81$, $p < 0.001$).

The model 2 coefficients as shown in Table 4.6-18 show how much each predictor variable contributes to predicting teacher job satisfaction. At a significance level of 0.001, five predictor variables appear to make a significant contribution: transformational leadership style ($\beta = 0.263$), rational decision-making style ($\beta = 0.258$), avoidant decision-making style ($\beta = -0.231$), intuitive decision-making style ($\beta = -0.128$), and laissez-faire leadership style ($\beta = -0.121$). The other three variables (last education, tenure with current principal, and school location) do not appear to make a unique contribution at $p < 0.01$.

These findings suggest that the model (the set of five predictor variables) is still able to predict teacher job satisfaction significantly ($p < 0.001$) after controlling for last education, tenure with current principal, and school location. In particular, these findings have not been previously described in the literature.

4.7 Conclusion

This section draws conclusions from addressing the nine research questions. Three major themes have been presented in this chapter: (1) analyses of the survey data collected using the questionnaires from the sample in the Indonesian schools, (2) results from addressing the research questions using the associated techniques, and (3) discussions of the results.

The analysis techniques—descriptive, multiple regression, ANOVA, and t-test using SPSS version 18—were used to analyse the survey data to address the nine research questions. The research questions investigated, the analyses used, the results obtained, and the discussions of the results are summarised in Table 4.7-1.

Table 4.7-1 Research questions, analysis techniques, results, and discussions of the results

Research Questions	Analysis Techniques	Results	Discussions of Results
1. What leadership style(s) do the principals mostly exhibit as perceived by the teachers?	Descriptive	Transformational leadership style	Results are consistent with prior results (e.g. Sarros, Gray, & Densten, 2001)
2. What decision-making style(s) do the principals mostly exhibit as perceived by the teachers?	Descriptive	Rational decision-making style	Results are consistent with prior results (e.g. Scott & Bruce, 1995);; Baiocco, Laghi, & D'Alessio, 2008)
3. What job satisfaction facet(s) do the teachers mostly prefer as perceived by themselves? How satisfied are they in general?	Descriptive	Co-workers, nature of work, supervision, and communication (out of the nine facets). Overall, the teachers are just slightly satisfied.	Results are consistent with prior results (e.g. Boeves , 2007)
4. How does teacher job satisfaction vary with last education, tenure with current principal, total tenure, and job level?	One-way between-groups ANOVA	Significant by last education and by tenure with principal, but insignificant by total tenure and job level.	Some results are inconsistent with prior results (e.g. Boeve, 2007, in terms of education; Zembylas & Papanastasiou, 2004, in terms of tenure), but other results have not been previously described in the literature.
5. How does teacher job satisfaction vary with gender, marital status, certification, and school location?	Independent-samples t-test	Significant by school location only.	Results in terms of gender are consistent with those of Eckman (2004), but other results have not been previously described in the literature.
6. How do self-perceived principal leadership styles compare with teacher-perceived principal leadership styles?	Independent samples t-test	Significant	Results have not been previously described in the literature.
7. What are the relationships between teacher-perceived principal leadership styles, teacher-perceived principal decision-making styles, and teacher job satisfaction?	Pearson correlation	Mostly significant: 32 significant relationships and four insignificant relationships.	Some results are consistent with prior results (Ejimofor, 2007; Elpers & Westhuis, 2008; Erkutlu, 2008; Griffith, 2004; Kao & Kao, 2007; Walumbwa et al., 2005).

8. Can teacher-perceived principal leadership styles and teacher-perceived principal decision-making styles significantly predict teacher job satisfaction?	Standard multiple regression	Yes. Five of the eight variables can significantly predict teacher job satisfaction.	Some results are consistent with prior results (Ejimofor, 2007; Elpers & Westhuis, 2008; Erkutlu, 2008; Griffith, 2004; Walumbwa et al., 2005).
9. Can the model (or the set of predictor variables) still significantly predict teacher job satisfaction after the possible effects of last education, tenure with current principal, and school location of participants are controlled for?	Hierarchical multiple regression	Yes	Results have not been previously described in the literature.

Source: Literature review, research methodology, and analysis of survey data

These results suggest that, to enhance teacher job satisfaction, stakeholders (particularly policy-makers/government district education leaders) could consider ways to help the principals, in collaboration with their staff to: (1) exhibit much more transformational leadership style and rational decision-making style, (2) exhibit less transactional leadership style and dependent decision-making style, (3) exhibit much less intuitive and spontaneous decision-making styles, (4) avoid laissez-faire leadership style and avoidant decision-making style, and (5) improve all the facets of job satisfaction.

The next chapter presents conclusions and implications of the research findings. It reviews this thesis in addressing the research problem and the nine research question.

V. CONCLUSIONS AND IMPLICATIONS

5.0 Introduction

Chapter 4 presented data analyses, results, and discussions of the results. Important results were found and summarised in Table 4.7-1. This chapter draws the entire thesis together to address the research problem and the nine research questions posed in Chapter 1, provide academic/theoretical, practical and policy implications, and contribute to closing the research gaps.

5.1 Review of this Thesis

This section relates each of the four preceding chapters to this final chapter. It emphasises the purpose and structure of this thesis.

5.1.1 Purpose of this Thesis

This thesis examines the relationships between principal leadership styles and principal decision-making styles and their possible use as indicators to predict teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia. This thesis was used to address the research problem posed in Chapter 1:

What are the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia?

5.1.2 Structure of this Thesis

Chapter 1 provided an overview of this thesis, including the background and justification, research problem, research aims, research methods, and data analyses.

In particular, Chapter 1 highlighted the nine research aims to address the nine research questions identified in the literature review.

Chapter 2 reviewed the literature of leadership styles, decision-making styles, and job satisfaction. This literature review identified several important knowledge gaps. Taken together, these gaps are a lack of evidence on principal leadership styles, principal decision-making styles, and teacher job satisfaction as well as their relationships in Lampung schools. The gaps were formulated into the research problem. The gaps were addressed using the nine research questions.

Chapter 3 reviewed research methodology, guided by the nine research questions derived from the literature review to address the research problem posed in Chapter 1. This chapter was set out to justify what research design, research methods, data collection methods, and data analysis techniques were considered the most appropriate for addressing the research questions.

The chapter discussed research design in association with quantitative, qualitative, and mixed methods approaches, data collection methods, and data analysis techniques. The strengths and weaknesses of the three research designs were compared, and the data collection methods were compared in an attempt, as suggested by Gray (2004), to select measuring instruments that provide the best and most accurate measure of the variables to be investigated.

Quantitative research design with survey questionnaires was chosen for this thesis because it was considered the best approach to address the research problem and nine research questions of this thesis. Some other significant reasons for using the questionnaires were:

- more effective in the use of time and budget than qualitative and mixed methods (Creswell, 2009) and thus have positive implications to the researcher's timeline and budget constraints.
- ideal to administer to a relatively large sample of participants, in particular, to explore relationships between variables and standardised questions are required (Gray, 2004).

- useful to describe and determine relationships between variables (Babbie, 1990, p. 56).

Four questionnaires were used in this study. They were three standard questionnaires and a self-designed demographic questionnaire. Gray (2004, p. 161) strongly suggests considering using an already constructed (standardised) instrument for the topics of interest because reliability and validity are usually available as long as the standardised instrument is available. These three standard questionnaires were:

- Multifactor Leadership Questionnaire (MLQ) Form 5X-Short,
- General Decision-making Style (GDMS), and
- Job Satisfaction Survey (JSS).

These questionnaires were randomly administered to 555 participants (37 principals and 518 teachers) from 37 public junior secondary schools in six selected districts in Lampung Province from 28 April to 21 July 2010.

Four main data analysis techniques were chosen for this study to analyse the data, using SPSS version 18. These analysis techniques were:

- descriptive,
- one-way between–groups ANOVA,
- independent-samples t-test,
- Pearson correlation, and
- multiple regression (standard and hierarchical).

These analysis techniques were considered the most appropriate to answer the research questions.

Chapter 4 presented data analyses and results and discussed the results. The data were obtained from the questionnaire responses of the participants. The participants who completed the questionnaires were 36 principals and 475 teachers which represent a response rate of 92 per cent. The data analysis techniques chosen in Chapter 3 were used to analyse the data using SPSS version 18 in an attempt to address the nine research questions.

Each research question was explained within the context of this study and prior studies from the literature reviewed in Chapter 2.

5.2 Conclusions about the Nine Research Questions

This section draws conclusions about the research questions. Findings of each research question from Chapter 4 are summarised in this section. The research questions help answer the aims of this study.

5.2.1 Conclusions about RQs 1-3

Taken together, the first three research questions were set out to identify principal leadership styles, decision-making styles, and teacher job satisfaction according to the teachers' perceptions.

A descriptive statistics analysis revealed that: (1) for RQ 1, the principals mostly exhibited transformational leadership style out of the three possible leadership styles, (2) for RQ 2, they also mostly exhibited rational decision-making style out of the five possible decision-making styles, and (3) for RQ 3, the teachers were found that they mostly preferred four facets of job satisfaction (co-workers, nature of work, supervision, and communication) out of the nine facets, but the teachers were least satisfied with operating conditions and fringe benefits. Overall, the teachers were just slightly satisfied.

These findings suggest that the principals are: (1) more likely to practice transformational leadership style and rational decision-making style, (2) less likely to exhibit transactional leadership style and other three decision-making styles (intuitive, dependent, spontaneous), and (3) hardly likely to exhibit laissez-faire leadership style and avoidant decision-making style. Overall, the teachers are slightly more satisfied than dissatisfied. They are more likely to enjoy four facets of job satisfaction (co-workers, nature of work, supervision, and communication), indicating they tend to hope for good relationships with other people at work by

placing nature of work, co-workers, supervision, and communication as their highest preferences. However, the teachers are less likely to enjoy three facets (pay, promotion, and contingent reward), and are hardly likely to enjoy the other two facets (operating conditions and fringe benefits).

