MOTIVATION AND JOB SATISFACTION OF SECONDARY SCHOOL

TEACHERS IN HONG KONG

Dissertation Manuscript

Submitted to Unicaf University

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy (Ph.D.) in Education

By Wing Cheung Tang

July, 2022

MOTIVATION AND JOB SATISFACTION OF SECONDARY SCHOOL

TEACHERS IN HONG KONG

This Thesis by Wing Cheung Tang has been approved by the committee members below, who recommend it be accepted by the faculty of Unicaf University in partial fulfillment of requirements for the degree of

Doctor of Philosophy (Ph.D.) in Education

Thesis Committee:

Dr Yusuf Suleiman, Supervisor

Dr Elena Papadopoulou, Chair

Dr Wahid Olanipekun , External examiner

Abstract

MOTIVATION AND JOB SATISFACTION OF SECONDARY SCHOOL

TEACHERS IN HONG KONG

Wing Cheung Tang

Unicaf University

The job satisfaction and motivation among secondary school teachers were important for

teaching effectiveness and job commitment. There was very little literature on this topic in

Hong Kong.

This study was significant not only in its reflection of secondary school teachers, but also

have broader implications for principals to reduce the job pressure and unsatisfaction of

teachers and remove obstacles for their psychological health. The use of online questionnaire

can collect large amount of data within a shorter period on this issue. Moreover, it can arouse

the principals and policy makers to pay attention to and solve the problems.

The study was conducted on 355 secondary school teachers by online questionnaire in

their preferable time and places. All of them were teaching in secondary schools and able to

speak, read and write Chinese. The level of job satisfaction and motivation were identified from

the analysis of the data.

The findings of the study led to a conclusion that the level of job satisfaction and motivation

of secondary school teachers was fair. Participants are most satisfied with their pay and most

unsatisfied with the operating procedures in the school. Moreover, there was a positive

correlation between teachers' job satisfaction and their motivation. Different strategies should

be adopted to overcome the challenges and difficulties faced by secondary school teachers.

Principals, policy makers, teacher training institutions, and particularly to those individuals who

are considering a career in secondary schools might benefit from the results of this study.

Declaration

I hereby declare that the thesis submitted in fulfilment of the Ph.D. degree is my own work

and that all contributions from any other persons or sources are properly and duly cited. I further

declare that the material has not been submitted either in whole or in part, for a degree at this

or any other university. In making this declaration, I understand and acknowledge any breaches

in this declaration constitute academic misconduct, which may result in my expulsion from the

program and/or exclusion from the award of the degree.

Name: Wing Cheung TANG

Signature of Candidate: **Date**: 22 May 2022

Copyright Page

Acknowledgements

First and foremost, I would like to present out sincere gratitude to my supervisor, Dr. Suleiman Yusuf for his continuous guidance, support, encouagement, and valuable advice throughout the whole process of writing my thesis. Thank you for his assistance and time spent during and outside his working hours. He had been very helpful and supportive in guiding me to complete the thesis.

Besides, I would like to say thank you to all the participants. They had been very kind and cooperative in participating the survey. They spend their valuable time to complete the online questionnaire. Throughout the research process, my family and friends have played very important roles too. They are always ready to help and provide helpful support in the entire process.

Last, but not least, I would like to show my highest appreciation to each member of the proposal defense and viva committees. Thank you for their recommendations, patience, and support throughout the entire process of proposal defense and viva. I had learned a lot during the research process. All efforts and hardworking will not be forgotten.

Table of Contents

List of Tables

List of Figures

List of Acronyms

ANOVA   Analysis of Variance

AMO   Amotivation

EDB   Education Bureau

EFA   Exploratory Factor Analysis

EXT   External regulation

IDEN   Identified regulation

IM   Intrinsic motivation

INTEG   Integrated regulation

INTRO   Introjected regulation

JSS   Job Satisfaction Survey

NCS   Non-Chinese Speaking

OECD   Organization for Economic Co-operation and Development

PISA   Programme for International Student Assessment

SEN   Special Educational Needs

SPSS   Statistical Package for the Social Sciences

W-SDI   Work Self-Determination Index

Chapter 1: Introduction

1.1 Introduction

Secondary education is essential for our society. Teachers can contribute greatly to this prosperity by maintaining the effectiveness of teaching. In order to implement educational policies successfully and to achieve the desired goals, schools need motivated and committed teachers who are secure in their work and able to perform their duties to a high standard actively.

Hong Kong has recently undergone of rapid and comprehensive change in the education system, from 7-year secondary and 3-year university to 6-year secondary and 4-year university since 2009. The success of such process is depended on teachers' performance, commitment, and effectiveness. It is essential to concern teachers are satisfied and motivated at work. It is not only benefit to our students, but also benefit our society at a whole. Chinese families are generally regarded as responsibilities for providing education for their children.

Teachers' motivation and job satisfaction are interrelated and influence each other (Anastasiou & Papakonstantinou, 2014). They are crucial factors for schools to achieve their ultimately goals and to enhance students' achievement and academic performance. Moreover, they can promote enjoyment, self-fulfillment, and self-efficacy in teachers' personal, professional, and psychological activities (Roy & Halder, 2018). Therefore, it is important for principals to understand the factors that affecting teachers' motivation and job satisfaction to enhance their morale, job commitment, and teaching effectiveness. They also need to provide a fair and healthy working environment for their staff to enhance their affective and cognitive job satisfaction (Bhuyan, 2016).

1.1.1   Background information

The Hong Kong education system was closely modeled on the United Kingdom system before 1997. After its handover to China, education system has undergone a series of changes. The Education Commission embarked on a comprehensive review of the overall education

system in 1998 to meet the needs of society in the 21st Century and the challenges of globalization.

A report is submitted to brief the public on the new senior secondary curriculum and its timetable for implementation (Education Bureau, 2003). Eventually, it was implemented from September 2009 and catered for students' varied interests, needs, and abilities.

More and more students with special educational needs (SEN) are studying at mainstream schools. Teachers are not fully trained to help students with various learning, behavioural, or emotional problems with normal students in the same classroom. They are not ready to deal with learning diversity of special educational needs students. However, it is difficult to force schools to be responsive to parental concerns and students' needs. In fact, more and more teachers are dissatisfied with their jobs (Ingersoll, 2003).

1.1.2 Secondary education in Hong Kong

There are three types of secondary schools in Hong Kong. Government schools run by the government accounted and aided schools run by charitable or religious organizations accounted for 77.1%, and private schools (including Direct Subsidy Scheme schools and international schools) accounted for 22.9% (Census and Statistics Department, 2018). Both government and aided secondary schools are free of charges. Schools and pupils are banded, the top one-third is band 1 and the bottom on-third is band 3. They are closely followed the regulations and government policies and their students are wearing school uniform.

Only 28% of the secondary schools (mainly admitted band 1 students) are allowed remain using English as medium of instruction. Their students have greater chance to get into university and brighter future for their job. It makes "the dominant role of English as an international language becomes stronger and stronger" (Zeng, 2007, p.42). This policy may benefit the less able or motivated students (band 2 or 3) to improve their academic achievement (Evans, 2002).

1.1.3 Achievement of Hong Kong

Hong Kong is ranked third for reading, second for mathematics and tenth for science in Programme for International Assessment (PISA) operated by Organization for Economic Co-operation and Development (OECD) in 2015 (OECD, 2016, p.44). The University of Hong Kong, the Hong Kong University of Science and Technology, and the Chinese University of Hong Kong are ranked 25, 37, and 49 respectively by QS World University in 2018-19 (QS World University Rankings, 2019). Therefore, many high banding schools are not willing to include students with special educational needs (Dowson, Bodycott, Walker & Coniam, 2000). Both teachers and students in Hong Kong are suffered from great pressure on academic performance. On the other hand, teachers worry about their job security due to enrolment drop sharply and sensitive to the initiatives of educational reforms to exhaust their energy and time (Cheng, 2009).

Hong Kong students are highly extrinsically motivated and aiming at performing well and obtaining higher grades (Ho, 2004). They suffer from low self-esteem and high anxiety level even though they perform well in many international studies (Ho, 2006). Besides, it is difficult to educate SEN students and to achieve a satisfaction of educational outcomes (Gunter, Coutinho & Cade, 2002).

Moreover, various unfavorable workplace conditions such as long working hours on non-teaching duties and student behavioral problems have adverse effect on teacher commitment (Choi & Tang, 2009). It is believed that "satisfied commitment provides a great source of strength and enjoyment to a teacher" (Choi & Tang, 2011, p.97). It is important to enhance teachers' commitment level and reduce their negative emotions. Otherwise, there is a wastage of well qualified and trained teachers.

1.1.4 Teacher salary in Hong Kong

The salary of secondary school teachers in Hong Kong is relatively high in comparison

with other occupations or with teachers in other parts of the world. The occupational security of teachers in Hong Kong is also very sufficient. The pay scale is according to the training and rank and irrespective of geographical areas or types of schools. Therefore, most of them have surpassed the physiological and safe level needs, especially the senior or promoted teachers. They have reached the level of love and self-esteem, and they are further pursuing self-actualization and self-transcendence. Therefore, as principals of secondary schools in Hong Kong, they do not need to focus on low-level physiological and safety needs. There are very stable and clear systems and arrangements. They need to spend energy to meet is the higher-level needs of teachers, let them find love and self-esteem in schoolwork, and give them more opportunities for self-realization and self-transcendence. Besides, teachers need to learn how to find fulfillment to achieve self-realization, to generate a drive from the heart, to constantly improve and transcend themself. There is a need for schools to provide teachers with different types of professional training, and to lead teachers to think more about the improvement of teaching and learning.

The salary is linked with seniority and experienced principle. It is not link with teachers' teaching ability which is obviously less effective in promoting teachers' continuous professional growth and development. The teacher training mode is not very diverse and complex. It lacks subject expert training or doing research on teaching efficient and effectiveness. Moreover, excellent teachers are not eager to share with other teachers in the form of lectures, forums, demonstrations, or classroom observation. It is not a common practice for practice exchange, expert guidance, and behaviour improvement to promote the professional development of teachers. Teachers should be promoted on teaching ability as well as administrative ability rather than their working experience or age (Valentine, Geoffrey & Paul, 2020).

In addition, the salary of teachers is not linked to the workload they need to perform. Many junior teachers have more lessons than senior teachers but get less paid. Teachers with more lessons will not be paid more, and a class teacher will also not be paid a little more. Even a

panel head of the subject or chairperson of the functional committee will not be paid a little more. It cannot improve the income distribution system of teachers in Hong Kong except getting the promotion. The promotion is based on administrative role rather than teaching ability. Hence, it cannot enhance the competitiveness of schoolteachers.

Remuneration linked to competence may be more effective in promoting teachers' continuous education. However, the teacher training models need to be very diverse and complex. Principals should regularly hire or invite experts and outstanding teachers in the form of lectures, forums, demonstrations, or instructional support (Vehkakoski, 2020) to enhance teachers' teaching knowledge and skills to promote the development of teachers.

1.1.5 Banding system of secondary schools

The government implemented a banding system for all secondary students according to their academic results of the tertiary wide assessment. They are allocated to different schools for different medium of instruction according to their academic ability level. Band 1 secondary schools are using English as medium of instruction. Band 2 secondary schools may have some classes or subjects are using English as medium of instruction. While band 3 secondary schools are using Chinese as medium of instruction. Almost all the further or tertiary institutions are using English as medium of instruction in their curriculum. Therefore, it may affect students' opportunities and adaptability for further study.

Although banding is normally based on their performance in the tertiary wide assessment, it may not be highly correlated to their true ability. Their learning environments, expectations, and outcomes may be different with their counterparts. It is generally believed that the labelling effect may create different impacts on all students in Hong Kong. The opportunities for studying at university in Band 3 schools are less likely and rare. In fact, low achievers may cause of more struggles or frustration under English-only environment (Wong, 2020). It is more difficult for teachers to encourage students' participation and progression in an English learning

environment.

Moreover, student's dropout rate of Band 3 schools is higher than Band 1 schools. However, people believed that students with similar enable a better match between instruction and the learner. It is easier for teachers to tailor individual needs owing to their abilities. On the other hand, high achievers' performance and needs will not be minimized. Students are learning better and more effectively by using their mother tongue language. Many research studies shown that band 3 students have lower self-esteem than low achievers in mixed ability classrooms and easier for them to learn with evidence of helplessness.

1.2 Research Problem Statement

The level of teachers' work motivation has been widely researched around the world. In fact, the level of satisfaction of work is diversified all around the globe. (Chen, 2010; Danish & Usman, 2010; Klassen & Chiu, 2010; Feng, 2014; Tayyar, 2014; Kimathi, 2017; Yavuz, 2018).

In Hong Kong, the level of work motivation for teachers is limited. In fact, it is discovered that some teachers are having intentions to change professions owning to the high stress and pressure of the job. To relieve this problem, it is of vital importance to find out the factors that affect their level of job motivation. Government needs to address the motivation of secondary school teachers to minimise its adverse influence (Mansur et al., 2017) on students' performance and quality of teaching. In fact, there is a significant correlation between teachers' motivation and students' academic performance (Josely & Devi, 2018).

As of now, it is deemed that the range and scope of studies regarding on teacher's work motivation in Hong Kong is limited. Concerning that there is a decreasing level of satisfaction of work for teachers, it is believed that this issue requires a deeper investigation. Therefore, the relationship between job satisfaction and motivation will be focused on this research study. It hopes to find out the factors affecting teachers' motivation and job satisfaction to reduce their

intention to leave their jobs (Masath, 2015) before retirement.

It is observed that there are a significant number of teachers vowing to change their profession, or even consider retiring early. Some direct subsidized schools have attempted to relieve this issue by issuing pay motivation. However, pay motivation have been found to be unsuccessful in increasing teachers' work motivation (Sango, 2016). Akuoko, Dwumah and Baba (2012) found that teacher motivation has "a high correlation between intrinsic motivation and teaching" (p.41). Therefore, there is a demand and need to further investigate the factors affecting work motivation among teachers at secondary schools. It is important to figure out a better way to address the problems and benefiting the society in long term.

1.3 Purpose of the Study

This study aspires to identify the factors that contributes to the declining motivation of secondary school teachers, so to address the current limitations of existing studies and research on secondary school teachers' job motivation and motivation. It is firmly believed that teachers with a high level of motivation can benefit greatly to the self-esteem and willingness of learning of students.

Moreover, it hopes to identify those factors accounting for the greatest amount of variability (Rahman, Akhter & Khan, 2017) in levels of job satisfaction across teaching workforce. It may help principals to improve teachers' job satisfaction level to enhance the effectiveness of teaching and learning. It also helps principals with a clear direction for improving teachers' levels of motivation in the workplace.

1.4 Research Aims and Objectives

The study aims to investigate job satisfaction and motivation amongst secondary school teachers in Hong Kong. It can gain knowledge of how teachers perceive commitments in daily

operation of schools and which major factors may enhance their level of job satisfaction. Its objectives are:

(a)   To find out secondary school teachers' level of motivation in Hong Kong.

(b)   To identify factors that lead to motivation amongst teachers in Hong Kong.

(c)   To find out the relationship between motivation and teachers' job satisfaction in Hong Kong.

1.5   Research Questions

This study aims to address the following questions:

(a)   What is perceived level of motivation among secondary schools in Hong Kong?

(b)   What are the factors that lead to motivation amongst teachers in Hong Kong?

(c)   Is there any relationship between motivation and teachers' job satisfaction in Hong Kong?

1.6   Research Hypotheses

(a)   The level of motivation is no significant difference among secondary school teachers in Hong Kong.

(b)   There are exist some factors that lead to motivation amongst teachers in Hong Kong.

(c)   There is a relationship between motivation and teachers' job satisfaction in Hong Kong.

1.7   Nature of the Study

The study is a survey research and try to explore the level of job satisfaction and dissatisfaction amongst secondary school teachers in Hong Kong. After collecting the data by online self-administered questionnaire, researcher will explain the thoughts, aspirations, and behaviours (Groves, 2011) of secondary school teachers in Hong Kong and differences between groups of teachers. It is worth to know the current job satisfaction level of secondary school teachers in Hong Kong in order to enhance the quality of education and teachers' performance.

The study focused on exploring the job satisfaction and motivation among secondary teachers in Hong Kong. Local secondary schools account for 92% of secondary schools in Hong Kong (Census and Statistics Department, 2018). The researcher only considers teachers who are teaching in local secondary schools, age between 18 to 60, and able to speak, read and write traditional Chinese. The study is conducted from March to May 2021. The study is quantitative approach and using of online questionnaire to collect large amount of data within a short period. The questionnaire is consisted of three parts, including job satisfaction survey adopted from Spector (1994), work extrinsic and intrinsic motivation survey adopted from Tremblay, Blanchard, Taylor, Pelletier and Villeneuve (2009), and the demographic data. The job satisfaction survey was approved by Spector and Tremblay et al. for academic research.

All participants in this study are entirely voluntary, and they are free to withdraw at any time during the research. Their data will only be used for this study and will be kept confidential. The data will be stored for 5 years after completion of study. There are no risks directly related to the study.

1.8 Significance of the Study

Many studies of job satisfaction and motivation are conducted in developed countries which produced a wealth of knowledge and understanding of the issues. They offer an understanding of individuals' job satisfaction and motivation closely related to their social, economic, and cultural background of their communities. Therefore, they may not be applicable to Hong Kong, because job satisfaction and motivation can be affected by social and cultural factors, particularly for Chinese context. Questionnaire is developed to reflect the research questions and to be appropriate to Hong Kong's educational context.

The proposed study will investigate the job satisfaction and motivation amongst secondary school teachers in Hong Kong. It seeks to take account of social and cultural values reported in the literature that might affect teachers' satisfaction and motivation. It gives secondary school

teachers the opportunity to express their feelings and views regarding job satisfaction and motivation, facilitating a deeper understanding of these phenomena. It is hoped that the findings will provide valuable information and act as a springboard for further research related to other levels of teachers in Hong Kong.

The audiences of this study are policy makers, teacher training institutions, principals and teachers at secondary schools, parents, and particularly to those people who are considering a career in secondary school in a Chinese context. It may serve as a starting point for considering the career choice.

1.9 Limitation of the Study

There are some limitations in this study that should be taken into consideration. The data for this present study is not gained from large number of participants due to limited time and resources. The secondary school teachers' responses on job satisfaction and motivation are very subjective which are based on their personal perceptions and feelings of the variables under the study. The questionnaire is adopted from Spector's job satisfaction survey and Tremblay's work extrinsic and intrinsic motivation survey may not covered all aspects of the measurement in Chinese context. It may have other valid instruments for investigating more in depth the secondary school teachers' job satisfaction and motivation, but these may not appropriate to use within the limitations of the study.

Regardless the limitations, it is believed that the questionnaire used produced valuable information, and more importantly the associations between the variables in question. Furthermore, it is important to note that the survey measured perceived job satisfaction (not dissatisfaction) and work motivation. Due to these limitations, there is still rooms for further improvements to strengthen the results. This is left for later inquiries.

1.10 Operational Definition

Education Bureau (EDB) -- A government organisation responsible for formulating, developing, and reviewing policies as well as programmes and legislation in respect of education from pre-primary to tertiary level in Hong Kong. It also responsible for overseeing the effective implementation of educational programmes (Audit Commission, 2018).

Job Satisfaction Survey (JSS) -- It is a 36-item Likert scale 6-point questionnaire used to evaluate nine subscales of job satisfaction related to overall satisfaction (Spector, 1985). It is well established among the other job satisfaction scales and the reliability and validity are high (Skitsou et al., 2015).

Non-Chinese Speaking (NCS) -- Children cannot use Chinese as the learning medium and notably ethnics minorities (Hong Kong Unison, 2017).

Secondary School Places Allocation (SSPA) System -- Government, aided and caput secondary schools may reserve not more than 30%, and Direct Subsidy Scheme (DSS) secondary schools participating in the Secondary School Places Allocation (SSPA) System may reserve more than 30% of their secondary one places as discretionary places (Education Bureau, 2018).

Special Educational Needs (SEN) -- It is categorized by Education Bureau as Specific Learning Difficulties, Attention Deficit/Hyperactivity Disorder, Autism Spectrum Disorders, Speech and Language Impairment, Intellectual Disability, Hearing Impairment, Physical Disability, Visual Impairment, and Mental Illness (Education Bureau, 2018a).

Teacher's Job Satisfaction -- The feelings of sentimental responses that a kindergarten teacher has about his or her job (Bota, 2013).

Work Extrinsic and Intrinsic Motivation Scale (WEIMS) – It is an 18-item Likert scale 7-point questionnaire for measuring the work motivation theoretically grounded in self-determination theory (Tremblay et al., 2009). The reliability and validity are high.

1.11 Organization of the Research

This research consists of five chapters which will cover the measuring the level of job satisfaction and motivation among secondary school teachers in Hong Kong.

Chapter one will introduce the problems and gives some backgrounds of the study. It also discusses the research aims and objectives, research questions and hypothesis, significance of the study, nature and limitations of the study, the operational definitions, and organization of the study.

Chapter two will cover the literature review which is the previous related works that been done before. Moreover, it provides relevant information for understanding the study more deeply.

Chapter three will explain the details of the selected methodology that we are going to use in the study, including research approach, sampling, data collection procedures, research instrument, and pilot study.

Chapter four will present the findings by tables, charts, and descriptive statistics. It will discuss the findings and analysis of the data.

Chapter five will discuss the conclusion, recommendations, and suggestions for future study.

Chapter 2: Literature Review

This chapter presents the theoretical framework of the study, theories of job satisfaction, teachers' job satisfaction, the importance of job satisfaction, motivation, importance of motivation, and the relationship between job satisfaction and the motivation that support the research for the study, and reviews existing literature on job satisfaction and motivation in various levels of education. Besides, the conceptual framework of the study is discussed.

2.1   Theoretical Framework of the Study

The theoretical framework connects the researcher's knowledge and theories in current literature. It may guide the researcher to establish his or her research hypotheses, to choose suitable theories and research methodologies. It helps researchers to address the research questions and generalize about various aspects of the study. It is not just a list of theories.

It is also related to the design of quantitative research. The choice of study design was based on the goals of the study and a complete literature review (Basak & Govender, 2015). Quantitative research uses deductive reasoning, which first develops the theoretical framework to establish the structure of the entire research, and at the same time can guide the research. It usually appears in the previous chapters of quantitative research to establish the basis for the entire research. It can also guide you in choosing the research method you need. In fact, the research method chosen must be able to bring conclusions to be consistent with the theory.

Besides, it serves the research problem and guides the research process. The theory must be based on the theory involved in the research problem. Hence, the researcher can follow-up on research needs to carry out concrete analysis according to the theoretical framework. The research is useless or invalid without theoretical foundations.

Last, but not least, it may specify the key variables of the study and highlight the needs to examine the key variables under different circumstances. In fact, it is not easy to select an appropriate theoretical framework according to the research problem, the purpose of research, and the significance of the study (Adom, Hussein & Agyem, 2018).

Different theories of job satisfaction and motivation could be adopted to guide the research study. They may explain the differences and relationships between job satisfaction and motivation in the Chinese context. These theories become the theoretical framework for the study.

2.2   Definition of Job Satisfaction

Kian, Yusoff and Rajah (2014) defined job satisfaction as "the extent of individuals' satisfaction with particular facets or aspects of their jobs" (p.96). Sohail et. al. (2014) defined job satisfaction is "a state of emotional gladness, which comes from the achievement of a goal that one gets by fulfilling his part of work in an organization" (p.42). Job satisfaction is different from motivation, but they are inter-related.

Job satisfaction is not only an intricacy concept but also cover the perceptions and attitudes of employees about their work. Employees' emotions affect their work behaviour, and the social and psychological factors of them are the main factors that determine job satisfaction and productivity. Job satisfaction is employees' subjective responses to work situations. The level of job satisfaction may influence by an individual (gender, age, marital status, educational level), social, cultural, and environmental factors (Gupta et al., 2012). Therefore, the level of job satisfaction may differ from people to people even in the same situation or working environment. More employees are more realistic and able to adapt to their working environment to minimize their dissatisfaction (Hajdukova, Klementova & Klementova, 2015).

Singh and Sinha (2013) believed that job satisfaction is "the nature of one's environment of the job influences one's feelings on the job" (p.1). In fact, the physical, social, and

psychological environments may affect employees' attitudes and job satisfaction. Moreover, their beliefs, perceptions, and values may influence their understanding of the concept in different cultures or contexts. The nature of job content, the fairness of supervision, co-workers, pay, fringe benefits, working conditions, achievements or recognition may affect employees' job satisfaction and commitment. It is not only about how much employees enjoy working in the workplace, but also how much they enjoyed their responsibilities and tasks.

2.2.1 Theories of Job Satisfaction

Job satisfaction is based on an individual's feelings and a sense of satisfaction with the working environment. It is also the subjective response of an individual to the organization's job nature.

There are many theories explain job satisfaction from different perspectives. They help to identify what factors affecting job satisfaction and how to improve the level of employees' job satisfaction. The followings are some relevant theories related to job satisfaction.

(a) Maslow's Needs Hierarchy Theory

Maslow (1943) divided human needs into five hierarchy, including physiological needs, safety needs, belongingness and love needs, esteem needs, and self-actualization. Although it was developed to explain human motivation, it may use to explain job satisfaction. Pay and fringe benefits help employees to meet their basic needs for survival. The intimate relationship with co-workers and supervisors at the workplace and feeling of accomplishment in their organizations help employees to meet their psychological needs. Employees may seek to self-actualize for personal growth and development.

There is a lack of empirical data to support Maslow's theory (Kaur, 2013). Moreover, he assumes every employee is the same. The assumptions about employees are unrealistic and they may have different ways to meet their needs. In fact, employees are different in nature.

Employers may meet the need of employees from the physiological needs to the self-actualization needs. Employees are desired to have a sense of achievement or do somethings that are important to them. They may feel satisfied with their jobs if their needs are fulfilled, and they get what they want. If they do not get what they want, they become dissatisfied. When a certain level of needs is satisfied, it is no longer to motivate employees to perform better. Therefore, organizations must continue to use different incentives or methods to stimulate employees' behavior and performance at different levels of need, and to satisfy another higher level of need.

Moreover, employees are tried to show their ability, skills, and creativity to achieve personal and organizational goals (Mohammed, Yap & Chan, 2019). Indeed, their desire for self-fulfillment is most satisfying their jobs. Many employees may try their best to obtain and use power and authority at the workplace. They may fulfill their material and spiritual needs intrinsically at different life situations (Bouzenita & Boulanouar, 2016).

Maslow's hierarchy of needs reflects the common law of human behavior and psychological activity to a certain extent. He started from the needs of people to explore human motivation, study human behavior, and grasping the key to the problem. He believed that human needs are constantly evolving from low to high, this trend basically meets the needs of regular development. Therefore, it is necessary to have a hierarchy theory to inspire the managers on how to effectively mobilize subordinates' enthusiasm. However, his theory is based on existential humanism. The views derived from it are difficult to adapt to the situation of some countries.

He mentioned that the satisfaction of people's needs is stepped. Individuals will try to satisfy basic needs before reaching for a higher level of needs (Vito et al., 2016). However, people's needs do not have such clear boundaries. It is possible for people to cross the boundaries of needs and desire new transcendence in addition to pursuing basic needs. In fact, people may generate motivation beyond their basic needs.

The level of personal needs is determined by the individual's own values and perceptions. Ordinary people also have the need for respect and self-actualization. The content of self-actualization needs is not based on universal social values, for example, to become a so-called "successful person". It comes from the individual's own values. Therefore, the self-realization of ordinary people is defined according to their own values. Self-actualization is a higher level of need, only through its individual internal behaviour to meet rather than external conditions. In fact, individuals have different needs at different stages (Jonas, 2016).

(b) Herzberg's Motivator-Hygiene Theory

Herzberg (1968) concluded that there are two types of work variables (job satisfiers and job dissatisfiers). Job satisfiers (motivators) are related to the job the content of a job such as pay, supervision, co-workers, and operating procedures. While job dissatisfiers (hygiene factors) are related to job contexts such as organizational policies, supervision, and working conditions.

Job satisfiers (motivators, intrinsic factors) mainly depend on formal organizations such as salary, recognition, sense of accomplishment. Employers should determine the criteria for outstanding performance to influence employees for improving their performance. Although motivator is usually associated with positive feelings of employees about their work, sometimes they involve negative feelings. The motivator is a strong predictor for the positive influence on the engagement of employees (Yunus & Azimi, 2016). While hygiene factors (extrinsic factors) are almost independent of positive feelings, they will bring about results such as mental depression, disengagement, and absence from work.

Herzberg's theory holds that satisfaction and dissatisfaction do not coexist in a single continuum but are separated. This double continuum means that one can feel satisfied and dissatisfied at the same time, and it also implies working conditions Health factors, such as salary and salary, do not affect people's satisfaction with their work, but only affect their dissatisfaction with their work.

Herzberg found that the opposition of "satisfaction" is not the traditionally recognized "dissatisfaction". Even the dissatisfaction factor in the workplace is completely eliminated, employees will not be satisfied. Unsatisfied is only relative to no dissatisfaction. Therefore, the factors that lead to job satisfaction and dissatisfaction are completely different. Managers who are committed to eliminating those factors that cause employee dissatisfaction, they can only reduce employee dissatisfaction. They cannot motivate employees.

If employees are merely fulfilling their basic needs, then they will not obtain job satisfaction. Their self-actualization needs may act as factors of job satisfaction. However, he ignores individual needs and differences (Khan et al., 2010) and assumes all employees react in a similar manner in different contexts. Besides, it cannot measure the factors of job satisfaction and dissatisfaction.

The adoption of an incentive measure does not necessarily bring satisfaction. Employers must pay attention to hygiene factors to eliminate employees' dissatisfaction, slack, and confrontation, but they cannot make employees to be satisfied or stimulate their enthusiasm for work. Therefore, it is important to use different incentives to stimulate employees' enthusiasm and efficiency. Besides, employers may set up competitive positions and run the competition mechanism throughout the work process to enhance their full potential.

The social and the cultural background of the organizations are not the same. Employers need to adopt effective incentives according to individual conditions and contexts (Habib, Awan & Sahibzada, 2017). In addition, they may establish a flexible salary and bonus system to prevent rigidity and immutability. Both fairness and differences should reflect on the salary and bonus systems. They should reflect the contributions of individuals are proportional to their rewards. Otherwise, employees may have a sense of unfairness, reluctant to work hard, and reduce morale and loyalty. It is also positively associated with their perceptions of the company as a caring and considerate employer (Nikolaou & Georgiou, 2018).