These findings relatively support prior works. Regarding RQ 1, the findings:

- Support the claims that the transactional-transformational leadership paradigm was universally applicable (Bass, 1997), and that although this paradigm originated from a culturally individualistic country (the United States of America), it seemed more likely to be relevant to culturally collectivistic countries (e.g. those within Asia) and in fact transformational leadership was said to emerge more readily in these culturally collectivistic societies (Jung, Bass, & Sosik, 1995, in Bass, 1997).
- Are relatively consistent with prior findings of Sarros, Gray, and Densten (2001). They found that the executives in the AIM-Monash survey all used transformational leadership styles as well as the transactional style of contingent reward fairly often. In contrast, the transactional leadership styles of MBE (active) and MBE (passive) were perceived as being used less frequently while laissez-faire was considered to be hardly used at all.
- Support the Japanese case to some extent. Fukushige and Spicer (2007) found that, in general, the followers preferred transformational leaders to transactional leaders, where individualized consideration was mostly preferred, followed by intellectual stimulation, and contingent reward with five, but management-by-exception passive and laissez-faire received no support.

As for RQ 2, the findings are consistent with prior findings of Scott and Bruce (1995), Spicer and Sadler-Smith (2005), and Baiocco, Laghi, and D'Alessio (2008).

- Scott and Bruce (1995) found that the five decision-making styles were not mutually exclusive, and individuals did not rely on a single decision-making style. Rational and avoidant decision-making were negatively correlated, and avoidant decision-making style is characterised by being relatively passive and an attempt to avoid decision-making.

- Spicer and Sadler-Smith (2005) found that despite practicing one dominant style, people were likely to use various decision-making styles.
- Baiocco, Laghi, and D'Alessio (2008) found that, among adolescents, older adolescents tended to exhibit more rational decision-making style and less intuitive, avoidant and spontaneous styles than the younger ones.

Moving to RQ 3, the findings:

- Partially support Bond, Gallinsky, and Swanberg's (1997) affirmation and Chen, Yang, Shiau, and Wang's (2006) findings. Bond, Gallinsky, and Swanberg (1997, p. 121) affirm that facets of pay and fringe benefits are often considered key determinants of teacher job satisfaction. Chen, Yang, Shiau, and Wang's (2006) research on teacher job satisfaction in college teachers in developed countries—Europe and America—indicated similar findings. Both European and American college teachers emphasised welfare, fair promotion systems, and high salaries.
- Are partially consistent with Boeve's (2007) findings. Boeve (2007) discovered that physician assistant faculty members were more satisfied than dissatisfied with their jobs in general, with education experience as their significant predictor for overall job satisfaction. The members reported the greatest satisfaction in co-worker relations, followed by the work itself, but particularly they were least satisfied with salaries they obtained and advancement opportunities. It seems that good pay and welfare or fringe benefits do not always necessarily produce satisfaction; perhaps many employees do not work only for money.

The findings from addressing these research questions have closed some of the knowledge gaps in the literature on the identification of leadership styles, decision-making styles, and job satisfaction in an Indonesian school context.

5.2.2 Conclusions about RQs 4-6

RQ 4 investigated how teacher job satisfaction varies with tenure (number of years) with current principal, total tenure, qualifications, and job level using one-way between-groups ANOVA. An independent-samples t-test was used to investigate how teacher job satisfaction varies with gender, marital status, certification, and

school location (RQ 5) and how self-perceived principal leadership styles compare with teacher-perceived principal leadership styles (RQ 6).

For RQ 4, one-way between-groups ANOVA revealed no significant differences in scores of teacher job satisfaction by total tenure and by job level. However, there were significant differences in scores of teacher job satisfaction by last education and by tenure (number of years) with current principal despite a very small effect as indicated by Eta squared. Post-hoc comparisons using the Tukey HSD test were used to determine which groups differed from each other and the results indicated two things:

- Mean score for diploma and undergraduate was significantly different from master. However, diploma was not significantly different from undergraduate. Overall, the differences represented a very small effect.
- Mean score for tenure with principal for 1-2 years was significantly different from tenure with principal for 3-4 years. Tenure with principal for 3-4 years was significantly different from tenure with principal for 5-6 years. Tenure with principal for 5-6 years was significantly different from tenure with principal for more than 6 years. All the other comparisons of means were not significantly different. Overall, the differences represented a small effect.

For RQs 5-6, an independent-samples t-test revealed that:

- There were no significant differences in teacher job satisfaction by gender, marital status, and certification at $p < 0.05$. However, there were significant differences in teacher job satisfaction by school location (RQ 5).
- There were significant differences at $p < 0.05$ in the three principal leadership styles as perceived by principals and as perceived by teachers despite a small to a moderate effect as indicated by Eta squared (RQ 6).

The findings from these three research questions suggest that:

- For RQ 4, teachers with a lower education level are likely to be more satisfied than those with a higher education level. These findings were not expected because, ideally, teachers with higher education should be more satisfied because they should have a higher chance to get promoted and better pay. It is likely that

teachers with higher education are more demanding for improvement, but they may not get what they expect. In other words, it is likely that teachers with higher education have higher desires but schools cannot meet their aspirations so these teachers are dissatisfied because "Those with the strongest desires or highest aspirations are least happy with their job if the environment does not facilitate satisfaction of their needs" (Zembylas & Papanastasiou, 2004, p. 359).

- For RQ 5, relating to school location, rural teachers are likely to be more satisfied than urban teachers even though this difference represented a small effect as indicated by Eta squared.
- For RQ 6, principals perceived themselves more transformational, more transactional, and less laissez-faire than what teachers perceived. It is likely that principals tend to be subjective when rating themselves. Interestingly, these findings suggest that both teachers and principals agree that principals tend to exhibit more transformational leadership style, less transactional leadership style, and least laissez-faire leadership style.

In relation to prior research, the findings from these three research questions provide mixed consistency as below.

- For RQ 4, the findings are inconsistent with Boeve's (2007) findings. Boeve (2007) administered a webpage instrument using Job Descriptive Index factors to physician assistant (PA) faculty members from Eastern Michigan University and discovered that faculty members were more satisfied than dissatisfied with their **j**obs in general, with education experience as their significant predictor for overall job satisfaction. This discrepancy may be due to these two different settings (Indonesia and the United States of America) and different salary systems.
- For RQ 5, the findings relating to the school location have not been previously described. However, in terms of gender, the findings are consistent with Eckman's (2004) finding that no significant difference between male and female principals existed in job satisfaction. With respect to marital status and certification, the findings have not been previously described. Contrary to expectations, this thesis did not find a significant difference in job satisfaction by certification. Certified teachers receive higher salaries. However, this pay might

be relatively insignificant, or there might an issue of delayed payment, or the teachers' satisfaction might not solely depend on the pay. Further research could include qualitative research components (e.g. interviews) to investigate why certified teachers and uncertified teachers are not significantly different in teacher job satisfaction.

- For RQ 6, the findings seem to have not been previously described in the literature.

In particular, results showed that last education, tenure with current principal, and school location of participants had significant differences in teacher job satisfaction. Such characteristics were further used as controlled variables to examine whether they had effects on leadership styles and decision-making styles in predicting teacher job satisfaction (see RQ 9).

The findings from addressing RQs 4-6 have closed some of the knowledge gaps in teacher job satisfaction relative to the participants' characteristics as well as in self-perceived principal leadership styles compared with teacher-perceived principal leadership styles in an Indonesian school context.

5.2.3 Conclusions about RQ 7

RQ 7 examined the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction.

A Pearson correlation analysis revealed most significant relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction. In particular, these findings were that:

- Relationships between teacher-perceived principal leaderships style were significant ($p < 0.001$). Transformational leadership style and transactional leadership style had a positive relationship. These two leadership styles had a negative relationship with laissez-faire leadership style. These findings support Bass' (1985, 1999) augmentation effect theory and Judge and Piccolo's (2004, p. 755) findings. Bass' (1985, 1999) augmentation effect theory stipulates that

transformational leadership adds to the effect of transactional leadership, and transactional leadership cannot be replaced by transformational leadership style. .Judge and Piccolo's (2004, p. 755) findings were that transformational leadership did add beyond the effect of transactional leadership, and that transformational leadership and transactional leadership are different but they are not mutually exclusive (Judge & Piccolo, 2004, p. 755).

- Rational decision-making style had a significant relationship with the other four decision-making styles ($p < 0.001$). Rational decision-making style had a positive relationship only with dependent decision-making style, but a negative relationship with the other three decision-making styles. These findings support prior findings of Scott and Bruce (1995) and Thunholm (2004, 2008) that the five decision-making style were not mutually exclusive.
- Relationships between teacher-perceived principal leadership styles and teacher-perceived principal decision-making styles were significant, except the relationship between transformational leadership style and spontaneous decision-making style. Transformational leadership style and transactional leadership style had a positive relationship with rational decision-making style, dependent decision-making style, and spontaneous decision-making style, but a negative relationship with intuitive decision-making style and avoidant decision-making style. In contrast, laissez-faire leadership style had a negative relationship with rational decision-making style and dependent decision-making style, but a positive relationship with intuitive decision-making style, avoidant decision-making style, and spontaneous decision-making style. These findings support prior findings by Tambe and Krishnan (2000), Kao and Kao (2007), and Griffith (2004) that, in general, leadership styles had significant relationships with decision-making styles.
- Relationships between teacher-perceived principal leadership styles and teacher job satisfaction were significant ($p < 0.001$). Teacher job satisfaction had a positive relationship with transformational and transactional leadership styles, but a negative relationship with laissez-faire leadership style. These findings suggest that transformational and transactional leadership style could lead to increased teacher job satisfaction. In contrast, laissez-faire leadership style could lead to decreased teacher job satisfaction. These findings partially support prior findings

by Griffith (2004), Ejimofor (2007), Walumbwa et al. (2005), and Erkutlu (2008, p. 721) that transformational leadership style had an impact on job satisfaction.