(c)   Job Characteristics Model

The job characteristics model is based on the idea that a task in itself is the key to the employees' job satisfaction. It may help managers to identify how certain job characteristics affect the outcomes of the jobs (Batchelor et al., 2014) and deal with the responses of individuals to perform their works. Positive reinforcement may serve as an incentive (Ali et al., 2013) for employees to enhance their job satisfaction and contribute towards organizational effectiveness ultimately.

A variety and challenging job may enhance employees' job satisfaction. Work redesign may make employees more satisfied. It is not merely enriching the five core job dimensions (skill variety, task identity, task significance, autonomy, and feedback). It also requires improving the work environment, employees' attitudes, and behaviours to enhance their job satisfaction.

The job characteristic model embodies the humanistic management approach. It attaches importance to the human factor in the work and tries to maximize it. Intrinsic work motivation is an incentive for individuals to perform better at work. When performing well at work, individuals have a positive internal experience. They may satisfy with their work and have the opportunity to develop their satisfaction at work.

When employees think that the work, they do is valuable, important, and worth doing, they may satisfy with their job. The work must have three characteristics of skill diversity, task integrity, and task importance, otherwise employees will not feel their work is meaningful. Besides, the work must be characterized by its independence. Employees have the freedom and control their working arrangement, making decisions, and deciding the way to achieve their goals. Moreover, positive and constructive feedbacks from work directly leads to employees' job satisfaction. They help to clarify expectations, provide information, and try to redirect employees' behaviour without negative impacts. They are non-judgmental (Omer & Abdularhim, 2017) and use to discourage undesirable, unproductive, or inappropriate patterns of behaviour.

Many employees want to improve and surpass themselves through learning which is the need for self-realization. When employees know (understands the result) that their personal (responsible experience) accomplish well on their task of attention (meaningful experience), then they will gain motivation intrinsically (Blanz, 2017). The more the job meets these three conditions, the higher the employees' satisfaction, and the less likely they are to absent from work and resign.

(d) Dispositional Approach

The dispositional approach suggested that job satisfaction is closely related to personality. Individuals are exposing to the work environment and condition as well as their feelings, emotions, and attitudes in the organizational context (Staw & Cohen-Charash, 2005). They have innate dispositions that cause them to have tendencies toward a certain level of satisfaction irrespective of the nature of the job. People have a strong predisposition towards a certain level of satisfaction and remain fairly constant over a period of time.

It assumes that dispositional personality traits and attitudes are inborn. However, job satisfaction can be perceived through the Five Factors Model (neuroticism, extraversion, agreeableness, conscientiousness, and openness). Each perception has conceived a notion of job satisfaction, personality variables, and individual differences. However, Furnham et al. (2002) believed that personality does not have a strong or consistent influence on job satisfaction.

Both the overall cognitive ability and the Five Factors personality traits have a very important influence on job satisfaction and adaptability and the learning and information processing ability. In fact, an individual's learning rate is related to his or her acceptance of new things. Those with more open personalities are more likely to accept new things or ideas, so their learning speed will be faster than those with personality biased toward conservatives. Besides, agreeableness is important for teamwork and collaboration (Bui, 2017). Al Doghan,

Bhatti and Juhari (2019) suggested that agreeableness, emotional stability, and extroversions are important for a multicultural workforce.

Furthermore, those with a cautious personality have better logic analysis and organization skills and have higher demands for achievement and perseverance. Therefore, they have a positive direction on their learning ability or information processing ability. They appear to be extremely happy with their work in organizations where their merits are likely to be recognized and rewarded.

2.2.2 Factors affecting job satisfaction

There are many factors affecting employees' job satisfaction. The main factors that influence job satisfaction are discussed as follows.

(a) Pay

Pay is one of the key components for retaining the level of satisfaction at workplaces. Employees are searching for higher pay (including base salary, allowance for overtime) to fulfill their living costs or market rate. It has a significant influence on job satisfaction (Malik, Danish & Munir, 2012). However, individuals will consider compensation differently according to their personal conditions (Othman, Kamarohim & Maan, 2018).

Monetary reward is an essential element for employees to remain their jobs. Hong, Hamid, and Salleh (2013) found that "Salary displays a strong relationship with the level of job satisfaction" (p.38). However, some scholars argued that pay is only marginally related to satisfaction. Despite this, the pay is motivating for many employees and has a positive impact on job attitudes (Judge et al.,2010).

(b) Promotion

Promotion is a kind of encouragement tool to enhance employees' morale when they are meeting organizational goals. It may promote employees to work harder and perform better

(Razak, Sarpan & Ramlan, 2018). When employees are treated unfairly in promotion, they may have a higher intention to quit their jobs. Employees who feel the opportunities for promotion are fair and justice may tend to be more satisfied with their jobs. Miah (2018) found that "remuneration and promotion have a highly strong factor of job satisfaction" (p.277). They may help employees to motivate their job in their organizations. Besides, the promotion has a positive impact on motivation and may be used as a predicting tool for job satisfaction (Naveed, Usman & Bushra, 2011).

An unfair and injustice promotion procedure greatly affected employees' job satisfaction and their commitment to working for the organization (Tran, 2018). Sometimes, people with abilities are not promoted and those without ability are promoted. They may become resentful, and work less effectively than they might. Some managers take advantage of their powers to appoint those to have connections with them. Employees who do not support the selected candidates may be mistreated in various ways.

(c) Supervision

Supervision may impact employees on their level of job satisfaction and motivation. It is essential for employees to feel towards their supervisors and companies. Moreover, the leadership style of supervisors may influence subordinates' job satisfaction, morale, and intention to leave. Supervisors who are friendly, offer praise for good performance, listen to subordinates' opinions, and show personal interest to them may enhance employees' job satisfaction undoubtedly (Lien, 2017).

Good supervision may result in more efficiency, higher productivity, and good industrial relationship. A supportive and responsive supervisor may be effectively enhanced subordinates' job satisfaction (Qureshi & Hamid, 2017). Besides, supervisors with humanistic leadership styles and positive feedback may increase the employees' level of loyalty and job satisfaction

(Dwumah, Gyasi-Boadu & Ayamga, 2015). Indeed, employees may feel that their efforts are being appreciated by their superiors.

(d) Fringe benefits

Fringe benefits are another factor that has an impact on the employees' job satisfaction. It is an important component of employees' compensation and generally less taxed (Mabaso & Dlamini, 2017). It may also act as a substitute for salary (Charith, 2015). Although some fringe benefits are required by law, some are voluntarily provided by the employers to retain talented employees. It is not only helping the company stand out from its competitors, but also to attract high value and talented employees from competing companies. In fact, employees are more likely to last in an organization with better fringe benefits for a longer time (Nisar & Siddiqui, 2019).

According to Herzberg's two-factor theory, fringe benefits are hygiene factors affecting job satisfaction. However, they do not lead to job satisfaction and merely prevents dissatisfaction (Ariana, Soleimani & Oghazian, 2018). They are one of the most common sources of dissatisfaction (Tsounis, Niakas & Sarafis, 2017).

(e) Contingent rewards

The contingent reward (bonus) system is a motivation-based system for motivating employees to achieve organizational identified goals. The bonus may be a single or lump-sum payment in terms of monetary or share options. It provides positive reinforcement for employees to perform high quality of work or contribution to increase their level of satisfaction (Jehanzeb et al., 2012). It may encourage employees to work effectively and meet the organizational goals in a professional and timely basis.

Frequently assessments of the employees' work based on their performance, competence, and contribution may be more efficient and effective. The contingent reward system may

enhance employees' performance, job commitments, and engagement levels in the organization (Priya & Eshwar, 2014). It may also be easier to retain valuable employees to work for the organization (Yamoah, 2014).

(f)   Operating procedures

Operating procedures are the rules, procedures, and paperwork of the organization. When standard operating procedures are established, employees' job satisfaction may decrease. The level of job satisfaction may increase by reviewing the effectiveness of existing operating procedures or policies (Valaei & Rezaei, 2016).

Employees who are working in innovative cultures have higher levels of commitment and job satisfaction. The more transparent and simpler operating procedures are, the more employees feel satisfied. Moreover, employees' perceptions about the rigidness of operating procedures may determine their behaviours and reactions about their works (Chang, 2017).

(g)   Co-workers

Co-workers' relation is an important source to provide support to employees and have a positive effect on their job satisfaction (Ariani, 2015). Indeed, social relations play an important role in our life and allow us to experience meaning and identity. Good relationships with co-workers may have a positive impact on job satisfaction and a more enjoyable working environment. Moreover, friendship with co-workers may increase employees' job satisfaction, job involvement, and organizational efficiency. It also makes employees desire for working as a team and reduce anxiety (Benrazavi & Silong, 2013) and work stress.

In fact, a harmonious co-worker's relationship may attract and retain talents and reduce work stress. They are more committed to their organizations and perform better (Emhan, 2012) and to strengthen the team's effectiveness and cooperation spirit (Wang & Farooq, 2019). Hence, employees' morale and satisfaction at work can be increased. It is wise for managers to

pay attention to improve employees' organizational identity and sense of belonging (Li & Su, 2014). It may enhance the efficiency and productivity by building a close relationship with co-workers and strengthening their sense of identity at the workplace.

(h) Nature of works

The nature of the work may influence employees' job satisfaction and work stress. If they feel their jobs are interesting and challenging, then they have a higher level of job satisfaction. Therefore, challenging tasks, autonomy, variety of job contents (Panchal, 2016) may enhance employees' job satisfaction in different perspectives. Employees who are able to utilize a variety of knowledge and skills in their jobs have a higher level of job satisfaction. In fact, an individual's job satisfaction comes from the nature of the work assigned to him or her by the organization. Highly educated employees are most likely to appreciate their jobs to be meaningful and rewarding (Klaus, Lerouge & Blanton, 2014).

Besides, workload and job stress may link to an undesirable impact on employees' job satisfaction. Employers may review the workloads of all employees to reduce their turnover rate or early retirement. The distribution of workload in the workplace should be made fairly according to their incomes and responsibilities.

A good working environment is not only enhancing employees' job satisfaction, motivation to work, and retention but also improve the physical and mental health of employees. Employers should create a suitable and comfortable physical environment and working atmosphere for their employees. Hence, the improvement of the work environment may boost productivity (Agbozo et al., 2017) and profitability.

(i) Communication

Communication consists of mutual communication between top management and employees. It is positively influenced by the employees' job satisfaction across the work

environment. Effective formal or informal communication may reduce employees' job stress and enhance their commitment to work. It plays an imperative and antecedent role in the formation of organizational commitment (Akpinar et al., 2013). The higher the communication satisfaction, the higher the job satisfaction (Musah, Zulkipli & Ahmad, 2017).

Good communication at the workplace may enhance employees' motivations, job involvement, and feelings of satisfaction. It also helps to promote good behaviours and build better interpersonal relationships among staff (Sidik et al., 2017).

2.2.3 Measuring Tools for Job Satisfaction

The measurement of job satisfaction belongs to the scope of attitude measurement, but it is difficult to have the ideal job satisfaction scale for measuring job satisfaction accurately. The questionnaire is the most used tool for measuring the level of job satisfaction. According to different measurement methods, scholars have developed various job satisfaction scales.

(a) Job Descriptive Index

Job descriptive index (JDI) was developed by Smith, Kendall, and Hulin (1969) to measure the feelings of employees about their job. It is a 72-item instrument designed to measure five dimensions of job satisfaction, including pay (9 items), promotional opportunities (9 items), satisfaction with supervision (18 items), coworkers (18 items), and the work itself (18 items). Each subscale contains some adjectives or narratives.

The participants answer the items described by the adjectives or narratives. The job satisfaction score is obtained according to their answers. Hence, it can measure the participant's job satisfaction. Tasios & Giannouli (2017) found that environmental factors (differences between companies) and personal differences (age, gender, and personality) may affect job satisfaction scores. Employee's direct supervisor has significantly affected their levels of job satisfaction, but insignificantly with gender (Aslaniyan & Moghaddam, 2013).

Ramayah, Jantan, and Tadisina (2001) found that the reliability of the job descriptive index was exceeding 0.8 for each facet. Hence, it can be considered as reliable. Besides, the predictive validity is acceptable and convergent validity is high. They also proved that individuals are placing different attitudes for five facets of job descriptive index. Moreover, Sulaiman, Zainal, and Shafie (2010) showed that job descriptive index has good convergent and discriminant validity.

Job descriptive index is a reliable measuring tool to use for investigating the individuals' job satisfaction (Kinicki et al., 2002). Many researchers also use this scale to measure job satisfaction in different occupations and countries (Wang & Russell, 2005; Hall, Bowers & Martin, 2010; Shaikh, Bhutto & Maitlo, 2012; Lopes et al., 2015). It can be used directly downloaded free of charge after 2010.

The five facets used by JDI are more focused on the tangible level of satisfaction while ignoring the intangible levels of satisfaction, such as the sense of formation and sense of belonging. In the answer, there are only three scales of "yes", "no" and "uncertain", which can only express satisfaction or dissatisfaction and cannot measure the difference between satisfaction and dissatisfaction.

Although the JDI has demonstrated excellent reliability and validity, the workplace environment is ever-changing. The working environment, salary, and individual differences of employers may affect the level of job satisfaction. Therefore, it is necessary to update the scales to collect data more accurately. It was updated in 2008 to replace or refine some items that no longer functioned well (Lake, Gopalkrishnan, Sliter & Withrow, 2010). Besides, it does not provide an overall satisfaction scale.

(b) Minnesota Satisfaction Questionnaire

Minnesota satisfaction questionnaire (MSQ) was compiled by Weiss, Dawis, England, and Lofquist (1967) to measure employees' job satisfaction. This scale is divided into short-form

(20 questions) and long-form (100 questions) and rated on a five-point Likert scale. Employees' internal satisfaction, external satisfaction, and general satisfaction are measured in MSQ short-form. While the MSQ long-form can measure employees' satisfaction and general satisfaction with 20 work aspects.

MSQ is one of the commonly used scales at present. The 20 facets covered by the long-form questionnaire are quite complete. The research shows that internal consistency is quite good. If the researcher uses the 100-question scale for measurement, it is inevitable to make the respondent lose patience. The short-form questionnaire with the items reduced from one hundred to twenty to save the answering time. However, the number of facets is from twenty reduces to three. It is inevitable to reduce the integrity of the long-form questionnaire. Therefore, it raises doubts about the applicability of the short-form scale.

Moreover, there is a negative correlation between the overall satisfaction and role conflicts, role ambiguities or turnover intentions. It has a positive correlation between overall satisfaction and life satisfaction, job involvement, and performance expectations. MSQ is a valid and reliable instrument (Lee et al., 2016) for measuring job satisfaction of working adults in different contexts. It is not an easy task to measure the level of employees' job satisfaction because it depends on various factors. Moreover, these factors are dynamic in nature (Nanjundeswaraswamy, 2019).

Schalkwyk and Rothmann (2010) commented that "it is justified to use the MSQ to measure the job satisfaction of employees" (p.124) indifferent language groups in the same workplace. Marijani and Marwa (2016) found that "intrinsic factors have a greater influence on job satisfaction than extrinsic factors" (p.170). Work itself, work environment, and interpersonal relationships may influence the level of employees' job satisfaction (Yu et al., 2018). Demographic factors may affect job satisfaction in different aspects. However, Kamarulzaman and Nordin (2012) found that "education itself is not the major determinant of job satisfaction" (p.10).

(c) Job Satisfaction Survey

Spector (1985) and others found that JDI is encountered difficulties in the service industry for measuring the level of job satisfaction. Hence, he has proposed that a specific satisfaction scale should be adopted for specific behavioral norms. He developed the job satisfaction survey (JSS) to meet the needs of the service industry for measuring its employees' job satisfaction.