- Relationships between teacher-perceived principal decision-making styles and teacher job satisfaction were significant ($p < 0.001$). Teacher job satisfaction had a positive relationship with rational and dependent decision-making styles, but a negative relationship with intuitive, avoidant, and spontaneous decision-making styles. These findings suggest that rational and dependent decision-making styles could lead to increased teacher job satisfaction. However, intuitive, avoidant, and spontaneous decision-making styles could lead to decreased teacher job satisfaction. These findings partially support prior findings of Kand and Rekor (2005) that perceived involvement in decision-making was a determinant of job satisfaction.

The leadership styles and decision-making styles were further examined to establish their impact on teacher job satisfaction before and after controlling for the following characteristics: last education, tenure with current principal, and school location of participants (see RQ 9).

The findings from addressing RQ 7 have closed some of the knowledge gaps in the relationships between principal leadership styles, principal decision-making styles, and teacher job satisfaction in an Indonesian school context.

5.2.4 Conclusions about RQ 8

RQ 8 was set out to examine whether principal leadership styles and principal decision-making styles can significantly predict teacher job satisfaction and which variable best predicts teacher job satisfaction.

A standard multiple regression analysis revealed that after the eight predictor variables were analysed using the standard multiple regression up to the fourth phase, a set of five variables (transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style) emerged as significant predictors of teacher job satisfaction.

These five predictor variables had an R of 0.707, an R^2 of 0.500, and an adjusted R^2 of 0.495, with $F(5, 469) = 93.832$, $p = 0.000$. The largest β coefficient (0.262) was achieved by both transformational leadership style and rational decision-making style. The second largest β coefficient (-0.237) was achieved by avoidant decision-making style (ignoring any negative signs), followed by the β coefficients of -0.144 and -0.117, which were achieved by intuitive decision-making style and laissez-faire leadership style respectively.

These findings suggest that:

- These five predictor variables can predict teacher job satisfaction significantly ($p < 0.001$), with transformational leadership style and rational decision-making style as the best predictors.
- Transformational leadership style, rational decision-making style, and dependent decision-making style can significantly contribute to increased teacher job satisfaction.
- Laissez-faire leadership style, intuitive decision-making style, and avoidant decision-making style, however, can significantly contribute to decreased teacher job satisfaction.
- These five predictor variables jointly account for 50% of the variance in teacher job satisfaction. It means that there is another 50% of the variance unexplained and accounted for by other variables. These other variables may include the facets of job satisfaction and demographics of participants.

Using the Wherry's equation, this model (the set of five predictor variables) had a statistical significance of 0.0001, an adjusted R^2 value of 0.495 (very similar to the R^2 value or only a very little shrinkage of 0.5%). These findings suggest that this model is considered a very good model (Field, 2005, p. 188).

The Wherry's equation does not express how well the model can predict the scores of a different sample of data from the same population. To address this weakness, the cross-validation with adjusted R^2 using Stein's formula was conducted. Using Stein's formula, results show that the value of adjusted R^2 (0.488) was close to the observed

value of R^2 (0.500). These findings suggest that the model has a very good cross-validity (Field, 2005, p. 188).

The findings are consistent with prior findings to some extent as shown below.

- Regarding transformational leadership and job satisfaction, Ejimofor (2007), Elpers and Westhuis (2008), Erkutlu (2008, p. 721), Griffith (2004), and Walumbwa et al.(2005) presented consistent findings that transformational leadership influenced job satisfaction.
- With respect to decision-making and job satisfaction, Kand and Rekor (2005) revealed that perceived involvement in decision-making was a determinant of job satisfaction; increasing in the involvement in decision-making contributed to a positive influence on job satisfaction.
- In terms of leadership, decision-making, and job satisfaction, Loveren (2007) found that perceptions of leadership, decision-making, and relationships were strongly related to their perceived organisational outcomes such as job satisfaction, trust, and commitment.

These findings have closed some knowledge gaps in relation to impacts of principal leadership styles and principal decision-making styles on teacher job satisfaction in an Indonesian school context.

5.2.5 Conclusions about RQ 9

RQ 9 examined whether the model (the set of five predictor variables) is still able to significantly predict teacher job satisfaction after the possible effects of last education, tenure with current principal, and school location of participants are controlled for.

Model 1 including the controlled variables and teacher job satisfaction as the dependent variable produced an R^2 of 0.041, with $F (3, 471) = 6.666$, $p = 0.000$, suggests that it accounts for 4.1% of the variance in teacher job satisfaction. Model 2 including all the variables produced an R^2 of 0.507, with $F (8, 466) = 59.805$, $p =$

0.000, suggests that model 2 accounts for 50.7% of the variance in teacher job satisfaction, and the model as a whole is significant.

These findings suggest that the model or the set of five predictor variables (transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style) is still able to significantly predict teacher job satisfaction after controlling for last education, tenure with current principal, and school location. However, these findings seem to have not been previously described.

These findings have closed some knowledge gaps regarding impacts of principal leadership styles and principal decision-making styles on teacher job satisfaction after controlling for last education, tenure with current principal, and school location of participants in an Indonesian school context.

Finally, taken together, the findings from addressing the nine research questions have closed some knowledge gaps in the literature on leadership styles and decision-making styles in association with teacher job satisfaction in an Indonesian school context. Thus, this thesis has answered the research questions and the research problem.

5.3 Implications for Theory

This section provides the full picture of the findings of this thesis within the body of knowledge, that is, the academic/theoretical implications of this thesis (Perry, 2002). These implications are drawn from Section 5.2. This thesis has made a significant academic/theoretical contribution to knowledge in at least two areas: methodology and leadership studies (in general, in school contexts, and in an Indonesian school context).

Regarding academic contribution to methodology, this thesis is the first to jointly use the three standard survey instruments (MLQ Form 5X-Short, GDMS, and JSS) in

leadership studies particularly in an Indonesian school context. This thesis linked three elements (leadership styles, decision-making styles, and job satisfaction) that have not been connected previously. In doing so, this thesis makes explicit how principal leadership styles and principal decision-making styles impact teacher job satisfaction in an Indonesian school context.

In terms of academic/theoretical contribution to leadership studies, this thesis is the first to: (1) identify principal leadership styles principal decision-making styles, and teacher job satisfaction, (2) investigate teacher job satisfaction relative to participants' characteristics, (3) compare self-perceived principal leadership styles with teacher-perceived principal leadership styles, and examine principal leadership styles, principal decision-making styles in association with teacher job satisfaction in an Indonesian school context. Thus, this thesis demonstrates a theoretical contribution to the body of knowledge in leadership by enriching the literature on school leadership with a particular focus on leadership styles, decision-making styles, and job satisfaction by confirming the findings and providing new insights. Also, this thesis makes a contribution to a deeper understanding of principal leadership styles and principal decision-making styles) in association with teacher job satisfaction. These phenomena add to our understanding on how principals should behave, for example, which leadership style(s) and decision-making style(s) should be avoided and which one(s) should be improved in the future in order to help teachers meet their satisfaction because satisfied teachers and principals would harmoniously work together to achieve school goals effectively.

5.4 Implications for Practice and Policy

This section presents implications for practice and policy. Like implications for theory, these implications are drawn from Section 5.2.

There are some interesting findings in this thesis which could prove beneficial, particularly, to principals and policy-makers or district education leaders in an Indonesian school context. This thesis has made a significant contribution to

knowledge in at least two areas. These are: (1) practical contribution to an Indonesian school context, and (2) policy contribution to an Indonesian school context.

In terms of practical contribution to an Indonesian school context, to help teachers meet their job satisfaction, this thesis is the first to present findings that suggest principals to:

- Exhibit more transformational leadership style and more rational decision-making style in schools.
- Exhibit less transactional leadership style and less dependent decision decision-making style.
- Exhibit much less spontaneous decision-making style.
- Avoid laissez-faire leadership style, avoidant and intuitive decision-making styles.
- Help improve the facets of job satisfaction for individual teachers and teachers as a group. Operating conditions/bureaucracy and fringe benefits, in particular, need urgent improvement.
- Be aware that Indonesian schools that have adopted school-based management (SBM) have the potential to be able to increase the exhibition of transformational leadership style and rational decision-making style in schools.
- Be aware that the Indonesian context would seem to encourage the exhibition of transformational leadership style. This is because Indonesian people have characteristics which can make transformational leadership style grow. For example, most Indonesian people live in collectivistic societies, helping one another.
- Understand that transformational leadership training will help them become effective school leaders. In general, this training is as important for principals as education is fundamental to the production of high quality human resources and in turn these human resources can contribute to economic growth and thus increased wellbeing of Indonesian people.
- Be aware that teachers with higher education are not as satisfied as teachers with lower education. Principals should nurture and promote transformational leadership style to improve school leadership. This will help improve their capacity to accommodate the demands of teachers with higher education.

Transformational leadership can also help principals build better relationships with teachers.

- Be aware that rural teachers are more satisfied than urban teachers. In particular, urban principals could help find out why urban teachers are less satisfied than rural teachers to help urban teachers enhance their satisfaction.
- Have the same perception of principal leadership styles as well as principal decision-making styles as teachers to avoid misunderstanding. This could help promote effective communication in building harmonious relationships between teachers and principals.
- Be aware that principals and teachers as well as other school stakeholders could benefit from the findings of this thesis. The findings could make a significant contribution to:
  - help improve school leadership effectiveness,
  - help increase school effectiveness,
  - increase teacher job satisfaction,
  - help schools produce high quality human resources, and
  - underpin the development of Indonesian schools that are applying school-based management (SBM).

In terms of policy contribution to an Indonesian school context, this thesis is the first to present findings that provide an important basis for education offices in Indonesia, particularly Lampung Province, to make educational policies. For example, requiring transformational leadership training for principals and other education leaders, or setting up a leadership centre and further leadership studies could help improve school leadership effectiveness and help meet teacher job satisfaction. In turn, teacher job satisfaction can contribute to high quality graduates.

Stakeholders, particularly, policy-makers could help principals consider ways to ensure the staff (e.g. teacher) job satisfaction could be improved. In turn, this would improve the effectiveness of school leadership in an Indonesian school context.

Bromley and Kirschner-Bromley (2007) argue that transformational leadership is the kind of school leadership that is believed to be effective to achieve school success.

However, it is not easy for a principal to shift from being a traditional leader to a transformational leader. It will take time, knowledge, education, patience, desire, and continuous learning. They suggest ways to become a transformational leader as below:

- Continue to learn and grow,
- Set attainable goals,
- Be energetic,
- Be open and responsive to change,
- Be creative in thinking processes,
- Interact with people honestly,
- Improve verbal and written communication skills to be good,
- Empower employees and give them more responsibilities, and
- Have a firm belief in ethics and morals (Bromley & Kirschner-Bromley, 2007, p. 57).

To become a transformational leader, Darling-Hammond (2007) proposes that principals practice several elements of effective school leadership. These elements are:

- Set direction, by developing a consensus around vision, goals and directions,
- Help individual teachers, through support, modelling, and supervision, and develop collective teacher capacity, through collaborative planning and professional development that creates shared norms of practice,
- Redesign the organisation to enable this learning and collaboration among staff (and personalisation/support for students), as well as to engage families and community, and
- Manage the organisation by strategically allocating resources and support (Darling-Hammond, 2007, p. 14).

To help teachers increase job satisfaction that will contribute to creating effective school leadership in Indonesian schools, this thesis proposes a set of recommendations developed from Erkutlu (2008) and that also incorporates the research findings of this thesis. The involvement of all stakeholders, particularly policy-makers and teachers, is essential to help implement these recommendations:

- Use transformational leadership style rather than transactional leadership style and avoid laissez-faire style,
- Use rational decision-making style rather than dependent, intuitive, and spontaneous decision-making styles and avoid using avoidant decision-making style,
- Involve stakeholders, particularly teachers and other staff, in school decision-making,
- Create a vision giving teachers and other staff a sense of identity and meaning within schools,
- Become a good listener to build good communication and relationship with teachers and other staff,
- Create flexible and democratic school operating condition or bureaucracy,
- Become strong role models for their teachers and other staff by developing a set of moral values and expressing strong ideals,
- Act as change agents who initiate and implement new directions within schools,
- Motivate teachers and other staff to do things in new ways beyond their expectation,
- Provide a supportive climate in which principals listen carefully to the individual needs of teachers and other staff,
- Appreciate teachers and other staff for the jobs they do by giving rewards (financial and non-financial), and
- Act as coaches and advisers help teachers develop and self-actualise to meet their needs for achievement and growth.

At school level, implementation of these recommendations should be done by principals in collaboration with their staff members, particularly teachers, because "Principals cannot lead schools without staff collaboration. They need to be able to empower staff members to make their own decisions and to work with them in a cooperative, collegial manner" (Sanzo et al., 2011, p. 41).

5.5 Limitations

The strengths of this thesis are its large sample size, widely accepted and well-validated survey instruments, and high (92%) response rate. The valid sample size of 475 teacher participants exceeds the acceptable sample size for multiple regression recommended by Tabachnick and Fidell (2007, p. 123). According to their formula $N \geq 50 + 8m$, where m is the number of independent variables (in this study m = 8), so the minimum sample size should be 114. The main instruments used are standard questionnaires suggested by Gray (2004) because they have well-established validity and reliability. These questionnaires were initially pilot tested to check feasibility of implementation in an Indonesian context prior to conducting the main study. The response rate of the main study was 92 per cent. This response rate is very good as Babbie (1990, p. 182) points out that a response rate of at least 70 per cent or more is very good. A high response rate results in less chance of significant bias

These strengths remain despite the limitations of this thesis. These limitations are in several ways. The scope of this thesis is limited to public junior secondary schools. The site of this thesis is limited to Lampung Province (out of the 33 provinces) in Indonesia. This thesis employed solely quantitative research. This thesis also may have limited confidence in results without the inclusion of factor analysis. These limitations are acknowledged and provide possible avenues for further research.

5.6 Implications for Further Research

This thesis provides opportunities for further research in general and further research from an academic perspective.

5.6.1 Further Research in General

In general, there are three areas for further research. First, further survey research should enlarge the scope to be able to generalise the findings to all private and public schools (primary, junior and senior secondary schools) in Lampung Province. Second, further survey research should enlarge the site to be able to generalise the

findings to all Indonesian provinces. Third, further research could include qualitative research components (e.g. interviews) to complement survey findings.

5.6.2 Further Research from an Academic Perspective

From an academic perspective, there are four areas identified for further research: starting point for further research, instrument validation, leadership outcomes, and leadership mapping. First, this study examined leadership styles and decision-making styles in association with job satisfaction in an Indonesian school context, where little research on these issues has been conducted, and this thesis has provided evidence of the applicability of the three questionnaires in an Indonesian school context. So, this study may serve as a starting point for a further research agenda that addresses the knowledge gaps. Second, despite the fact that the three questionnaires used in this study have well established reliability and validity, psychometric properties of the questionnaires should be further evaluated when employed in a new context to ensure credibility of results. At least, this evaluation could ensure internal consistency using Cronbach's α coefficients and item-total correlations. Factor analysis (e.g. confirmatory factor analysis) could be then employed to add confidence in research findings. Third, further research should include leadership outcomes (extra effort, effectiveness, and satisfaction) from Bass and Avolio's (2004) MLQ Form 5X-Short in research and data analysis to examine to what extent the leadership styles influence the outcomes. Finally, further research should include comparisons of study results between provinces to map out leadership behaviours throughout Indonesia.

5.7 Concluding Remarks

Education is important for Indonesia because education can contribute to enhancing human resources and thus economic growth in Indonesia. However, studies of school leadership are extremely few in an Indonesian school context. This thesis examined the relationships between principal leadership styles and principal decision-making styles and their possible use as indicators to predict teacher job satisfaction in the specific context of public junior secondary schools in Lampung Province, Indonesia.

The research questions were focused on three elements (principal leadership styles, principal decision-making styles, and teacher job satisfaction), the relationships between these three elements, the possible use of these principal leadership styles and principal decision-making styles as indicators to predict teacher job satisfaction, and the possible effects of last education, tenure with current principal, and school location in predicting teacher job satisfaction.

Indonesian versions of three standard survey questionnaires (MLQ Form 5X-Short, GDMS, and JSS) and a demographic questionnaire were completed by 36 principals and 475 teachers (92% response rate) from 36 schools in six districts in Lampung Province, Indonesia. The responses were analysed using descriptive statistics, one-way ANOVA, independent-samples t-test, Pearson correlation, and multiple regression (standard and hierarchical), using SPSS version 18.

Key findings are:

1) Principals mostly exhibited transformational leadership style.
2) Principals mostly exhibited rational decision-making style.
3) Overall, teachers were just slightly satisfied. Their preferences out of the nine facets of job satisfaction were co-workers, nature of work, supervision, and communication.
4) There were significant differences in scores of teacher job satisfaction by last education and by tenure (number of years) with current principal. However, there were no significant differences in scores of teacher job satisfaction by total tenure and job level.
5) There were significant differences in teacher job satisfaction by school location. However, there were no significant differences in teacher job satisfaction by gender, marital status, and certification.
6) There were significant differences ($p < 0.001$) in scores of leadership styles according to the perceptions of principals compared to those of teachers.
7) The relationships between teacher-perceived principal leadership styles, teacher-perceived principal decision-making styles, and teacher job satisfaction were mostly significant.

8) Five predictor variables (transformational leadership style, laissez-faire leadership style, rational decision-making style, intuitive decision-making style, and avoidant decision-making style) could predict teacher job satisfaction significantly ($p < 0.001$). Transformational leadership style and rational decision-making style best predicted teacher job satisfaction.
9) The set of five predictor variables were still able to predict teacher job satisfaction significantly ($p < 0.001$) after controlling for last education, tenure with current principal, and school location.

These findings have addressed the nine research questions and have met the aims of this thesis as outlined in Chapter 1.

These findings mainly suggest that, to enhance teacher job satisfaction, stakeholders (particularly policy-makers and district education leaders) could consider ways to help the principals in collaboration with their staff to: (1) exhibit much more transformational leadership style and rational decision-making style, (2) exhibit less transactional leadership style and dependent decision-making style, (3) exhibit much less intuitive and spontaneous decision-making styles, (4) avoid laissez-faire leadership style and avoidant decision-making style, and (5) improve all the facets of job satisfaction.

In terms of the implications, this thesis provided a contribution to the body of knowledge in at least four areas: academic/theoretical contribution to leadership studies, academic/theoretical contribution to methodology, practical contribution to an Indonesian school context, and policy contribution to an Indonesian school context. This thesis acknowledged the limitations and these are avenues for possible further research.

This thesis has novelty in research. More importantly, this thesis is scientifically significant for four reasons: contributing to closing a few of important gaps in the literature of school leadership in Indonesia, helping enhance the quality of Indonesia's education, addressing neglect in jointly using the three comprehensive standard questionnaires in research in Indonesia, and highlighting academic/theoretical, practical and policy implications for Indonesian schools.