JSS is applicable to the service industry, non-profit organizations, and public agencies. It covers the main aspects of job satisfaction in service organizations. It is an emotional or attitude response to work. There are 36 question items in nine subscales (salary, promotion, supervision, fringe benefits, contingent rewards, operating procedures, co-workers, nature of work, and communication). Each subscale consists of four questions.

Lumley et al. (2011) found that "the participants' level of satisfaction with their pay and the nature of the work was significant in terms of predicting or explaining their overall commitment to the organization" (p.113). However, Astrauskaite, Vaitkevicius, and Perminas (2011) argued that some of the JSS subscales cannot explain teachers' job satisfaction accurately.

The biggest feature of JSS is that it uses a large number of reverse questions to ask the respondents. There are 19 reverse questions, which account for more than 50%. It may enhance to get more reliable and valid data. The Cronbach α and retest reliability values of the JSS are 0.91 and 0.71 which shows that its internal consistency and stability are good. However, it does not consider the factor of context. It may require making minor adaptions to reflect local contexts in different countries (Batura et al., 2016) to become a more comprehensive and sensitive tool for measuring job satisfaction.

(d) Index of Job Satisfaction

Index of job satisfaction (IJS) was co-authored by Brayfield and Rothe (1951). A total of eighteen items are included, which is a scale for measuring overall comprehensive satisfaction in a wide variety of jobs. An overall satisfaction belongs to a single facet and uses 18-items

five-point Likert scale. They believed that job satisfaction belongs to the attitude scale and has the following characteristics. The scale is measured the overall job satisfaction, not a scale that measures all levels of the work situation. It is applicable to different personnel. Differences in attitudes among individuals are measured. The question design is interesting, practical, and rich in change, and can cause cooperation between managers and employees. It is simple and easy to score.

Petty, Brewer, and Brown (2005) found that there is no significant differences between job satisfaction and demographic variables. IJS is quite precisely expressing the satisfaction rate of the employees (Myskova, 2011). It is reliable (Azash & Thirupalu, 2017), valid, and relatively short. However, it does not consider the cultural differences and the measurement is subjective (Lee et al., 2016).

(e)   Job Diagnostic Survey

Job diagnostic survey (JDS) was developed by Hackman & Oldham (1975) according to the Job Characteristics Model (Mukul et al., 2013) for the measurement of job satisfaction. It mainly measures the existing job and understands whether it is necessary to redesign the job to improve the motivation of employees and enhance their productivity. JDS has a total of 5 facets (growth, treatment, security, social relations, supervisor), each of which is composed of 2 to 5 questions. The seven-point scale is used as the answering option, from "very satisfied" to "very dissatisfied".

JDS may be used to understand the key aspects of employees' motivation. However, it does not consider interpersonal, technical, or situational factors of how people react to their work. In fact, interpersonal relationship is a critical issue between job satisfaction and motivation. Personal feelings of accomplishment and growth, contextual factors, and employees' knowledge and skills are the moderators of the job characteristics model (Boonzaier & Boonzaier, 1994).

The internal consistency and construct validity (Idaszak & Drasgow, 1987) of JDS is acceptable. It is a comprehensive, valid, and reliable instrument (Serhan & Tsangari, 2019). It mainly examines and diagnoses the content of the existing job. In fact, there is a gap between the subjective feelings of job satisfaction and the judgment of the job content. Anyway, it is a simple and valid instrument to measure the level of job satisfaction (Giraldo-O'Meara, Marin-Garcia & Martinez-Gomez, 2014).

2.2.4 Strategies to Enhance Employees' Job Satisfaction

Salary and fringe benefits cannot enhance the full potential of employees. In fact, employees prefer to have a safe, inspiring, and pleasant working environment. Many employees are dissatisfied with their work or workplaces. On the other hand, the competition for talents is becoming increasingly fierce among organizations. The friendliness of the company's culture (Amah & Daminabo-Weje, 2013) is often a key consideration for job seekers when choosing which company to join. Many scholars suggest that employers should build a friendly company culture to retain talents. In fact, self-motivated employees can save time for supervision.

Hong Kong is famous for its long working hours. It is important for managers to maintain a motivating environment and enhance a high level of job satisfaction. Otherwise, they cannot improve their performance of employees, improve their effectiveness and loyalty, and increase their productivity and profitability. Therefore, they should adapt different policies to enhance the level of job satisfaction in their organizations.

The following strategies may help employers to improve employees' motivation within their organizations and level of job satisfaction.

(a) The expectation to be realistic

The unrealistic expectation is often a source of stress and anxiety for employees, especially when employees feel overwhelmed. It may have a negative effect on employees' job

satisfaction as well as their expectations about the job and the organization (Bilal & Bashir, 2016). Besides, managers should tell employees clearly what they expect. They should not assume others will read their mind. If they do not tell employees what they expect, then it is more likely to end up greater disappointed.

When managers cannot express their concerns for various reasons, the stress and anxiety of employees are even greater. Finally, they may sacrifice their personal interest or work-life balance. It is difficult to make employees happy with every goal at the same time, but frank discussions are definitely a good solution. When the supervisor's expectations are realistic and reasonable, employees express higher job satisfaction (Cooper, Heinsen & Diacin, 2018) and commitment to work.

(b) Appreciated employees' work

Recognizing and praising the efforts of employees' hard work is the easiest and cheapest way to improve employees' job satisfaction. When employees get recognition or praise from superior in public, they may be highly motivated (Danish & Usman, 2010) to perform better next time. Managers may take the time to personally thank employees for doing something well and praise them publicly. Both can make them feel respected and enable them to strive for work worthwhile. It is more important to encourage the worst employees and praise they when they do things right.

Everyone wants their efforts to be recognized, so employers may praise employees who are hard-working or work overtime. Indeed, employees wish to feel appreciated and valued when performing their tasks. Managers may fulfill a variety of employees' needs by personal recognition, recognition of work practices, recognition of job dedication, and recognition of results (Brun & Dugas, 2008). They may enhance employees' motivation, commitment, contribution, and job satisfaction. In addition, they should not just focus on the results but also motivate employees to make progress.

(c) Looking to the future

Managers should not rush into success; they need to keep in mind the company's long-term goals and make sure all employees understand them clearly. Working together towards common goals and tasks is a good motive to enhance job satisfaction and productivity. When employees' performance is found to have improved, they should be appreciated their effort. The team members who assist in the completion of the work should be commended.

It is necessary for managers to ensure all employees have the opportunity to perform to their fullest potential at their positions. Employees' competence may enhance to do present or future work after suitable development and training.

(d) Mutually communicate

There is never too much communication. In fact, the lack of communication is the most common cause of frustration for employees in the workplace. It is important to establish a two-way and open communication work culture so that the colleagues can express their ideas freely and sincerely. Everyone can take the lead and share one's thoughts may drive the entire communication culture in the organization.

It may increase employees' job satisfaction and work commitment after improving the channels of communication. It is also necessary to provide and improve feedback systems (Awad & Alhashemi, 2012) to encourage helpful and constructive mutual communication.

(e) Caring for employees

Employers must show concern for the situation of their employees by heart and do not ignore their mental health. Indeed, mental health is an important part of job satisfaction and human well-being. A calm and impatient work environment helps employees reach their full potential. In fact, the caring climate has a significant impact on employees' job satisfaction (Fu & Deshpande, 2014) as well as organizational commitment.

Moreover, employers may provide appropriate policies such as subsidizing fitness clubs, scheduling time for employees to exercise, and encouraging healthy lifestyles. They are cheap and effective ways to help employees to achieve a better work-life balance. Therefore, managers may give high preference to employees and care about their health and safety (Sree & Satyavathi, 2017).

(f) Provide learning opportunities

The personal growth and development of employees are extremely important to work commitment. Once employees feel stagnant, they may end up looking bored and looking for a more exciting and challenging job. Therefore, employers need to give employees opportunities to grow in their careers and in the company to retain talents. They may provide training, promote to more challenging positions, or provide study allowances for employees to pursue a higher education help in enhancing organizational performance.

Employees through the training and development opportunities at their jobs may increase their overall job satisfaction (Schmidt, 2007). It may also improve their workplace attitudes and job commitment which are important to the entire organization.

(g) Provide a clear career path

Employers may provide a clear career path for employees for looking forward to in their future to increase their job satisfaction. It helping employees plan for the future and shows employers are willing to invest in them and commit to their success in the long term. It is also wise to provide suitable coaching or mentoring sessions for employees to develop and foster friendships in the workplace. Hence, employees may be more satisfied with their job by fulfilling their career goals. It is important to support employees to develop their career paths in the organization and make positive contributions to organizational performance.

Employees may motivate to work hard by providing the prospect of career advancement for them. Everyone aspires to progress steadily in their organizations to meet individual and organizational needs (Dialoke & Nkechi, 2017). Although the career path does not significantly affect the employee's career development (Triandani & Anggriani, 2015), it helps the employee to develop one career optimally. Managers should understand every employee characteristic and provide them with opportunities and space to grow. Hence, they will be more interested in contributing to the organizational goals and show loyalty and commitment (Mayangdarastri & Khusna, 2020) to their job and organization.

(h) Empower employees

Employees who are controlling their tasks may feel more satisfied in the workplace. Individuals may be proud of their work by having more autonomy and meaning. Osborne and Hammoud (2017) commented that "employees desire a challenge in their work and want leaders to trust them in completing their assigned tasks" (p.56). Therefore, employers may give them direction and requirements and let them work on and make their own decisions.

Employers may enhance the culture of staff empowerment to increase the positive effect on employees' job satisfaction. Ulutas (2018) agreed that "there is a positive relationship between empowerment and job satisfaction, when considering that autonomy is an element of empowerment" (p.592).

2.3 Definition of Teachers' Job Satisfaction

Demirtau (2010) defined job satisfaction as "a positive or pleasant the emotional state resulting from a person's appreciation of his/her own job or experience" (p.1069). It is a sense of satisfaction or positive emotion that teachers have about the teaching job they are engaged in and the overall working environment.

Teachers' job satisfaction is for judging by their personal feelings about their working environment. This feeling may be the difference between expected motivation and actual incentives or own investment and income. It may also be the perception obtained in comparison with others or a particular tendency to certain needs. However, this subjective feeling may be changed the standards for measuring satisfaction by changing the working environment such as school policies and procedures, leadership style, appraisal system, and so on. In fact, teachers' job satisfaction is a complicated issue.

Teachers' job satisfaction is linked to the role they fulfill within schools. It is a positive relationship between teachers' desire to teach and where they want to work. Job satisfaction is important to both teachers (healthier, more satisfied, and more creative) and schools (higher performance, better commitment, and lower absenteeism). It is also an important determinant in career decisions about teaching. Pan and Qin (2007) found that "there are significant correlations between the various factors of school climate and the different dimensions of teacher job satisfaction" (p.65).

The level of teachers' job satisfaction may affect by intrinsic motivators (personal needs, the challenge, recognition), extrinsic motivators (promotion, pay rise, authority), social relationships with colleagues, feeling of belonging, relationship with students and parents, the leadership style of principal, and school culture. It may also affect by demographic data (age, gender, marital status, level of education, personality traits) and environmental factors (superiors' leadership style, participation in decision-making opportunities, organizational culture, job characteristics, parental support). The determinants of teachers' job satisfaction do not only depend on the teacher 's personal factors but also on work itself and the working environment factors.

Teachers play an important role in educational quality and education reform. They may influence students' performance and academic achievement. Teachers' job satisfaction may be measured in many different ways or scales. However, there is no consensus about the standard

scale to measure their job satisfaction (Hee et al., 2019). It is limited in its available extrinsic rewards for teachers (Chughati & Perveen, 2013), so principals need to highly appreciate teachers' efforts.

Besides, there is a positive correlation between job satisfaction and the mental health of female teachers (Aliakbari, 2015). When the level of teachers' job satisfaction is high, it may reduce the risk of teachers' mental and psychological illnesses. In fact, teachers' job satisfaction is a critical issue of human resource management in school. Principals may take attention because it will affect the school organization directly or indirectly (Mukhtar, Ali & Rusmini, 2017). Many pieces of research showed that teacher dissatisfaction with work is the most significant factor in individual turnover. Although the influencing factors of teacher turnover behavior are complicated, teachers' job satisfaction is one of the important indicators.

2.4 Importance of Job Satisfaction

The job satisfaction of teachers is important for teaching. It is the ability of the teaching job to meet teachers' needs and improve their teaching performance. Morgan and O'Leary (2004) stated that "Identification of influences on job satisfaction among teachers would seem important at a time of concern with the recruitment and retention of high caliber teachers in the education system" (p.73). Schools can successfully achieve their goals and missions unless and until teachers are satisfied in their jobs. Otherwise, it cannot achieve its ultimate goals without satisfied teachers.

Donald, Lucia, and Victor (2016) pointed out that "job satisfaction can be an important indicator of how employees feel about their jobs and a predictor of work behaviours" (p.38). It may affect employees' absenteeism and turnover rate as well as the success of an organization. In fact, employees with a high level of satisfaction may contribute to the organization effectively and efficiently (Thiagaraj & Thangaswamy, 2017). They may perform better and committed to organizational goals.

On the other hand, Ngunia, Sleegersb, and Denessen (2006) pointed out that "job satisfaction appears to be a mediator of the effects of transformational leadership on teachers' organizational commitment and organizational citizenship behavior" (p.145). It helps in improving the attitudes of teachers towards their teaching job and facilitates their integration of school culture or ethos. Indeed, it is an indicator of emotional well-being and psychological health of teachers. It is one of the determinants of an effective school to enhance students' academic achievements and their personal development and growth.

Job Satisfaction is necessary for highly dedicated and committed teachers towards their daily teaching jobs. Principals may adopt suitable strategies to enhance teachers' level of job satisfaction. Besides, greater autonomy for teachers may increase their sense of responsibility (Joshua & Ashok, 2018) and involvement.

It is important for principals to support their teachers to enhance their job satisfaction. is very important. All efforts should be taken to improve the job satisfaction of teachers. Some useful strategies to achieve higher job satisfaction are self-development opportunities, short term courses, seminars, workshops, praise, and recognition for commendable work that may improve teachers' job satisfaction (Nigama et al., 2018). Moreover, the government may establish appropriate policies to create different professional development programs for teachers to increase their confidence in the teaching process (Gkolia, Belias & Koustelios, 2014).

Work-life balance plays a crucial role in influencing teacher's job satisfaction and greater quality of working life (Johari et al., 2018). It also enhances their job commitment and engagement to a better satisfaction level throughout their profession life (Ordu, 2021). Principals should adopt flexibility policies and job design to improve teacher's job satisfaction and their work-life balance. It is not only improving the teacher's job performance at the workplace, but also the overall quality of teaching in Hong Kong.

Principals need to pay attention to providing teachers with praise and recognition to enhance their job satisfaction. Moreover, they must ensure creating a supportive working culture in schools. They need to encourage teachers to attend continuous professional development programs, workshops, and seminars to boost the level of teaching performance and satisfy teachers' different needs. When they are making decisions, they need to consider teachers' opinions and suggestions. Regularly review must be applied to track the effectiveness of different policies and set the corrective actions if necessary (Alromaihi, Alshomaly & George, 2017) to retain talents in the organization.

Teachers' job satisfaction is an important issue for schools. It may affect teachers' attitudes and beliefs to perform better and work harder. If they are dissatisfied with their work, then it will lead to dissatisfaction in other areas of their performances. The following are some of the benefits of a high level of teachers' job satisfaction.