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Appendices

Appendix 1: Table of codebook of participants' profiles

Variable	SPSS Variable Name	Coding Instruction	Scale
Identification number	ID	Number assigned to each questionnaire of participant	Scale
Gender	Gender	0= Male 1 = Female	Nominal
Marital status	Marital	0 = Married 1 = Unmarried	Nominal
Teacher certification	Cert	0= Yes 1 = No	Nominal
Age	Age	Age in years: 1 = < 20 2 = 20-29 3 = 30-39 4 = 40-49 5 = 50-59 6 = >59	Nominal
Last education	Edu	1 = Diploma 2 = S1 3 = S2 4 = S3 5 = Other	Nominal
Tenure of principal	Tenure	1 = < 1 year 2 = 1-2 years 3 = 3-4 years 4 = 5-6 years 5 = > 6 years	Nominal
Total tenure as teacher (and as principal)	TTenure	1 = < 5 years 2 = 5-9 years 3 = 10-14 years 4 = 15-19 years 5 = 20-24 years 6 = > 24 years	Nominal
Rank in position	Rank	1 = II 2 = III 3 = IV	Nominal
School location	Scloc	1 = Urban 2 = Urban 3 = Rural	Nominal

Appendix 2: Table of codebook of leadership styles

Variable	SPSS Variable Name	Coding Instruction	Scale
Contingent reward	CR01	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Intellectual stimulation	IS02	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Management-by-exception (passive)	MBEP03	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Management-by-exception (active)	MBEA04	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Laissez-faire leadership	LF05	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Idealized influence (behavior)	IIB06	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Laissez-faire leadership	LF07	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Intellectual stimulation	IS08	0 = Not at all 1 = Once in a while	Ordinal/ Interval

		2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	
Inspirational motivation	IM09	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Idealized influence (attributed)	IIA10	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Contingent reward	CR11	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Management-by-exception (passive)	MBEP12	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Inspirational motivation	IM13	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Idealized influence (behavior)	IIB14	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Individual consideration	IC15	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Contingent reward	CR16	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often	Ordinal/ Interval

		4 = Frequently, if not always	
Management-by-exception (passive)	MBEP17	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Idealized influence (attributed)	IIA18	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Individual consideration	IC19	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Management-by-exception (passive)	MBEP20	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Idealized influence (attributed)	IIA21	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Management-by-exception (active)	MBEA22	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Idealized influence (behavior)	IIB23	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Management-by-exception (active)	MBEA24	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Idealized influence	IIA25	0 = Not at all	Ordinal/

(attributed)		1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Interval
Inspirational motivation	IM26	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Management-by-exception (active)	MBEA27	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Laissez-faire leadership	LF28	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Individual consideration	IC29	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Intellectual stimulation	IS30	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Individual consideration	IC31	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Intellectual stimulation	IS32	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Laissez-faire leadership	LF33	0 = Not at all 1 = Once in a while 2 = Sometimes	Ordinal/ Interval

		3 = Fairly often 4 = Frequently, if not always	
Idealized influence (behavior)	IIB34	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Contingent reward	CR35	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Inspirational motivation	IM36	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Effectiveness	EFF37	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Satisfaction	SAT38	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Extra effort	EE39	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Effectiveness	EFF40	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Satisfaction	SAT41	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval

Extra effort	EE42	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Effectiveness	EFF43	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Extra effort	EE44	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval
Effectiveness	EFF45	0 = Not at all 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always	Ordinal/ Interval

Appendix 3: Table of codebook of decision-making styles

Variable	SPSS Variable Name	Coding Instruction	Scale
Rational decision-making style	Rat01	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Rational decision-making style	Rat02	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Rational decision-making style	Rat03	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Rational decision-making style	Rat04	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Rational decision-making style	Rat05	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Intuitive decision-making style	Int06	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Intuitive decision-making style	Int07	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Intuitive decision-making style	Int08	1 = Strongly disagree 2 = Somewhat disagree	Ordinal/ Interval

		3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	
Intuitive decision-making style	Int09	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Intuitive decision-making style	Int10	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Dependent decision-making style	Dep11	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Dependent decision-making style	Dep12	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Dependent decision-making style	Dep13	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Dependent decision-making style	Dep14	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Dependent decision-making style	Dep15	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Avoidant decision-making style	Avo16	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree	Ordinal/ Interval

		4 = Somewhat agree 5 = Strongly agree	
Avoidant decision-making style	Avo17	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Avoidant decision-making style	Avo18	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Avoidant decision-making style	Avo19	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Avoidant decision-making style	Avo20	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Spontaneous decision-making style	Spo21	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Spontaneous decision-making style	Spo22	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Spontaneous decision-making style	Spo23	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval
Spontaneous decision-making style	Spo24	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval

Spontaneous decision-making style	Spo25	1 = Strongly disagree 2 = Somewhat disagree 3 = Neither agree nor disagree 4 = Somewhat agree 5 = Strongly agree	Ordinal/ Interval

Appendix 4: Table of codebook of teacher job satisfaction

Variable	**SPSS Variable Name**	**Coding Instruction**	**Scale**
Pay	Pay01	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Promotion	Pro02r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Supervision	Sup03	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Fringe benefits	FB04r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Contingent rewards	CR05	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Operating conditions	OC06r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval

Co-workers	Cow07	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Nature of work	Now08r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Communication	Com09	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Pay	Pay10r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Promotion	Pro11	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Supervision	Sup12r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Fringe benefits	FB13	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval

Contingent rewards	CR14r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Operating conditions	OC15	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Co-workers	Cow16r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Nature of work	Now17	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Communication	Com18r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Pay	Pay19r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Promotion	Pro20	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately	Ordinal/ Interval

		6 = Agree very much	
Supervision	Sup21r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Fringe benefits	FB22	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Contingent rewards	CR23r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Operating conditions	OC24r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Co-workers	Cow25	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Communication	Com26r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Nature of work	Now27	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly	Ordinal/ Interval

		5 = Agree moderately 6 = Agree very much	
Pay	Pay28	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Fringe benefits	FB29r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Supervision	Sup30	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Operating conditions	OC31r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Contingent rewards	CR32r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Promotion	Pro33	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Co-workers	Cow34r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly	Ordinal/ Interval

		4 = Agree slightly 5 = Agree moderately 6 = Agree very much	
Nature of work	Now35	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Communication	Com36r	1 = Disagree very much 2 = Disagree moderately 3 = Disagree slightly 4 = Agree slightly 5 = Agree moderately 6 = Agree very much	Ordinal/ Interval
Not Applicable		0 = N/A	Ordinal/ Interval

Appendix 5: Table of Mahalanobis and Cook's distance of total teacher job satisfaction

ID	Position	TJS	MAH_1	COO_1
1	0	0		
2	1	142	15.63183	0.00080
3	1	155	11.83751	0.00110
4	1	155	11.83751	0.00110
5	1	169	12.23600	0.00014
6	1	169	9.76885	0.00072
7	1	169	8.70213	0.00002
8	1	135	5.38560	0.00659
9	1	196	4.85344	0.00002
10	1	169	10.91172	0.00000
11	1	188	8.73924	0.00689
12	1	156	4.73224	0.00056
13	1	201	4.16463	0.00517
14	1	178	4.25104	0.00010
15	1	135	6.07843	0.00419
16	1	154	1.26236	0.00046
17	1	155	11.40622	0.00065
18	0	0		
19	1	188	10.28566	0.00225
20	1	167	12.04652	0.00363
21	1	199	12.67912	0.01411
22	1	211	7.21254	0.00137
23	1	211	7.98901	0.00275
24	1	211	7.01197	0.00250
25	1	211	7.12902	0.00144
26	1	193	5.91204	0.00467
27	1	161	2.13671	0.00001
28	1	142	8.49535	0.00551
29	1	139	22.92123	0.00948
30	1	177	7.46867	0.00125
31	1	162	9.70788	0.00136
32	1	198	13.07070	0.00233
33	1	182	5.40871	0.00088
34	0	0		
35	1	171	15.89521	0.00245
36	1	196	4.83423	0.00061
37	1	176	2.34171	0.00030
38	1	191	11.02687	0.00376
39	1	164	7.77758	0.00191
40	1	158	12.47104	0.00158

ID	Position	TJS	MAH_1	COO_1
41	1	191	3.99314	0.00068
42	1	176	10.38523	0.00265
43	1	146	12.47104	0.00674
44	1	156	5.62156	0.00456
45	1	176	10.59570	0.00034
46	1	211	8.25627	0.00122
47	1	181	9.68850	0.00000
48	1	183	2.82715	0.00006
49	1	181	7.60362	0.00069
50	1	209	6.15538	0.00361
51	1	171	17.98941	0.00001
52	1	201	7.69117	0.00029
53	1	196	8.22696	0.00060
54	1	206	7.87238	0.00363
55	0	0		
56	1	122	3.88685	0.00471
57	1	137	9.45498	0.00209
58	1	137	13.03368	0.00024
59	1	169	5.02376	0.00009
60	1	136	14.45365	0.00079
61	1	137	12.51492	0.00027
62	1	167	13.00625	0.00001
63	1	158	14.16691	0.00177
64	1	181	6.63429	0.00007
65	1	174	18.72850	0.00959
66	1	172	5.32773	0.00012
67	1	163	5.49865	0.00141
68	1	129	3.76204	0.00290
69	1	126	3.95409	0.00394
70	1	168	10.34535	0.00003
71	1	186	5.12332	0.00040
72	1	163	2.78108	0.00062
73	1	124	3.13172	0.00356
74	0	0		
75	1	131	10.13344	0.00565
76	1	126	9.17088	0.00525
77	1	183	2.61104	0.00044
78	1	183	4.85849	0.00087
79	1	137	15.07484	0.00046
80	1	155	0.78498	0.00044