(a) Increase performance

Teachers who are satisfied with their job will be more productive (Usop et al., 2013) and contribute to the overall success of the school. They will develop and maintain a high level of teaching performance. Their students learning abilities are more efficient and effective. They may engage less-abled students in problem-solving and exploring different learning approaches. Indeed, teachers' job satisfaction is closely related to their teaching performance (Baluyos, Rivera & Baluyos, 2019) and effectiveness.

Satisfied teachers are more willing to participate in continuous professional development programs, workshops, and seminars to update their knowledge and skills for improving teaching quality and effectiveness. They are also more eager to learn new technologies, teaching methods, and assessments to help students to learn better. Therefore, better performance can be expected if principals can be more concerned about teachers' job satisfaction (Alajlouni, 2015).

(b) Lower turnover rate

The turnover rate can be affected by students' learning outcomes and needs for growth and development. Retaining a stable teaching force helps to create a better teaching and learning environment and makes it easier to recruit quality talents and save money. Teachers' job satisfaction level has a direct impact on employee turnover (Khan & Aleem, 2014).

Teachers are more likely to be actively searching for other schools if they have low satisfaction. In fact, teachers are the most valuable assets and a prominent role in achieving the quality of education. When teachers feel the school has their best interests at heart, they often support its policies and work hard to achieve its organizational goals. They desire to stay with the school and the ability of the organization to retain its workforce. However, there is a negative correlation between job satisfaction and turnover rate (O'Connor, 2018).

(c) Higher job commitment

Teachers with high job satisfaction tend to be more committed to their jobs (Ndulue & Ekechukwu, 2016). When they are enjoying their job, they pay attention to their students' learning outcomes and meet an individual's needs. They are also eager to take responsible and accountable for achieving the school's missions and visions.

When one teacher displays high commitment, it is natural for other teachers to try to increase their commitment at the desired level. Satisfaction with interpersonal relationships may be used as a predictor of organizational commitment (Leite, Rodrigues & Gualberto, 2014).

(d) Decreased burnout

There is a greater likelihood for teachers to suffer from anxiety and burnout. Teachers are often giving every support to their students if they can. Esfandiari and Kamali (2016) found that "job satisfaction had a weak negative relationship with teacher burnout" (p.73). Burnout is

not only affecting teachers' physical and psychological health, but also the effectiveness of the school (Mousavy et al., 2012).

The less experienced teachers are more likely to have burnout syndrome. They may have difficulty in adapting to the school environment or administration, dealing with parental complaints, or managing students' disciplines. Principals may provide more resources for low satisfaction teachers about coping strategies and stress management techniques. Besides, they may empower teachers emotionally to reduce their stresses and emotional exhaustion (Kitchel et al., 2012). On the other hand, doing exercise regularly may increase well-being and reduce stress and burnout (Bretland & Thorsteinsson, 2015).

(e)   Reduce absenteeism

It is not likely that a satisfied teacher may absent from work due to illness or personal matters. When teachers are satisfied with their job, they may be more likely to attend work even if they are sick. Teacher absenteeism may reduce the quality of teaching and learning as well as disrupt the consistency of the learning atmosphere. In fact, the effectiveness of substitute teachers has been in question for a long time (Smith, 2012).

A high level of absenteeism is most likely caused by low job satisfaction (Thirulogasundaram & Sahu, 2014). Drakopoulos and Grimani (2013) argued that many findings of the relationship between absenteeism and job satisfaction were inconsistent. The main cause of absenteeism is the health issues of individuals, while attitudes and commitment to work are insignificant.

(f)   Increase motivation

Satisfied teachers are more motivated to help their less experienced colleagues and cooperate with the school during crises or emergencies. They may develop a better feeling of

attachment and loyalty towards their schools. Motivation has positive impacts on teachers' job satisfaction (Bajpai & Rajpot, 2018).

Fully motivated teachers are a valuable asset to any school. They are not only improving students' achievements but also remain loyal to the school. Principals may assign duties to teachers according to their expertise to enhance their job satisfaction and motivation (Shah et al., 2012). It is wise to allow teachers to participate in the decision-making of school policies to make them feel belongs to school.

(g) Enhance teaching efficacy

High efficacy of teaching and learning becomes the key to determining the success of a school. High job satisfaction may enhance teachers to have a strong sense of self-efficacy. It may increase teachers' self-confidence to manage students' behaviour effectively, implement instructional strategies and engage students in all learning activities (Gkolia, Belias & Koustelios, 2014).

The work performance of teachers in a school directly affects the students' performance and outcomes of the school. The level of teachers' job satisfaction with their work also affects their willingness to continue to perform their duties. Principals should make appropriate reconciliations between teachers' work and remuneration to improve their job satisfaction. In addition, they need to pay attention to intrinsic rewards for teachers.

However, assessing whether the level of job satisfaction is reasonable must be combined with the personal expectations of employees and the company's requirements for employees. The level of personal expectations is often matched with personal abilities. If the actual return is much higher than personal expectations, the company needs to carefully analyze whether the return paid by the company exceeds the personal contribution. If the company's performance results are unsatisfactory, but employee satisfaction is high, it is often the result of the

employee's aggressiveness and self-requirement, and the lack of company performance culture. Or if the employee satisfaction is inconsistent with the results of the external salary survey, it may indicate that there may be potential problems in the appointment and evaluation of personnel.

Work is a means of earning a living for most employees. It may also be a career pursuit, but it must be based on the satisfaction and guarantee of the basic life of the employees. The salary income that employees can get is to meet the basic needs of employees and their families. The material basis is an important indicator that affects employee work and organizational evaluation. Companies can never satisfy employees' satisfaction in a sense, but it can reduce the relative dissatisfaction of employees. Whether a senior manager or a junior employee, the satisfaction of salary is not high. This is a fact recognized in the world.

The purpose of employees' job satisfaction survey is to know the true feelings of employees and to propose countermeasures for improvement. It is important to make employees willing to answer questions honestly. Otherwise, the meaning of the survey is completely lost. Employees are concerning the follow-up improvement plan after the survey. Hence, employees are a willingness to express their true opinions. Managers should regularly review the gap between goals and results and help employees do things in the right way to improve their performance, commitment, and job satisfaction (Kyumana, 2017).

2.5 Definition of Motivation

Motivation stimulates desire and energy in people to be continually interested and committed to a job or to try to attain a goal personally. It includes both conscious and unconscious factors such as the intensity of desire or need, incentive or reward, and expectations of the significant others. It helps teachers to sustain positive behaviour and refresh over a long period of time. It also helps to work towards higher expectations and inspires students spontaneously to do better.

Motivation is generally considered to be related to the origin, direction, intensity, and persistence of behaviour in psychology. In organization behaviour, motivation mainly refers to the psychological process that stimulates people's motives. People may have an internal driving force by inspiring and encouraging to move toward the desired goal. The motivation is usually not static, it may increase or decrease over time. If people can maintain a certain level of motivation, then they can not only maintain the behaviours of pursuing the goal but also maintain the psychological desire for the goal until the goal is achieved. Therefore, motivation often regarded as a driving force for human behaviours. If you can grasp people's motives, then you can predict the direction and pattern of their behaviours.

Tohidi and Jabbari (2011) defined motivation as "Powering people to achieve high levels of performance and overcoming barriers in order to change" (p.820). It guides the individual's direction and persistence of effort towards attaining a goal. Moreover, it is a goal-oriented continuous process and a psychological phenomenon for the individual to perform. Individuals' motives are based on their personal needs. Goyal (2015) defined motivation as "the process that initiates, guides, and maintains goal-oriented behaviours" (p.71).

2.5.1 Theories of Motivation

The theories of motivation can be classified as content and process theories. Content theories focus on "what", while process theories focus on "how" human behaviour is motivated. Content theories try to identify what individuals' needs are and relate motivation to the fulfilling of these needs. However, it cannot entirely explain what motivate or demotivate people. Process theories are concerned with how motivation occurs and what kind of process can influence individuals' motivation, including expectations, goals, and perceptions of fairness. Both theories have to do with motivation.

No single motivation theory can explain all situations of individuals' motives or lack of motives. Different cultures may use different motivators for difference situations. Each theory

can serve as the basis for the development of techniques for motivating. However, no one theory is fit for all cases.

Content theories are not universal theories and cannot apply to everyone. They take no account of gender, age, culture, religion, or other personal differences. They tend to assume that workplaces are the places to meet individuals' needs and personal development. They ignore the importance of other aspects of individuals' lives and the impact of work lives. Besides, they fail to recognize individuals' needs are constantly changing. Their static nature does not relate to the real world. They ignore the processes of evaluation and implementation to achieve the desired outcomes. They are too simplistic to account for the complexity of the real world and the complex decision-making the process that individuals must often make in the motivation process. However, they are focusing attention on the area of motivation and the importance of needs. They have helped managers evaluate their own perceptions about their employees and themselves.

Process theories are the emphasis on how people think and what those processes are in the minds that induce them to act (Kispal-Vitai, 2016). They are based on the use of individuals' rational thought processes or cognitive processing abilities to solve problems. Besides, they address more the issues relating to how the process works and sustains themselves over time such as factors that determine the degree of effort, the continuation of effort, the modification of effort. No one process theory fits all individuals. However, process theories seek to deliver employees' needs in a way that promotes the effort that an employer's desires.

(a) Maslow's Hierarchy of Needs

Maslow's (1943) hierarchy of needs has a wide range of influences. He divides people's needs into five categories: physiological needs, safety needs, social needs, esteem needs, and self-actualization needs. He emphasizes the role of needs when interpreting motivation. He believes that all behaviours are meaningful and have their own special goals which are derived

from individuals' needs. Different people have different needs, and these needs will change with time and other factors. Different people will have different behaviours in the same situation and the same person will have different behaviours at different times with different reasons. Needs influence people's behaviour and direction of achievement.

In general, the most important missing need in school is love and self-esteem. If students feel that they are not loved or that they are incompetent, they will have a strong motivation to achieve higher goals. Teachers who were able to make students feel comfortable, understood, and respected may make students eager to learn and are willing to take risks for creative and open new ideas. In order to make students creative, students must feel that teachers are fair, caring, and respectful of themselves. They will not be ridiculed and punished for making mistakes. This theory combines extrinsic motivation with intrinsic motivation to consider the promotion of behaviour which has certain scientific significance.

In Maslow's theory, people are never run out of motivation because the self-actualization needs are never to be fully met. It has been widely embraced and taught within the fields of business, education, and psychology. It is still important and relevant in today's business organizations (Jerome, 2013). It helps the organization to achieve its goals ultimately. It is possible for employers to provide challenges and opportunities for meeting employees' needs to enhance their motivation and commitment (Benson & Dundis, 2003). However, the hierarchy fails to take into account individual and cultural differences.

Hierarchy of needs is an important theory for explaining personality and an important theory for explaining motivation. It proposes that the internal drive of individual growth is motivation. Motivation is composed of a variety of needs of different levels and natures. There are high and low levels and order among various needs. The needs and satisfaction of each level will determine the realm of individual personal and professional growth and development. People may achieve self-actualization in their own unique way, and less than 2% of the population achieve self-actualization.

However, it is subject to doubts by some people. It ignores the existence of individual differences. In fact, everyone is an independent individual. The lower-level needs in undeveloped countries are more concerned by individual, but developed countries are more inducing to higher-level needs. The hierarchy of needs is by no means a solid structure, nor can there be clear divisions and boundaries. There should be overlapping areas between each level, and the decrease of some needs will relatively increase the other needs. The needs of human beings will continue to change with the living environment, and the five different levels are constantly adjusted back and forth, and the variables are quite large, changing almost all the time.

It may expand to seven levels of needs (adding understanding needs and aesthetic needs) to address people's needs to improve their living conditions in various social settings in the society (Aruma & Hanachor, 2017). Uysal, Aydemir and Genc (2017) found in the orders of needs compared to the original theory in 16 occupations are significant differences. Therefore, managers need to familiar with the characteristics and requirements of their professional employees to apply suitable motivators and develop the necessary strategies to reach their full potential. They can give the employees challenging jobs in which the employees' skills and competencies are fully utilized to achieve their needs for self-actualization. Moreover, growth and development opportunities can be given to them to reach their full potential.

(b) Herzberg's Two Factors Theory

Herzberg's (1968) theory has received many attentions within the workplace. He developed the theory that differentiated between factors that satisfied employees (motivators: achievement, recognition, work itself, responsibility, advancement) and factors that dissatisfied employees (hygiene factors: company policies, supervision, salary, interpersonal relationships, working conditions). In his theory, the opposite of satisfaction is not dissatisfaction but rather no

satisfaction. Motivators are not only having positive effects on individuals' job satisfaction but also prevent their dissatisfactions (Yusoff, Kian & Idris, 2013).

He believed that hygiene factors (more money, better working conditions, and so on) do not create more motivation but they can reduce the level of dissatisfaction. Only motivators can motivate people to enhance their performance and productivity. His theory is closely related to Maslow's hierarchy of needs. The hygiene factors are roughly equivalent to Maslow's lower-level needs, while the motivators are roughly equivalent to Maslow's higher-level needs. It is easy to remember, explain and use. However, it may be too simplistic. For example, increased responsibility for one person may be a motivator, but to another person can be a dissatisfier, particularly if the salary does not reflect the new role.

Motivation is an important part of organizational management and is considered to be the greatest management principles. When motivating employees, managers must focus on the integration of multiple incentives. It may wisely use material and spiritual incentives. Material needs are employees' first needs. Therefore, a reasonable and competitive salary system is the basic strategy for companies to motivate employees and retain talents. At the same time, managers should pay more attention to spiritual incentives. The important role of the learning organization provides a typical model of spiritual motivation. It may achieve by cultivating the ability of employees to transcend themselves, breaking the old fashion thinking restrictions, creating a new mental model more suitable for the development of the organization, and work towards the overall goals and common vision of the organization.

Managers need to effectively blend the motivators and hygiene factors well to suit the special needs of their employees to motivate and satisfy employees to enhance their performance and commitment to work (Dartey-Baah & Amoako, 2011). Atalic, Can and Canturk (2016) found that both hygiene factors and motivation factors can contribute to job satisfaction. Therefore, managers need to use monetary rewards as well as praise and recognition to motivate workers and promote job satisfaction effectively (Tan & Waheed, 2011).

Motivators lead to job satisfaction and hygiene factors prevent job dissatisfaction are still true in today's context (Lalwani & Lalwani, 2017). Hygiene factors tend to cause only short-term satisfaction to the workers, while motivators most probably cause long-term job satisfaction (Haque, Haque & Islam, 2014).

(c) McGregor's X and Y Theories

McGregor's (1957) suggested two fundamental approaches, Theory X and Y, to managing people. They are mutually incompatible. Managers need to balance the drives and forces between task (getting things done) and people (how best to get them done) to achieve the goals of the organization.

Theory X assumed that people dislike work and attempt to avoid it. They have no ambition, do not want to take responsibility, and prefer to follow the instruction. They are self-centred and resistance to change. They work only for money and security. He found that the commands and control environment is not effective because they rely on lower needs as levers of motivation. Managers require a close and firm supervision with clearly specified tasks and the threat of punishment or the promise of greater pay as motivators. They even require external control to deal with irresponsible employees (Dobre, 2013).