ID	Position	TJS	MAH_1	COO_1
81	1	169	1.88584	0.00006
82	1	126	9.79379	0.00061
83	1	155	11.69505	0.00183
84	1	167	9.26521	0.00179
85	1	181	3.44161	0.00022
86	1	165	8.15329	0.00116
87	1	151	1.74834	0.00004
88	1	187	5.26464	0.00364
89	1	176	3.51878	0.00176
90	1	193	5.36787	0.00317
91	1	193	4.66972	0.00497
92	1	196	6.83092	0.00012
93	1	169	15.95897	0.00233
94	1	164	2.81400	0.00020
95	0	0		
96	1	137	3.88021	0.00236
97	1	179	18.05264	0.00251
98	1	141	12.01878	0.00140
99	1	154	2.33515	0.00084
100	1	147	7.52124	0.00061
101	1	179	13.02750	0.00000
102	1	177	4.47587	0.00011
103	1	149	3.39414	0.00012
104	1	172	12.82957	0.00119
105	1	177	12.50710	0.00010
106	1	189	10.57854	0.00026
107	1	137	7.36873	0.00014
108	1	189	6.95702	0.00432
109	1	156	1.38471	0.00002
110	1	184	3.16975	0.00248
111	1	174	13.19679	0.00403
112	1	158	7.58229	0.00001
113	1	96	10.43873	0.02164
114	1	196	4.04076	0.00153
115	1	171	2.26430	0.00048
116	0	0		
117	1	188	4.46164	0.00003
118	1	176	19.73809	0.00016
119	1	158	17.39076	0.00256
120	1	166	15.20962	0.00232

ID	Position	TJS	MAH_1	COO_1
121	1	172	7.13176	0.00131
122	1	172	7.13176	0.00131
123	1	185	8.72240	0.00088
124	1	154	5.97120	0.00012
125	1	166	3.58382	0.00017
126	1	182	7.49658	0.00010
127	1	158	3.51699	0.00087
128	1	158	3.51699	0.00087
129	1	158	14.02612	0.00142
130	1	159	8.85190	0.00411
131	1	162	7.11851	0.00016
132	1	158	5.70103	0.00000
133	1	165	6.17133	0.00022
134	1	151	22.38638	0.00961
135	1	175	12.20586	0.00048
136	0	0		
137	1	194	7.26987	0.00235
138	1	186	4.95953	0.00009
139	1	189	2.71740	0.00014
140	1	194	3.97767	0.00139
141	1	181	3.76157	0.00008
142	1	192	6.41981	0.00107
143	1	187	4.20461	0.00022
144	1	189	4.29566	0.00073
145	1	182	4.84337	0.00004
146	1	190	4.06453	0.00062
147	1	185	4.92249	0.00010
148	1	183	2.01812	0.00023
149	1	178	4.40659	0.00149
150	1	188	1.68783	0.00023
151	1	182	5.62289	0.00097
152	1	175	8.59621	0.00030
153	1	174	5.43922	0.00040
154	1	172	4.03584	0.00035
155	1	173	3.65234	0.00024
156	1	178	6.42956	0.00041
157	0	0		
158	1	139	2.91484	0.00020
159	1	161	5.02702	0.00000
160	1	154	3.13864	0.00003

ID	Position	TJS	MAH_1	COO_1
161	1	168	6.89158	0.00001
162	1	175	7.61060	0.00070
163	1	186	4.30151	0.00087
164	1	139	4.09366	0.00110
165	1	178	5.32726	0.00004
166	1	111	10.63254	0.00993
167	1	166	11.81015	0.00061
168	1	161	10.78383	0.00307
169	1	161	6.74322	0.00023
170	1	166	9.62384	0.00002
171	1	167	3.52146	0.00002
172	1	161	6.33025	0.00060
173	1	169	2.96067	0.00000
174	0	0		
175	1	183	3.30136	0.00312
176	1	139	15.58304	0.01306
177	1	132	6.27909	0.00013
178	1	132	7.94175	0.00004
179	1	169	11.10744	0.00033
180	1	128	3.73353	0.00052
181	1	132	20.75034	0.00171
182	1	134	12.82516	0.00514
183	1	143	7.03424	0.00112
184	1	156	5.48546	0.00017
185	1	179	3.83089	0.00060
186	1	164	4.94931	0.00008
187	1	130	4.16636	0.00046
188	1	146	6.45799	0.00002
189	1	145	10.53900	0.01008
190	0	0		
191	1	174	4.86970	0.00126
192	1	199	7.88923	0.00368
193	1	161	3.61162	0.00162
194	1	132	4.35655	0.00246
195	0	0		
196	1	145	3.52556	0.00149
197	1	181	10.67115	0.00022
198	1	184	18.06301	0.00052
199	1	173	7.37697	0.00027
200	1	138	10.76158	0.00000

ID	Position	TJS	MAH_1	COO_1
201	0	0		
202	1	196	10.29138	0.00128
203	1	180	9.15665	0.00086
204	1	186	13.68067	0.00672
205	1	165	10.77322	0.00114
206	1	162	11.48902	0.00335
207	1	166	16.54500	0.00769
208	1	119	6.70735	0.00929
209	1	169	9.15899	0.01975
210	1	172	9.15899	0.02239
211	1	171	4.68104	0.00001
212	1	181	4.22838	0.00057
213	1	173	7.70292	0.01328
214	1	170	7.63346	0.01094
215	1	159	6.88294	0.00040
216	1	135	9.71188	0.00115
217	1	141	8.57276	0.00257
218	1	192	9.15779	0.00205
219	0	0		
220	1	208	6.94963	0.00115
221	1	214	6.67601	0.00251
222	1	208	6.67601	0.00118
223	1	203	6.10948	0.00164
224	1	203	7.13395	0.00189
225	1	195	6.53037	0.00008
226	1	203	6.01151	0.00062
227	1	198	6.93222	0.00118
228	1	185	5.54898	0.00001
229	1	205	5.49484	0.00091
230	0	0		
231	1	147	11.54375	0.00199
232	1	164	12.06667	0.00254
233	1	179	5.81791	0.00034
234	1	190	2.69033	0.00076
235	1	132	5.44591	0.00095
236	1	126	11.97180	0.00108
237	1	182	3.19430	0.00398
238	1	182	3.90048	0.00507
239	1	181	7.97020	0.00396
240	0	0		

ID	Position	TJS	MAH_1	COO_1
241	1	170	3.13369	0.00057
242	1	141	6.45105	0.00501
243	1	171	4.51265	0.00044
244	1	161	5.09629	0.00051
245	1	139	2.75205	0.00348
246	1	162	6.43328	0.00000
247	1	159	3.10677	0.00002
248	1	161	4.51660	0.00029
249	0	0		
250	1	162	3.55038	0.00024
251	1	193	6.73886	0.00777
252	1	173	3.18002	0.00006
253	1	173	7.15346	0.00047
254	1	163	6.35448	0.00007
255	1	147	6.83265	0.00006
256	1	154	6.75261	0.00422
257	1	147	8.67490	0.00045
258	1	186	7.00763	0.00234
259	0	0		
260	1	115	14.71168	0.00012
261	1	128	19.65490	0.00014
262	1	165	4.41930	0.00099
263	1	136	11.12051	0.00125
264	1	145	7.06517	0.00033
265	1	189	4.69373	0.00108
266	1	141	8.97623	0.00055
267	1	119	17.60332	0.00041
268	1	152	2.66278	0.00022
269	1	120	8.42222	0.00422
270	1	160	4.83788	0.00025
271	0	0		
272	1	132	5.04574	0.00122
273	1	173	4.04465	0.00063
274	1	134	6.95593	0.00180
275	1	167	2.90618	0.00003
276	1	186	5.39900	0.00167
277	1	158	7.60489	0.00005
278	1	156	7.70299	0.00007
279	1	148	4.40788	0.00149
280	1	171	3.09630	0.00056

ID	Position	TJS	MAH_1	COO_1
281	1	131	5.59211	0.00188
282	0	0		
283	1	151	5.30753	0.00007
284	1	149	11.92584	0.00205
285	1	159	7.34312	0.00013
286	1	151	5.45380	0.00009
287	1	157	4.87303	0.00002
288	1	152	5.64707	0.00007
289	1	148	5.26017	0.00024
290	1	139	6.48936	0.00444
291	1	152	5.43501	0.00002
292	1	151	5.88362	0.00001
293	1	152	17.40962	0.00676
294	1	181	9.22898	0.00199
295	1	181	10.90926	0.00246
296	1	125	14.52757	0.01178
297	1	132	9.62852	0.00566
298	1	132	15.78454	0.00606
299	1	117	10.60371	0.02110
300	1	182	12.42073	0.00596
301	1	182	11.09020	0.00248
302	0	0		
303	1	146	5.05864	0.00011
304	1	169	4.90617	0.00000
305	1	185	6.74575	0.00290
306	1	184	21.18116	0.01104
307	1	181	14.86727	0.00269
308	1	170	4.94087	0.00001
309	1	153	6.42255	0.00203
310	1	175	4.74192	0.00000
311	1	175	4.71646	0.00065
312	1	186	1.68648	0.00064
313	0	0		
314	1	134	2.28656	0.00277
315	1	128	2.83653	0.00478
316	**1**	**155**	**26.73483**	**0.00129**
317	1	167	5.03937	0.00055
318	1	167	6.97789	0.00057
319	1	126	8.80904	0.01066
320	1	157	4.74725	0.00001