Theory Y assumed that people work can be as natural as play and rest. They will be self-directed and creative to meet their work objectives if they are committed to them. They will be committed to their goals if rewards are addressing higher needs such as self-fulfilment. They will seek responsibility to satisfy their higher levels of personal needs through their jobs. Many employees can enjoy work and make meaningful contributions (Lawter, Kopelman & Prottas, 2015), but they cannot apply for all. However, it is challenging for managers to exploit the full potential of all employees.

Theory Y highlights the motivating role of job satisfaction and encourages employees to approach tasks without direct supervision. Managers may use Theory X or Theory Y to affect

employees' motivation and productivity in different ways. They may implement different strategies in their daily practices. Moreover, their perceptions of motivation may influence their manner in evaluating employees' performance (DeVoe & Iyengar, 2004). They may need to help subordinates develop their skills and competencies needed for increasing productivity.

The theory of Y has received more and more attention and application from managers in recent decades. The total quality management implemented in Japan is based on the Theory Y. Theory Y and Theory X are opposed to each other, but in fact, they are two sides of the same problem. They are incompatible with each other and two different terminals on the continuum.

After comparing the different management characteristics of Japanese companies and American companies, Japanese scholar proposed a Z theory (Barney, 2004) with reference to theory X and theory Y and summarized the management of Japanese corporate culture. Theory Z emphasizes the cultural characteristics of management and is mainly composed of trust, subtlety, and intimacy. According to this theory, managers should show trust to employees. In fact, trust can motivate employees to treat the company with a sincere attitude, treat colleagues as a family member, and work faithfully for the company. Subtlety refers to the company's understanding of the different personalities of employees in order to form the best partner or team according to their personalities and strengths. It may enhance loyalty and reduce the turnover rate. Intimacy emphasizes the role of personal feelings and advocates the establishment of an intimate and harmonious the partnership between employees to work together for the development of the enterprise (Aithal & Kumar, 2016).

Theory X and Theory Y basically answer the basic principles of employee management. Theory Z combines the humanistic feelings in the Eastern countries into management theory. It is a supplement and improvement to Theory X and Theory Y. It can flexibly grasp the relationship between system and humanity, regulation, and consciousness according to the actual situation of the enterprise in human resources management and the management of employee benefits.

No matter how managers view employees, it is necessary to set goals and manage employees. It is also necessary to respect employees and induce them to work consciously. Managers should formulate a scientific and rigorous management system to guide and discipline employees. The objectives of management should be flexible and sliding according to the conditions of employee quality, company management foundation, and work characteristics. Excellent and effective managers should be good at paying attention to the art of management and maintain employee motivation at a high level according to the actual situation of the organization and the individual characteristics of employees. It also helps for decision-making for managers at all levels and strategic planning of the enterprise for improvement of performance and profitability.

(d) Alderfer's ERG Theory

Alderfer's (1972) revised Maslow's theory to develop the existence, relatedness, and growth (ERG) theory. He reduced the levels in the hierarchy of needs from five to three and termed these existence needs, relatedness needs, and growth needs. He has altered Maslow's concept from one-way progression up the hierarchy to allow for regression to lower levels if these needs are no longer being met. For example, if the growth needs are not met, then individuals will invest more effort in the relatedness needs in order to achieve the higher needs. If people are frustrated in trying to satisfy their needs at one level, their next lower-level needs will re-emerge. Hence, they will regress to the lower level to satisfy more basic needs.

He believed that people are differences, and more than one need may be operative at the same time. It does not exist a rigid hierarchy. Individuals will have different important needs for them which depend on their education, family background, and cultural environment. People in different cultures may rank the needs categories differently. However, it does not offer a clear-cut guideline to determine the importance of the three needs.

It has been used as a construct to understand what internal perspectives move humans to certain behaviours (Caulton, 2012). Individuals' needs should be fulfilled simultaneously and do not in any specific order. Employers need to satisfy employees' immediate or unmet needs to enhance job satisfaction (Govindaraju, 2018).

ERG theory does not emphasize the order of levels of need and believes that a certain type of need will act on behaviour within a certain period of time. When this kind of need is met, it may pursue higher levels of need. There may not be such an upward trend. When a higher level needs to be frustrated, it may come down next. ERG theory also believes that after a certain need is basically satisfied, its intensity will not only weaken but may also increase. It is inconsistent with Maslow's point of view.

ERG theory also proposes a frustration-regression principle (Yang, Hwang & Chen, 2011). Maslow believes that when a person's needs at a certain level have not been met, he may stay at this level of needs until he is satisfied. Conversely, the ERG theory holds that when a person is frustrated at a higher level of need, his or her need at a lower level may increase as a substitute. For example, if a person's social interaction needs are not met, it may increase his or her desire for more money or better working conditions. The ERG theory believes that the satisfaction of lower-level needs will trigger the desire for higher-level needs. Unlike the theory of the hierarchy of needs, the ERG theory holds that multiple needs can act simultaneously as incentives. When attempts to meet higher-level needs are frustrated, people will return to lower-level needs. Therefore, the management measures should be changed correspondingly with the change of human needs structure. Moreover, the corresponding management strategies should be worked out according to the different needs of each person.

(e) McClelland's Theory of Needs

McClelland's model argues that all people have these three needs. They are needed for achievement, need for power, and need for affiliation. People with a high need for achievement

are striving for personal achievement rather than for trappings and rewards of success. They have a desire to do something better or more efficiently than it has been done before. They are not gamblers and dislike succeeding by chance. They are motivated and prefer the challenges of working at a problem and accepting the personal responsibility for success or failure.

People with achievement needs have strong requirements for the competence and success of their work, and they do not worry about failure. They are willing and even keen to accept challenges, and often set for themselves goals that are difficult but not unattainable. They also dare to take risks with a demonstrative attitude. They are willing to take personal responsibility for their work they do and hope to get the clear and rapid feedback. They get a lot of satisfaction from the completion of their work. Even if there is a real failure, they will not be overly depressed. McClelland believes that if a company has many people with achievement needs, then the company will develop very quickly. Its economic development will be higher than the country average. However, the characteristics and performance of achievement needs are not the same in different countries and different cultural backgrounds, and he has not fully explained this.

Achievement motivation is conducive to mental health and social and economic development, but not all achievement motivation can promote social and economic development. McClelland not only emphasized the role of achievement motivation but also pointed out that achievement motivation was formed under a certain social atmosphere. The achievement goals and evaluation criteria of individual-oriented achievement motivation is mainly determined by the individual (Luo, 2008). The behaviour to achieve the achievement goal is also decided and evaluated by the individual. The individual's value of achievement is internalized to a relatively high degree, and the functional autonomy of achievement is relatively strong. Social-oriented achievement motivation (Chang & Wong, 2008) emphasizes that individual achievement goals and evaluation criteria are mainly determined by others or the group they belong to. Their behaviour to achieve the goal is determined by others or groups.

The evaluation criteria are also set by others or groups from time to time. The internalization degree of the values of achievements by individuals is relatively weak, and the social instrumentality of achievements is relatively strong.

These two orientations have different motivations for achievement. In social life, if a person's achievement motivation is too biased to an extreme, there may be some undesirable consequences. The achievement motive at this time will not necessarily promote the development of society, and even counterproductive. Individuals with high motivations for individual-oriented often do not perform well in the organization. Due to the emphasis on personal orientation, these people use their own personal performance standards to measure achievements, and they are also satisfied because of their personal goals. Therefore, they are more willing to work independently, because doing so can make the task completely dependent on their own efforts. This feature may reduce the performance of these people in the team. In an organization, there is a great need for people who can compromise, adapt, and combine their achievements with organizational goals. If an organization has a large proportion of people who are motivated by personal achievements, then this organization will certainly not be able to achieve substantial development.

Royle (2012) found that achievement motivation was the strongest predictor of informal accountability for others followed by affiliation and power. It is impossible for all individuals can be completely satisfied with their needs at the workplace. Managers need to identify the needs of subordinates to motivate them according to their needs and organizational goals. This not only creates an environment that motivates employees, but also meet more employees' needs. Hence, it can promote the company's continuous improvement and sustainability.

(f) Skinner's Reinforcement Theory

Skinner's reinforcement theory is also called behaviour theory. It refers to the probability that behaviour occurs as a function of the behaviour. Reinforcement is the power of an organism

to enhance the recurrence of a certain reaction during the learning process. Reinforcements are all irritants that can strengthen. Psychologists not only use reinforcement to explain the occurrence of operational learning but also use reinforcement to explain the causes of motivation. People have a certain behavioural tendency owning to the strong connection established by the previous behaviour and stimulus. Some psychologists believed that there is no need to distinguish motivation from learning. Reinforcement can be used to explain it. It can apply in different areas such as growing up the child, motivating employees, determination of teaching and learning outcomes (Omomia & Omomia, 2014), and so on.

Timely feedback (De Villiers, 2013) is to inform the actors of the work results in a timely manner through some form and channel. Appropriate strengthening methods should be adopted as soon as possible after the behaviour occurs to obtain the best incentive effect. After a person implements a certain behaviour, even simple feedback that the manager said can play a positive role. If the manager does not pay attention to this behaviour, the possibility of this behaviour repeated occurrences will decrease and disappear. Therefore, timely feedback must be used as a means of strengthening.

Positive reinforcement is more effective than negative reinforcement (Leong & Yazdanifard, 2014). Therefore, the use of strengthening means should be based on positive strengthening. It may also punish bad behaviour and achieve a combination of reward and punishment. Reinforcement theory only discusses the influence of external factors or environmental stimuli on behaviour. It ignores the reaction of human internal factors and subjective initiative to the environment. However, many behavioural scientists believe that reinforcement theory helps to understand and guide people's behaviour. It is because an act will inevitably have consequences, and these consequences will determine to a certain extent whether such acts will occur repeatedly in the future. Instead of adopting a luck attitude toward the relationship between this behaviour and consequences, it is better to analyze and control it so that everyone knows what the best consequences should be. Reinforcement theory is not to manipulate employees, but to

give employees the best opportunity to choose among various clearly defined alternatives. Hence, it has been widely used in motivation and the transformation of human behaviour.

If students are strengthened by learning such as getting good grades, praise from teachers or parents, they will have a strong motivation for learning. If students' learning is not strengthened, they will lack motivation for learning and get poor results. Students' learning is punished such as being laughed at by classmates or teachers, there is a motivation to avoid learning. Besides, teachers may motivate students with a badge system to succeed in their learning effort (Troussas, Krouska & Virvou, 2017).

It focuses on external conditions and situations. It helps managers for motivating the workers in the workplace by external factors like giving promotions or increasing wages. However, it may not apply to all people with different abilities. Gordan and Krishanan (2012) pointed out that "A reinforcement which is very effective on some people may not be effective on others" (p.687). It is difficult to apply reinforcement to a situation. Moreover, it is unethical to give gifts or rewards to someone for changing their behaviour.

(g) Vroom's Expectancy Theory

Vroom (1964) indicates that an individual's level of motivation depends on the attractiveness of the rewards sought and the probability of the rewards obtained. He explains that motivation is a product of three factors. They are valence (how much one wants a reward), expectancy (the probability of effort for successful performance) and instrumentality (the chance for receiving the reward). Motivation = V x E x I (Valence x Expectancy x Instrumentality). It relies on the accuracy measures of valence, expectancy, and instrumentality (Parijat & Bagga, 2014). It is more valid (Beiu & Davidescu, 2012) where individuals clearly perceive effort-performance and performance-reward linkages. Otherwise, it tends to be idealistic.

It focuses on an individual's decision-making based on the values of outcomes from an action and the probability of these outcomes happening. Individuals will decide to act or not act based on their perceptions whether the outcome is significant enough for the effort that they put in. Employees will start work if they think they can achieve a good result, that result will end up in a reward and the reward has a high value for them. A confident individual will have greater expectancies than one who does not believe in his or her own abilities.

Individuals cognitively choose the course of action may lead to the greatest degree of pleasure. Employers need to increase the belief that good performance will result in valued rewards (De Simone, 2015). People's value on various rewards is varied. Besides, the valence for the same reward may vary from situation to situation. It provides some insights for managers on why their employees may behave in a certain way. They need to discover what personal values are important for employees and realize that needs might change over time.

Managers should pay attention to raising the expected probability and potency at the same time. Paying attention only to motivation is one-sided, and we should pay attention to improving the quality of the staff. It includes improving their ideological quality and business ability by increasing the expectations of their own probability to increase the level of motivation and create higher performance goals. They should improve their understanding of the correlation between performance and compensation. The closer the relationship between performance and remuneration is, the more the goal to be achieved can meet the needs of the motivated person. Moreover, they should combine material rewards with spiritual rewards. They need to understand their management objects and adopt diversified rewards (Merriman, Turner & Galizzi, 2016) in a targeted manner if possible. Hence, the organization's remuneration matches the employee's wishes to a certain extent.

Moreover, managers can motivate employees by altering an individual's effort-to-performance expectancy, performance-to-reward expectancy, and reward valences (Lunenburg, 2011). Employees will compare their rewards with the rewards of the individuals doing similar

work with them (Turabik & Baskan, 2015). They may pay attention to different intrinsic or extrinsic rewards.

(h) Adam's Equity Theory

Adam (1963) believed that employees will become de-motivated if their perceived input is greater than the output from the company. It focuses on distributive justice. It also examined how employees would behave in reaction to inequity (Al-Zawahreh & Al-Madi, 2012). It is a simple but useful tool to allow managers to apply workplace psychology and increase their subordinates' motivation at work. Many variables may influence the inputs and outcomes in an organizational setting (Hofmans, 2012). However, it may not be possible to measure workload equity effectively (Coldwell & Perumal, 2007).

Scholars may argue that numbers of demographic and psychological variables affect people's perceptions of fairness and interactions with others. Besides, people may perceive equity not only in terms of the specific inputs and outcomes of a relationship but also in terms of the overarching system that determines those inputs and outputs. Equity can be strengthened by empowering employees and placing them properly in positions with limited pay incentives (Tudor, 2011).

Equity theory has important implications for managers. It is not only the absolute value of the reward but also the relative value of the reward that affects the motivation effect. It is important to strive for fairness during the process of motivation. Even if there is an error in subjective judgment, it will not cause a serious sense of injustice. During the motivation process, attention should be paid to the guidance of the fair psychology of motivated people. Hence, they can establish a correct view of fairness. Managers must realize that absolute fairness does not exist, and they should not blindly compare. Pay for work is the main killer that causes a vicious circle on the issue of equity.

Enterprises should take various measures to create a fair and reasonable atmosphere to avoid unfair feelings among employees. It gives employees a sense of subjective fairness. Some enterprises adopt the method of keeping secret wages (Colella, Paetzold, Zardkoohi & Wesson, 2007) so that employees do not know each other's income and expenditure ratio to avoid a sense of injustice caused by comparison between employees.

When employees perceive inequity in their input-outcome ratio compared to colleagues, they become dissatisfied and less motivated (Badubi, 2017). Besides, they will compare with other employees in a similar organizational level on how they are being treated. Managers should share information on how allocation decisions are made and follow consistent and unbiased procedures. If employees feel that inputs are fairly and adequately rewarded by outputs, then they are happy to work and motivated to continue performing at the same level. If they feel that inputs are out-weigh of the outputs, then they become demotivated in relation to their job and may feel a strong sense of injustice. People may respond to this feeling in different ways.

Generally, the extent of demotivation is proportional to the perceived disparity between inputs and expected outputs. Some people reduce effort and application and become inwardly disgruntled. Other people may seek to improve the outputs by making claims or demands for more rewards or seeking an alternative job.

(i) Locke's Goal-Setting Theory

Locke's goal-setting theory highlighted the importance of considering the whole journey of completing a goal and not just the outcome. An Individual's goal-directed effort depends on goal difficulty, specificity, acceptance, and commitment. The effects of goal setting are very reliable and replicable (Locke & Latham, 2002).

The specific and difficult goals with feedback will lead to higher performance. Goals tell an individual what needs to be done and how much effort will need to be extended. When the

goals are difficult, some people persist in trying to attain them. However, they help the individual to perform the job or task more efficiently. People do better when they get feedback on how well they are progressing toward their goals. In fact, feedback helps to identify discrepancies between what they have done and what they want to do.

Individuals may break the challenging goals down into smaller chunks and commit to achieving them. It can be applied effectively on any domain in which individuals have some control over the outcomes (Locke & Latham, 2006). It may apply not only to workplaces but also to other settings. Asmus, Karl, Mohnen, and Reinhart (2015) found that "even without financial incentives goal setting improves worker performance by 12 to 15%" (p.127).

It is generally believed that setting mastery goals (Schatt, 2011) can stimulate internal motivation more than performance goals. However, this process is influenced by many other intermediary factors such as the level of achievement motivation of the individuals. There is a complex relationship between goal setting and satisfaction. Difficult goals provoke higher performance than easy goals, but it may lead to lower satisfaction. It is generally believed that feedback can promote performance improvement, but different feedback methods have different effects on performance. Therefore, it is necessary to learn how to feedback is the most effective. In addition, there are some impacts of goal conflict on performance effect. When the goal is difficult and the task is complex, the factors may affect the choice of strategy.

(j) Deci's Self-determination Theory

It is about human personality and motivation and to consider the innate talent and psychological needs of the individual. It is to explore the motivations of people from the heart, to exclude external incentives and influences, and to focus on individual motivation and self-determination. It is an important part of intrinsically motivated behaviour and of some extrinsically motivated behaviours (Deci, 1971). It helps to clarify individual differences in selecting and responding to social situations (Deci & Ryan, 1987).

In the 1970s, many researchers focused on intrinsic motivation and extrinsic motivation. They attempted to understand the ways in which intrinsic motivation affects human behaviour. However, it was not until the mid-1980s that this theory gained solid research and support, and it was not until the 2000s that scholars applied it to different fields of teaching and social psychology.

It raises three innate needs will bring the best development and progress to the individual. It tries to achieve the following three indicators (competence, relatedness, and autonomy) through individual experience. If it is achieved, it can satisfy the individual's psychological sense of accomplishment or satisfaction and thus show good performance. If it is not achieved, there will be fragmentary, reaction or exfoliation. It takes the experience of freedom inside one's commencing behaviour as a reference. It can be used to enhance human potential, reflected in behavioural, relational, and experiential outcomes (Ryan & Deci, 2006). It also provides detailed accounts of how social and cultural forces impact personality development and global motivational orientation as well as behavioural responses in specific situations (Legault, 2017).

People who are high in self-determination tend to believe that they have control over their own lives. When facing difficulties or challenges, they feel that they can overcome them through diligence, good choices, and hard work. They do not rely on external rewards or punishments to motivate them to act. They are good at setting goals and working toward those aims. They are taking responsibility for their behaviours and accept their strength and limitations. It offers relatively more autonomy supplying social content or enriches internal motivation (Vansteenkiste, Lens & Deci, 2006).

2.5.2 Types of Motivation

There are three types of motivation, namely intrinsic motivation, extrinsic motivation, and amotivation. Each type of motivation may affect individuals differently with its own benefits

and drawbacks. However, the applications of intrinsic and extrinsic motivation still apply to all employees and striking a balance between them may be the key to organizational success (Singh, 2016). Different types of motivation are discussed as follows.

(a) Intrinsic motivation

Intrinsic motivation involves doing something because it is good for people personally. When they are intrinsically motivated, their actions are based on inner desires, actions that are made for their own benefit. For example, people clean their homes because it helps them feel organized, eager to learn a skill because they are eager to learn or read a book because they like to tell stories. They are actively striving toward doing the things they find interesting or enjoyable (Legault, 2016).

Intrinsic motivation plays a vital role in whether individuals can show creativity (Steele, McIntosh & Higgs, 2017) in the field they are engaged in. In fact, it is the social psychology foundation of creativity. Employees are most creative when they are inspired by the satisfaction and challenges of their work, rather than by external pressure. If they with a high level of intrinsic motivation, then they will proactively propose tasks and actively search for the current situation. They may use their existing knowledge and experience to produce various possible responses. Even they are disturbed by external stimuli (such as competition, evaluation), they will maintain an open mind and aware of the relatively hidden major clues related to problem-solving in the stimulus. Moreover, they are dared to take risks, challenging, innovative, and creatively solve problems. Intrinsic motivation is an important characteristic of outstanding creative talents.

Besides, intrinsic motivation plays a crucial role in job satisfaction and motivation among secondary school teachers. Teachers need to think about the way students can be intrinsically motivated in the classroom. They can empower students and move them by providing a supportive learning environment (Valerio, 2012). Moreover, they should provide choices,

enabling students to set goals and achieve their aims. Through the implementation of suitable tasks, they able to connect to their daily activities and engage in learning. Froiland, Oros, Smith and Hirchert (2012) believed that "intrinsically motivated learners have a greater sense of well-being and are more engaged in the classroom" (p.97). They will cherish their learning opportunities and truly preparing to contribute to the betterment of society. Furthermore, they will persist in a long time, overcome more challenges, and demonstrate success in their academic performance (Adamma, Ekwutosim & Unamba, 2018).

People may think that teachers' motivation for teaching has a direct impact on students' motivation for learning. However, Bieg, Backes, and Mittag (2011) found that "Teachers' intrinsic motivation for teaching was not a significant predictor for students' intrinsic motivation" (p.134). Intrinsic motivation is positively related to well-being, meaning in life, and positive emotions, but negatively related to negative emotions (Kunanitthaworn et al., 2018). Besides, the intrinsic motivation of teachers has a strong correlation with academic achievement of the students (Akhtar, Iqbal & Tatlah, 2017).

Students motivated by intrinsic motivation are more likely to be willing to carry out their tasks and improve their skills and abilities during the entire process of study (Mahadi & Jafari, 2012). They are more likely to have intrinsic motivation if they attribute their academic performance to a factor they control (autonomy). They have the ability to achieve the desired goal (the final result does not depend on luck) and are interested in mastering the knowledge of a subject rather than memorizing good results. In fact, their intrinsic motivation may affect their learning effectiveness. Therefore, teachers should use various strategies in accordance with the individual differences of students in teaching design to stimulate students' desire for knowledge and actively participate in learning.

Moreover, teachers should create a good learning environment, allow more interaction between teachers and students, arouse a sense of accomplishment to enhance students' intrinsic

motivation. Hence, they can focus on the needs of proficiency and learning and achieve their perfect state of self-realization.

(b) Extrinsic motivation

Extrinsic motivation includes doing something because you want to get rewards or avoid punishment. When people have extrinsic motivation, their behaviour is motivated by external factors that encourage them to do something, hope to get rewards or avoid a less positive outcome. For example, read a book to prepare for the examination, do exercise regularly to lose weight, or clean their home and prepare for the visitors. Extrinsically motivated students may do a good job or perform well to achieve a certain reward (Afzal, Ali, Khan & Hamid, 2010) for a short period of time. Their overall performance cannot be improved or consistent over a longer time.

Extrinsic motivation is the act of engaging in an activity to obtain external rewards. This kind of motivation often conflicts with intrinsic motivation. Extrinsic motivation comes from the outside of the individual. The common extrinsic motivations are money, marks, coercion, punishment, pressure, responsibilities, and so on. Competition is an extrinsic motivation because it encourages people to beat others rather than enjoy the intrinsic rewards of behaviour. The uniqueness of the individual and the trophy badge obtained by the task are also extrinsic motivations. It is positively affected job engagement (Miao, Rhee & Jun, 2020) in different stages.

Extrinsic rewards may lead to a shift in motivation. That is, obtaining extrinsic rewards becomes the main reason for the task and internal opportunities are weakened. For example, children who expect to continue to obtain ribbons and medals through painting will spend less time in real painting than children without rewards. For children who will not have extrinsic rewards, self-determinism holds that if the task meets their value standards and beliefs. The external dynamic opportunities are internalized by the individual, thereby satisfying their basic

psychological needs, and further becoming a decision basis of reference or behaviour of the driving force.

Dickson (2018) found that students performed significantly better using the extrinsically motivated instructional method than non-extrinsically motivated instructional method. In fact, students can perform better and more effectively by using the benefits of extrinsic motivation. It also has a significant impact on the engagement of students' learning (Putra, Cho & Liu, 2017). Teachers should apply different forms of extrinsic motivation in the instructional process to spur students to achieve their best performance. Shaikh, Pathan and Khoso (2018) concluded that extrinsic factors are key tools within the organization to improve the students' performance. Teachers need to know what factors need to be met to obtain extrinsic motivations for students, otherwise they cannot utilize of students' skill within their abilities (Turner, 2017). In fact, students need some extrinsic motivations to encourage them to learn new knowledge or skills.

(c) Amotivation

Amotivation is a lack of desire to complete tasks, a sense of apathy about the future, poor concentration, and decreased interest in social and other activities. An amotivated person cannot be intrinsically or extrinsically motivated. It has a multidimensional nature (Vlachopoulos & Gigoudi, 2008) and different sources may lead individuals to be amotivated. They may lack of contingency between behaviour, the attainment of desired outcomes, or lack of ability to perform the behaviour. They always experience passivity and an absence of autonomy (Orvis et al., 2018). Erten (2014) found that "Male participants appeared to be more inclined to develop a sense of amotivation" (p.177). They are easier to suffer amotivation and work burnout.

Amotivated persons cannot perceive a relationship between their actions and subsequent outcomes of those actions. They may feel lacking control of their actions and unwilling to invest any effort or energy in any action. They may also use excuses or statements to minimize their personal responsibility for events (Wery & Thomson, 2013). Amotivation is usually linked with boredom and poor concentration, poor interpersonal relationships, high perceived stress at

workplace or school, and easy to give up. In addition, it is associated with individuals' values in relation to the task or activity (Shen et al., 2010).

Salary may not enhance productivity on the long term or improve performance significantly. It is vital to focus on teachers' attitude rather than their welfare and financial gains. Moreover, there are non-financial factors such as rewards, praises, recognition, and responsibility have positive influences on motivation (Dobre, 2013). Ahmed, Oyagi and Tirimba (2015) believed that employers "to adopt fair and equal recognition criteria for the motivation of its employees which will result to higher productivity" (p.400). Principals can motivate teachers by creating an environment that is inspiring and supportive. Moreover, positive classroom environment and teacher interaction have a profound impact on students' achievement and motivation. When the need for autonomy or relatedness are created, even amotivated people may attain intrinsic motivation (Koseoglu, 2013).

2.5.3 Comparison of intrinsic and extrinsic motivation

Both intrinsic and extrinsic motivation are applicable to many industries and all kinds of people. They can allow reagent, interest focus, moving the right direction, and sustained actions to achieve the expected outcomes. Sometimes they can exist independently or in combination with each other in any activity. They can also overlap depending on the circumstances. It is important for teachers or employers to lead students or employees to internalize the responsibility and sense of value for extrinsic goals (Ryan & Deci, 2000).

Intrinsic motivation is voluntary motivation. It is often caused by interest, enjoyment and pleasure, personal accomplishment and satisfaction, pride, internal reward, developed skills and competency, core beliefs, and internal needs. It has elements of autonomy, personal goals, and eagerness. It is more favoured by human beings because it is voluntary, no need for force, and builds more momentum in the individual. Moreover, people with intrinsic motivation are more

cooperative, less competitive with other people, and they sustain their interest in the subject for a long period of time. Over time, intangible rewards can later be realized.

On the other hand, extrinsic motivation exists outside of a person. It can cause some people to be more competitive or more aggressive among other people for the same reward. In addition, some rewards are non-sustainable or decrease in value over the passage of time. Many human situations are often caused by extrinsic motivation. These causes are usually in the form of external rewards, pressure, acknowledgement and praise, conformity, sense of worth, and other forms that are not self-based. External (tangible) rewards can reinforce or undermine internal beliefs or rewards. Nevertheless, the tangible rewards hold a prominent role in extrinsic motivation.

The difference between intrinsic and extrinsic motivation lies in the reason for doing something. In terms of intrinsic motivation, rewards or incentives are usually self-based or things that occur inside a person. Extrinsic motivation needs to have an external reward or motive to perform particularly behaviour. In intrinsic motivation, intangible rewards occur first while external motivation often gives importance to tangible benefits. If people engage in an activity for its pure enjoyment, they are acting on intrinsic motivation. If they are do it for a separable outcome rather than the inherent enjoyment, they are acting on extrinsic motivation. However, both are the same in creating interest, maintaining focus, creating expected behaviour, and an expected outcome. Both intangible and tangible rewards are appreciated by human beings.

The differences between intrinsic and extrinsic motivation are shown in Table 2.5.3. Both can play a significant role in academic learning or job performance. Extrinsic motivation is useful for people to complete a task or an assignment in which they have no internal interest. It is a useful tool when used appropriately, but excessive rewards may be problematic. Conversely, it is not a good idea to reward people externally for their internal desires and wishes.

Table 2.5.3: Comparison of intrinsic and extrinsic motivation

	Intrinsic motivation	Extrinsic motivation
Nature	associated with the involvement in complex tasks	associated with the engagement in activities
Motivators	personal needs and enjoyment	salary, benefits, and incentives
Rewards	internal rewards such as psychological rewards	external rewards such as tangible rewards
Performance	better performance in the long term	poor performance in the long term
Commitment	stronger sense of personal commitment	weaker sense of personal commitment
Persistence	more persistent when facing difficulties	less persistent when facing difficulties
Creativity	more creative	less creative

Source: Harter, 1981, p.4.

2.5.4 Work Extrinsic and Intrinsic Motivation Scale

The Work Extrinsic and Intrinsic Motivation Scale (WEIMS, Appendix 2 Section B) is developed by Vallerand and Blssonnette (1992) which is based on self-determination theory (Ryan & Deci, 2000). It consists of 18-item 7-point Likert-scale questionnaire to measure the level of work motivation. There are six subscales, including one intrinsic-motivation subscale, four extrinsic-motivation subscales (integrated regulation, identified regulation, introjected regulation, and external regulation), and one amotivation subscale. Each subscale consists of three items. It is one of the most commonly used instruments for measuring the level of work motivation.

Questions 40, 44 and 51: Intrinsic motivation (IM) relates to interest, enjoyment, and inherent satisfaction.

Questions 41, 46 and 54: Integrated regulation (INTEG) relates to the hierarchical synthesis of goals, and congruence.

Questions 37, 43 and 50: Identified regulation (IDEN) relates to conscious valuing of activity, and self-endorsement of goals.

Questions 42, 47 and 49: Introjected regulation (INTRO) relates to ego involvement and focus on approval from self or others.

Questions 38, 45 and 52: External regulation (EXT) relates to the salience of extrinsic rewards or punishments, and compliances or reactance.

Questions 39, 48 and 53: Amotivation (AMO) relates to perceived non-contingency, low perceived competence, nonrelevance, and non-intentionality.

The Work Self-determination Index (W-SDI) is used to express the attainment of either self-determined or non-self-determined motivational profile. The W-SDI score is calculated by the following formula.