ID	Position	TJS	MAH_1	COO_1
321	1	153	6.86137	0.00000
322	1	128	8.41349	0.00006
323	**1**	**156**	**28.52375**	**0.00175**
324	1	122	7.12973	0.00117
325	0	0		
326	1	175	2.43978	0.00008
327	1	175	1.79987	0.00001
328	1	140	5.24765	0.00350
329	1	152	7.01327	0.00300
330	1	148	7.25095	0.00411
331	1	120	16.83175	0.00235
332	1	182	2.64313	0.00173
333	1	164	2.64383	0.00000
334	1	129	4.85275	0.00566
335	1	168	4.39885	0.00036
336	1	161	3.55679	0.00017
337	1	136	20.92053	0.00101
338	0	0		
339	1	196	14.63831	0.00995
340	1	196	12.22966	0.01420
341	1	195	18.42396	0.01878
342	1	166	7.24607	0.00024
343	1	171	3.88741	0.00051
344	1	155	7.59754	0.00265
345	1	175	5.67536	0.00007
346	1	153	6.71574	0.00244
347	1	168	9.10580	0.00001
348	1	177	18.51517	0.00476
349	1	140	3.74315	0.00084
350	1	167	7.80892	0.00026
351	1	148	2.92605	0.00000
352	1	158	2.99520	0.00078
353	1	153	4.78319	0.00205
354	1	187	4.31788	0.00013
355	1	159	9.50619	0.00065
356	1	161	4.86255	0.00012
357	0	0		
358	1	190	6.77174	0.00028
359	1	176	4.82349	0.00053
360	1	189	8.17659	0.00108

ID	Position	TJS	MAH_1	COO_1
361	1	146	7.68228	0.00415
362	1	186	5.96280	0.00154
363	1	189	8.22973	0.01133
364	1	189	8.09435	0.00093
365	1	190	6.77174	0.00028
366	1	171	9.65898	0.00354
367	1	190	6.77174	0.00028
368	1	189	6.53265	0.00000
369	1	179	9.34549	0.00141
370	1	189	8.09435	0.00093
371	1	163	10.03911	0.00802
372	0	0		
373	1	180	7.04664	0.00029
374	1	141	13.08474	0.00541
375	1	120	5.08403	0.00197
376	1	187	8.73539	0.00020
377	1	161	9.92853	0.00185
378	1	162	4.72190	0.00284
379	1	164	6.79227	0.00048
380	1	131	8.87307	0.00065
381	1	130	7.10549	0.00004
382	1	163	9.00309	0.00000
383	1	170	12.07893	0.00046
384	0	0		
385	1	141	9.18630	0.00074
386	1	145	3.86443	0.00399
387	1	158	3.07920	0.00041
388	1	139	8.71970	0.00029
389	1	161	11.56365	0.00069
390	1	139	8.71970	0.00029
391	1	161	11.56365	0.00069
392	1	145	4.70898	0.00505
393	1	124	10.06297	0.00626
394	1	122	8.09945	0.00563
395	1	124	9.78713	0.00511
396	1	124	9.95439	0.00398
397	1	145	5.22182	0.00526
398	0	0		
399	1	177	4.36530	0.00002
400	1	118	15.13043	0.00432

ID	Position	TJS	MAH_1	COO_1
401	1	124	16.33657	0.00162
402	1	119	13.74464	0.00861
403	1	143	12.23829	0.00297
404	1	152	3.51204	0.00280
405	1	159	12.07282	0.00000
406	1	199	8.33678	0.00221
407	1	187	2.86884	0.00065
408	1	193	14.56884	0.00484
409	0	0		
410	1	179	8.65417	0.00040
411	1	177	5.48591	0.00012
412	1	150	5.16568	0.00237
413	1	170	4.08937	0.00066
414	1	175	6.19765	0.00033
415	1	199	6.87063	0.00468
416	1	174	2.42265	0.00002
417	1	169	4.09412	0.00026
418	1	185	14.19927	0.00404
419	1	199	6.87063	0.00468
420	1	196	7.95363	0.00188
421	1	150	5.10184	0.00189
422	1	156	13.40711	0.00116
423	1	199	11.14052	0.00244
424	1	198	6.93837	0.00027
425	1	200	5.03719	0.00050
426	1	190	9.11032	0.00051
427	1	165	4.15812	0.00183
428	1	161	3.59552	0.00022
429	0	0		
430	1	169	4.19414	0.00002
431	1	147	13.90294	0.00028
432	1	164	11.33625	0.00281
433	1	168	9.23592	0.00215
434	1	150	5.58315	0.00047
435	1	147	15.45553	0.00263
436	1	186	5.62004	0.00149
437	1	144	5.25968	0.00145
438	1	168	6.31866	0.00016
439	1	188	7.89044	0.00089
440	1	189	7.18178	0.00075

ID	Position	TJS	MAH_1	COO_1
441	1	174	7.55723	0.00006
442	1	180	10.19564	0.00136
443	1	155	5.18926	0.00253
444	1	153	4.58228	0.00266
445	1	126	9.30501	0.02034
446	0	0		
447	1	149	4.27872	0.00014
448	1	141	6.26745	0.00006
449	1	150	5.36689	0.00049
450	1	152	8.90720	0.00104
451	1	183	3.95614	0.00089
452	0	0		
453	1	137	6.89740	0.00263
454	1	190	11.71897	0.00079
455	**1**	**123**	**32.91256**	**0.00000**
456	1	159	4.42002	0.00016
457	1	159	4.41295	0.00018
458	1	125	24.41638	0.00193
459	1	190	6.07724	0.00797
460	1	147	6.96830	0.00001
461	1	136	12.65273	0.00095
462	1	119	6.83712	0.00047
463	1	141	9.16159	0.00063
464	1	141	7.41695	0.00168
465	0	0		
466	1	206	7.47908	0.00054
467	1	175	12.90096	0.00060
468	1	179	7.36974	0.00161
469	1	173	14.58128	0.00014
470	1	140	14.84002	0.01102
471	1	211	7.47908	0.00137
472	1	135	10.56276	0.00168
473	1	201	20.43376	0.00780
474	0	0		
475	1	180	14.43090	0.02493
476	1	206	13.69002	0.01300
477	1	157	11.59687	0.00042
478	1	156	3.48728	0.00208
479	1	172	6.54447	0.00055
480	1	162	7.91274	0.00089

ID	Position	TJS	MAH_1	COO_1
481	0	0		
482	1	139	7.22318	0.00002
483	1	184	10.20129	0.00043
484	1	163	7.48633	0.00000
485	1	114	6.22833	0.00274
486	1	125	7.16837	0.00073
487	1	175	3.61457	0.00146
488	1	128	7.85801	0.00066
489	1	152	4.06518	0.00045
490	1	185	6.03848	0.00370
491	1	125	9.57064	0.00153
492	1	123	5.08913	0.00316
493	1	147	8.22209	0.00149
494	1	142	5.38103	0.00286
495	1	136	8.19296	0.00053
496	1	119	7.13948	0.00233
497	1	114	17.72701	0.00005
498	1	112	9.74079	0.00497
499	1	177	4.59477	0.00331
500	1	185	6.03848	0.00370
501	0	0		
502	1	138	14.53708	0.00166
503	1	137	20.37334	0.00171
504	1	165	2.32288	0.00011
505	1	150	6.65889	0.00089
506	1	133	8.64931	0.00139
507	1	151	3.49664	0.00009
508	1	151	3.49664	0.00009
509	1	143	5.97099	0.00005
510	1	166	15.79939	0.02945
511	1	121	13.55731	0.00337

Note: Teacher is coded as 1 under the word "Position."
The number of teachers is 475.
Source: Analysis of survey data

Appendix 6: Table of coefficients of teacher job satisfaction and five predictor variables

Model		Unstandardized Coef.		Standardized Coef.			95.0% CI for B		Correlations			Collinearity Statistics	
		B	SE	β	t	p	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	Teacher job satisfaction(Constant)	118.353	7.600		15.573	0.000	103.419	133.287					
	Transformational leadership style	10.866	1.550	0.262	7.011	0.000	7.821	13.912	0.512	0.308	0.229	0.761	1.315
	Laissez-faire leadership style	-4.013	1.244	-0.117	-3.225	0.001	-6.457	-1.568	-0.394	-0.147	-0.105	0.817	1.224
	Rational decision-making style	1.917	0.282	0.262	6.798	0.000	1.363	2.471	0.541	0.300	0.222	0.715	1.398
	Intuitive decision-making style	-0.614	0.160	-0.144	-3.842	0.000	-0.928	-0.300	-0.417	-0.175	-0.125	0.760	1.316
	Avoidant decision-making style	-1.273	0.206	-0.237	-6.184	0.000	-1.677	-0.868	-0.497	-0.275	-0.202	0.725	1.380

Source: Analysis of survey data

Appendix 7: Table of descriptive statistics of principals' demographics (n = 36)

Demographic Data	Frequency	Percent
Gender:		
Male	25	69.4
Female	11	30.6
Marital Status:		
Single	1	2.8
Married	35	97.2
Certification:		
Yes	34	94.4
No	2	5.6
School Location:		
Urban	13	36.1
Rural	23	63.9
Age Group in Years:		
<20	0	0.0
20-29	1	2.8
30-39	23	63.9
40-49	12	33.3
50-59	0	0.0
>59		
Last Education:		
Diploma	0	0.0
Undergraduate	29	80.6
Master	7	19.4
Tenure as principal:		
1-2 years	14	38.9
3-4 years	12	33.3
5-6 years	7	19.4
>6 years	3	8.3
Total Tenure:		
<5 years	0	0.0
5-9 years	0	0.0
10-14 years	4	11.1
15-19 years	9	25.0
20-24 years	13	36.1
>24 years	10	27.8
Job Level:		
II	0	0.0
III	5	13.9
IV	31	86.1

Source: Analysis of survey data

Appendix 8: Table of descriptive statistics for variables as perceived by principals (n = 36)

Variables	M	SD	Skewness	Kurtosis
Principal leadership styles				
Transformational	2.976	0.341	-0.436	0.383
Transactional	2.352	0.409	0.195	-0.126
Laissez-faire	0.410	0.349	1.162	1.980
Leadership outcomes				
Extra efforts	3.074	0.541	-0.084	-0.612
Effectiveness	3.347	0.532	-0.543	-0.260
Satisfaction	3.056	0.504	0.010	-0.532

Source: Analysis of survey data

Appendix 9: Table of test of homogeneity of variances for principals' variables

Variable	Levene Statistic	df1	df2	p
Transformational leadership	0.937	1	34	0.340
Transactional leadership	2.159	1	34	0.151
Laissez-faire leadership	1.734	1	34	0.197
Extra effort	0.661	1	34	0.422
Effectiveness	0.235	1	34	0.631
Satisfaction	0.442	1	34	0.511

Source: Analysis of survey data

Appendix 10: Demographic Questionnaire (for Teachers)

This section contains questions that require your demographic data. Please circle the one number for each question that best describes your situation.

1. What is your gender?
   1. Male 2. Female
2. What is your marital status?
   1. Single 2. Married
3. Have you got certification?
   1. Yes 2. No
4. How old are you?
   1. < 20 2. 20-29 3. 30-39 4. 40-49
   5. 50-59 6. > 59
5. What is your last education?
   1. Diploma 2. Undergraduate 3. Postgraduate
6. How long have you worked with your current principal?
   1. < 1 year 2. 1-2 years 3. 3-4 years 4. 5-6 years
   5. > 6 years
7. How long have you been in your position as a teacher?
   1. < 5 years 2. 5-9 years 3. 10-14 years 4. 15-19 years
   5. 20-24 years 6. > 24 years
8. What is your job level?
   1. II 2. III 3. IV
9. Where is your school located?
   1. City (urban) 2. District capital (urban) 2. Out of district capital (rural)

Appendix 11: Modified Multifactor Leadership Questionnaire (MLQ) Form 5X-Short

This questionnaire is used to describe the leadership style of your current principal. Answer all items on this answer sheet. Please answer this questionnaire anonymously. Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits the person (your principal) you are describing. Please circle the one number for each question that comes closest to reflecting your opinion. Use the following rating scale:

Not at all	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
0	**1**	**2**	**3**	**4**

My principal

1. Provides me with assistance in exchange for my efforts.....	0 1 2 3 4
2. Re-examines critical assumptions to question whether they are appropriate.....	0 1 2 3 4
3. Fails to interfere until problems become serious	0 1 2 3 4
4. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards.....	0 1 2 3 4
5. Avoids getting involved when important issues arise.....	0 1 2 3 4

Inclusion of this instrument is limited to five samples due to the copyright issue.

Appendix 12: Modified General Decision-making Style (GDMS) Questionnaire

This questionnaire is used to describe the decision-making style of your current principal. Answer all items on this answer sheet. Please answer this questionnaire anonymously. Please circle the one number for each question that comes closest to reflecting your opinion; it ranges from 1 (Strongly disagree) to 5 (Strongly agree). The word "he" or "she" refers to principal you describe.
Use the following rating scale:

Strongly disagree	**Somewhat disagree**	**Neither agree nor disagree**	**Somewhat agree**	**Strongly agree**
1	**2**	**3**	**4**	**5**

1. My principal double-checks information sources to be sure he/she has the right facts before making decisions ……1 2 3 4 5
2. He/she makes decisions in a logical and systematic way……... 1 2 3 4 5
3. His/her decision making requires careful thought…….. 1 2 3 4 5
4. When making a decision, he/she considers various options in terms of a specific goal……... 1 2 3 4 5
5. He/she usually has a rational basis for making decision……1 2 3 4 5
6. When making a decision, he/she relies upon his/her instincts…… 1 2 3 4 5
7. When he/she makes decisions, he/she tends to rely on his/her intuition……... 1 2 3 4 5
8. He/she generally makes decisions that feel right to him/her……...1 2 3 4 5
9. When he/she makes decision, it is more important for him/her to feel the decision is right than to have a rational reason for it…… 1 2 3 4 5
10. When he/she makes a decision, he/she trusts his/her inner feelings and reactions……..... 1 2 3 4 5
11. He/she often needs the assistance of other people when making important decisions……1 2 3 4 5
12. He/she rarely makes important decisions without consulting other people……... 1 2 3 4 5
13. He/she has the support of others; it is easier for him/her to make important decisions…..1 2 3 4 5
14. He/she uses the advice of other people in making his/her important decisions……....1 2 3 4 5
15. He/she likes to have someone to steer him/her in the right directions when he/she is faced with important decisions……..…1 2 3 4 5
16. He/she avoids making important decisions until the pressure is on……... 1 2 3 4 5
17. He/she postpones decision making whenever possible……..… 1 2 3 4 5
18. He/she often procrastinates when it comes to making important decisions……....1 2 3 4 5
19. He/she generally makes important decisions at the last minute…… 1 2 3 4 5

20. He/she puts off making many decisions because thinking about them makes him/her uneasy…….. 1 2 3 4 5
21. He/she generally makes snap decisions…….…… 1 2 3 4 5
22. He/she often make decisions on the spur of the moment…..…… 1 2 3 4 5
23. He/she makes quick decisions…….…….. 1 2 3 4 5
24. He/she often makes impulsive decisions…….…….. 1 2 3 4 5
25. When making decisions, he/she does what seems natural at the moment…….…… 1 2 3 4 5

Appendix 13: Modified Job Satisfaction Survey (JSS) for Teachers

This section consists of 36 items used to describe your level of job satisfaction. Please circle the one number for each question that comes closest to reflecting your opinion; it ranges from 1 (Disagree very much) to 6 (Agree very much). Use the following rating scale:

Disagree very much	**Disagree moderately**	**Disagree slightly**	**Agree slightly**	**Agree moderately**	**Agree very much**
1	**2**	**3**	**4**	**5**	**6**

1. I feel I am being paid a fair amount for the work I do……	1	2	3	4	5	6
2. There is really too little chance for promotion on my job……..	1	2	3	4	5	6
3. My principal is quite competent in doing his/her job……..	1	2	3	4	5	6
4. I am not satisfied with the benefits/incentives I receive……..	1	2	3	4	5	6
5. When I do a good job, I receive the recognition for it that I should receive……...	1	2	3	4	5	6
6. Many of our rules and procedures make doing a good job difficult……	1	2	3	4	5	6
7. I like the people I work with……	1	2	3	4	5	6
8. I sometimes feel my job is meaningless……...	1	2	3	4	5	6
9. Communications seem good within this organisation (school)……	1	2	3	4	5	6
10. Raises in salaries are too few and far between……..……	1	2	3	4	5	6
11. Those who do well on the job stand a fair chance of being promoted…..…….	1	2	3	4	5	6
12. My principal is unfair to me……...……	1	2	3	4	5	6
13. The benefits/incentives we receive are as good as most other organisations offer……..	1	2	3	4	5	6
14. I do not feel that the work I do is appreciated……	1	2	3	4	5	6
15. My efforts to do a good job are seldom blocked by red tape …….	1	2	3	4	5	6
16. I find I have to work harder at my job because of the incompetence of people I work with……..	1	2	3	4	5	6
17. I like doing the things I do at work……	1	2	3	4	5	6
18. The goals of this organisation are not clear to me..……	1	2	3	4	5	6
19. I feel unappreciated by the organisation when I think about what they pay me……..…..	1	2	3	4	5	6
20. People get ahead as fast here as they do in other places……	1	2	3	4	5	6
21. My principal shows too little interest in the feelings of subordinates……..….	1	2	3	4	5	6
22. The benefit/incentive package we have is equitable……..	1	2	3	4	5	6
23. There are few rewards for those who work here……...	1	2	3	4	5	6
24. I have too much to do at work …….……	1	2	3	4	5	6
25. I enjoy my co-workers……..	1	2	3	4	5	6
26. I often feel that I do not know what is going on with the organisation ……	1	2	3	4	5	6

27. I feel a sense of pride in doing my job ……. 1 2 3 4 5 6
28. I feel satisfied with my chances for salary increases…..…… 1 2 3 4 5 6
29. There are benefits we do not have which we should have…… 1 2 3 4 5 6
30. I like my principal..…….. 1 2 3 4 5 6
31. I have too much paperwork…….. 1 2 3 4 5 6
32. I don't feel my efforts are rewarded the way they should be……. 1 2 3 4 5 6
33. I am satisfied with my chances for promotion…….. 1 2 3 4 5 6
34. There is too much bickering and fighting at work…….….... 1 2 3 4 5 6
35. My job is enjoyable……..…… 1 2 3 4 5 6
36. Work assignments are not fully explained……..... 1 2 3 4 5 6

Appendix 14a: Permissions to use MLQ Form 5X-Short (400 copies)

ADMINISTRATIVE DOCUMENTATION HAS BEEN REMOVED

Appendix 14b: Permissions to use MLQ Form 5X-Short (250 copies)

ADMINISTRATIVE DOCUMENTATION HAS BEEN REMOVED

Appendix 15: Permission to use GDMS

ADMINISTRATIVE DOCUMENTATION HAS BEEN REMOVED

Appendix 16: Permission to use JSS

ADMINISTRATIVE DOCUMENTATION HAS BEEN REMOVED

Appendix 17: Permission from local government (Lampung Province) (a sample)

ADMINISTRATIVE DOCUMENTATION HAS BEEN REMOVED

Appendix 18: Research ethics

ADMINISTRATIVE DOCUMENTATION HAS BEEN REMOVED