W-SDI score = (3 x IM) + (2 x INTEG) + (IDEN) – (INTRO) – (2 x EXT) – (3 x AMO).

Therefore, the W-SDI score ranges from – 36 to 36. The score reflects an individual's relative level of self-determination. A positive score indicates a self-determined profile, while a negative score indicates a non-self-determined profile.

Tremblay et al. (2009) commented that "WEIMS as a reliable and valid work motivation instrument in its own right" (p.223).

2.6 Importance of Motivation

Motivation is a curial factor that affects an individual's working attitudes. It may improve employees' productivity and performance and increase their creativity and innovative (Varma, 2017). Zembylas and Papanastasiou (2004) found that "teacher motivation (intrinsic or extrinsic) is related to job satisfaction" (p.369). Teachers who are highly motivated tend to perform better at work and to be more responsible and care for students. It makes teachers work harder and therefore results in higher passing rates. They enjoy their work and remain in teaching. Skaalvik and Skaalvik (2011) found that "job satisfaction is a key variable for mediating the effect of belonging and exhaustion on the motivation to leave the profession" (p.1036).

Managers need to motivate employees to work hard and enhance morale in the fierce market competition. If it takes a day to complete an hour work, then managers should solve the problem. The real reason of the problem is not the employees, but the company's incentive mechanism leads to this result. Managers may use the incentive mechanism to motivate the enthusiasm of employees and improve the quality of services or products. Effective use of incentives and ways to motivate employees' initiative and enthusiasm in work are the basic ways and important means of management.

Moreover, incentives can awkward employees' full potential and improve their subjective initiative. When employees encounter their own vital interests, they will pay special attention to their success or failure of tasks. The instinct to seek benefits and avoid harm will make the pressure faced into motivation. When there is a need to meet satisfaction, employees can be motivated.

Moreover, incentives can strengthen the cohesion of an organization. Behaviourists have found that an incentive for individual behaviour will cause or eliminate the production of group behavior. Therefore, incentives are an important factor in maintaining a harmonious and stable labour relationship.

Teachers' motivation is important for educational reforms. Motivated teachers are able to work towards reforming the educational system and believe the policies are good for the next generation. It will contribute to the long-term success and performance of the educational system (Recepoglu, 2013). It is a challenge for principals to fully motivate teachers with different characters and needs (Darty-Baah, 2010).

2.6.1 Benefits of Motivating Employees

The concept of motivation is used for management to motivate employees' enthusiasm and creativity with various effective methods. Hence, they can work hard to complete the

organization's tasks and achieve the organization's goals. Main benefits of motivating employees are discussed as follows.

(a)   Conducive to organizational goals

As an important resource of an enterprise, people play a very important role in the process of achieving organizational goals. The accuracy and speed of achieving organizational goals are determined by the level of employees' enthusiasm. If their enthusiasm is not high, no matter how much money and advanced technology cannot guarantee the true realization of organizational goals. Organizations may utilize the available support and strengths to help them to attain their goals. However, the improvement of employees' enthusiasm depends largely on motivation.

(b)   Conducive to the development of employees' full potential.

In addition to the abilities that employees show in daily work, there are many abilities that have not yet been shown or discovered. In fact, the full potential of employees is amazing. When they are under normal circumstances, they only need to exert 30% of their ability to cope with work. If they are given sufficient motivation, their ability can be exerted to 90% or even higher. They can maintain high enthusiasm in their work. Motivation can develop employees' full potential for three to four times of their usual ability. It shows the importance of motivation.

(c)   Improve the social responsibility and quality of employees

Through praise and rewards for outstanding people and criticism and punishment of bad behaviours, motivation can play a demonstrative role to guide employees to improve their understanding of social requirements and corporate requirements. They may establish a correct outlook and values on life to monitor and constrain their own thoughts and behaviours. Motivation also has the role of inspiring employees' sense of honour and shame, cultivating

their aggressiveness and strong will. Hence, they are conducive to improving their sense of social responsibility and quality of services.

(d)   Improve morale and corporate performance

Effective use of motivation may mobilize employees' initiative and enthusiasm for work. Many employees hope that their abilities can be exercised, and their work performance can be recognized. They also hope to work in a fair and justice environment, as well as their tasks and life, can be meaningful. Managers provide clarity, support, and challenge may contribute to the positive work climate. It may lead to and sustain employees' motivation and high performance and even exert above and beyond expectation.

(e)   Strengthen the cohesion of an organization

The motivation for individual behaviour will cause or eliminate undesirable group behaviour. Group cohesion (Banwo, Du & Onokala, 2015) is an important factor in maintaining a harmonious and stable labour relationship. The higher the level of group cohesiveness, the better the effective and efficient organization. Cohesive teams work better together and improve productivity and profitability. Moreover, it may affect the survival of any organization.

(f)   Stabilize the workforce

Workplace and workforce stability is an important part of any organization. It will project the goodwill and reputation of the organization. Loyal employees may use their skills and perform their work efficiently. Employees can succeed after successfully organizing their work. Therefore, employee motivation is very important. However, it is difficult for managers to motivate the employee to work in repetitive work due to no opportunity for improvement.

On the contrary, shy, or passive employees will not be promoted. They will not interest to manage or responsible for others. Managers need to understand which goals are important to

them, and then match their goals with the characteristics of the work. They can make the work more meaningful and inspire them to work hard and stay in the organization.

2.6.2   Ways to Enhance Employees' Motivation

Motivation is not manipulation or control, but to meet people's needs. There are many ways to motivate employees such as salary increases, bonuses, and so on. Monetary rewards may be effective at the beginning, but the needs of employees will be found in the long run still cannot be satisfied. Occasional praise and care can inadvertently gain the loyalty and trust of the subordinates. Therefore, motivation may not cost money. In fact, everyone has different motivations and needs for work and different driving points. The most important prerequisite for managers is whether they really understand and master the motivations and needs of subordinates in order to give different kinds of motivation according to different individuals. Otherwise, it will strive for the results that the subordinates do not want. The motivation effect will not be achieved, and even counterproductive effects will be caused because they still cannot meet the needs.

Except for material reward, many employees want to exert their ability and integrate into the organization. The human resources managers must keep in mind these three basic needs of employees in order to design a comprehensive employee motivation plan. It may avoid the marginal effect of money, effectively manage the morale of employees, and avoid excessive reliance on salary increases to increase operating costs to weaken the competitiveness of enterprises.

It is not an easy task to establish a set of truly effective strategies to get employees to work. Managers must be tailored to everyone's special needs and sources of motivation to motivate employees to work. It may use the following tips to motivate employees to work hard and improve their performance intrinsically.

(a) Create an incentive salary mechanism

Salary is very important and is the main source of employee income. However, no matter how important salary is, it must be directly related to the performance of employees in order to play the role of incentives (Alfandi & Alkahsawneh, 2014). Employers should distinguish salaries according to the contribution of employees to the enterprise according to the merits of performance. The salaries of key positions or positions with high skill content are higher than those of other positions. But no matter what position, it should be properly rewarded as long as the performance is excellent.

Salary rewards cannot simply be based on the level of academic qualifications. The level of academic qualifications is only a necessary condition for being qualified for the position. Jobs that can be clearly quantified can use work efficiency as an important basis for remuneration It is better to formulate a policy that closely links efficiency and remuneration to stimulate employees' work motivation. It is undeniable that the overall salary of employees is relatively high, and the cohesion of the enterprise is relatively strong.

(b) Create a good working environment

Employers should establish a fair and justice working environment. When they formulate various policies and systems, they should take the continuous improvement of the cohesion of the enterprise and promote the development of the enterprise. Managers must strictly implement the rules and regulations, implement various assessments, and create a fair and justice competitive environment for employees. Hence, employees have a sense of belonging and feel happy to follow the managers' instructions. Scientific personnel, skilled personnel, and sales personnel may have different promotion channels. It should be established specific measures in terms of salary incentives to encourage talents to get full payment to their roles.

Moreover, it is important to provide good working condition (Ukandu & Ukpere, 2011) for employees. A clean, civilized, comfortable, and pleasant working environment can add a lot to

the enterprise. Work culture is an intangible ecosystem that makes employees portray their capabilities and attain their full potential. They can work to the best of their capability and creativity when they are surrounded by an encouraging environment and supportive co-workers. It is also an important factor that affects employees' job satisfaction.

(c) Set up a personalized incentive plan

There are several levels of human needs. When one need is met, employees will turn to other needs. Managers should provide personalized incentive plans (Moniz, 2010) or rewards for employees in different situations. It may provide additional benefits for outstanding employees. Welfare is regarded as a reward when employees perform well, which is both a material reward and a spiritual reward. Managers may set work goals for employees. The strongest motivation for work comes from the challenge of the work itself and the desire to achieve a career for many employees. Besides, it can provide talented employees with a variety of creative opportunities and set higher work goals for them. It is wise to tell employees clearly what their work goals are and provide sufficient feedbacks and encouragement to reward their contributions. A clear job objective not only clearly communicates employees' job responsibilities, but also an objective standard for evaluating their work performance. For example, the collective-based projects use collective performance as the basis for remuneration, which can effectively enhance the team's sense of cooperation.

Managers may organize team activities (outreach training, special evenings, fun competitions, and mountain climbing) from time to time to enhance cohesion and help create a positive and supportive working atmosphere. It can effectively bring employees together to spend happy time, feel the warmth of the team, and leave a good memory. Besides, it may enrich the work content through job rotation to increase the challenge. It can not only train generalists and overcome post fatigue but also eliminate the gaps caused by different divisions of labour and achieve mutual trust and mutual understanding. Education and training are also

incentives for many employees. Participating in external training is an employee's favorite reward (Cheng & Lai, 2017).

(d) Spiritual and emotional motivation

Managers may pay attention to praise employees properly and publicly. They should communicate their appreciation of their employees' outstanding performance in a timely manner. When an employee has completed a certain job and achieved results, he or she needs to get is the manager's affirmation of his or her job. However, it is easily overlooked by the managers in actual cases. In fact, praising and complimenting employees is not complicated. There is no need to consider the time and place at all. They can praise employees anywhere at any time. A word of warmth or encouragement, a sincere greeting, and an affirmative physical movement can all play their due role.

Moreover, managers may pay attention to communication and guidance with employees. Communication is the cornerstone of mutual trust and the glue of superiors and subordinates. It can enhance mutual understanding and close their emotional distance with employees. The information passed to employees through communication is that managers care about them and pay attention to them.

When a major event occurs in the employee's home, the manager should pay attention to it and give appropriate assistance if necessary. When the manager helps him or her at the crucial moment, he or she will remember it and support the manager at work. Managers need to learn to respect people, especially those who are talented. When respect is converted to allow employees to give full play to their personal creativity, the effectiveness of their work must rise sharply. Hence, employees are not only meet the needs of fulfillment but also make them feel valued and respected. Besides, the conduct and style of the managers may directly affect their employees. A procrastinating manager cannot cultivate a resolute employee in the workplace.

(e) Provide growth opportunities

When employees feel that they are not being reused, they are guaranteed to resign automatically. Therefore, employees who are committed to work should have the opportunity to give full play to their skills and be encouraged to extend these skills and continue to pursue progress.

Besides, managers may talk to employees about their career plans. They should ensure employees' current work takes full advantage of their strengths and abilities. If not, they can plan to add some work for employees and move in the direction they want. They may try to arrange a path within the company and agree on the goal of promotion. When there is a new project or task, allow subordinates to participate and expand their work skills. Moreover, they may arrange subordinates' secondment to a different department or location to change the work content or environment.

Managers may discuss some training and development opportunities to help subordinates' move forward within the company and provide clear and consistent recommendations for ways to improve their performance. They need to show their concern at the right time and be willing to help employees maintain job satisfaction. They will eventually see a return.

(f) Make all employees feel that their work is meaningful

Employees will work hard when they believe that what they do is important and valuable. They are trying to do something meaningful and will be proud of the results of their efforts. Managers may constantly strengthen the importance of the role of employees to the entire company. They may also help them to see a direct connection between their actions and the company's success. Even the smallest work will contribute to it.

Moreover, they may set realistic goals and achievable challenges for employees to achieve and aware of the importance of their work. They may give them autonomy to improve the way

they do things, make them feel trusted and respected, and let them participate in decision-making and feel that they have the right to decide the development of the company.

(g) Identify leadership skills to inspire employees

Managers with competence, enthusiasm, and practical experience are the key to employees' engaging their work. They should show that they really care about their employees and take some time to understand their needs and ambitions. It will help them to convey some information to let employees know that their contributions are valued by others. Hence, they will be happy and eager to pursue personal or team success. They may also talk with subordinates regularly and find ways to improve their experience of the working environment. It can be done through informal channels such as regular chats or occasional activities not related to work. It is wise to propose a more formal survey and feedback channel to understand their sources of motivation. It is necessary to understand employees' definition of success to create an environment conducive to their success.

(h) Find ways to praise and reward employees

If managers want to inspire employees to give full play to their talents, then they must let them know that their efforts will be praised and rewarded. They should thank them for their efforts on a regular basis, prove that you have noticed their efforts, and then encourage them to further improve their performance.

Moreover, it may take time to celebrate the achievements of their work and reward and praise them in ways that employees find meaningful. Celebrations do not have to be luxurious to make sense. Managers can reserve a group lunch and share the results of their victory with more colleagues or send a small gift to a milestone on a long journey which can be used to praise and reward employees.

(i)   Negative reinforcement

   The punishments (Payne & Dozier, 2013) are serious and indifferent when it is implemented. It should be removed from the negative stimuli to increase the frequency of positive behaviour to achieve the organizational goals (Cho et al., 2019). The penalty is necessary for the maintenance of internal rules and regulations of the company. It is also an indispensable and important means. When punishing, managers must not discount it in front of human feelings. The value of a punitive discount will never be appreciated. Many of the employees who are punished are special and excellent. If an enterprise adopts a penalty, then it is likely that it will create the loss of corporate talent. The punishment is not only cold but also heartless. It can become as motivating as positive praise, even more, positive, and effective than positive praise.

2.6.3 Tips for Motivating Employees

   There are many strategies and tips for all-round employee motivation mechanisms (Liu, 2014), but they must be personalized and take into account the diversity of employees. The changes in society, economy, and generations in recent years, employees' values and lifestyles are obviously different. As these new generations enter the workplace, it will definitely bring about managing complexity and challenges. The tips are listed as follows to highlight motivation management to achieve the effect of motivating employees.

(a) Motivation timing -- Leading motivation may make employees feel insignificant; but late motivation may make employees feel superfluous, meaningless, and unable to play its role.

(b) Excitation frequency -- The relationship between the excitation frequency and the excitation effect is not a simple proportional relationship. Under certain special conditions, the two have a certain inverse relationship. Only a comprehensive analysis of the specific situation can determine the appropriate excitation frequency.

(c) Motivation level -- Whether the motivation level is properly controlled can directly affect the exertion of the motivation effect. Excessive motivation and insufficient motivation not

only fail to serve the real purpose of motivation but sometimes even counteract them, causing serious contusion to work enthusiasm.

(d) Motivation direction -- The motivations and functions of various needs are different in different situations. The choice of motivation direction has a very close relationship with the role of motivation.

(e) Incentive principle -- A spiritual incentive is better than a material incentive. A positive incentive is better than a negative incentive. An internal incentive is better than an external incentive.

(f) Scientific appraisal system -- A scientific appraisal system is a guarantee for the effectiveness of incentives. Effective motivation must be guaranteed by a scientific appraisal system. It includes the evaluation of the performance appraisal system and the effectiveness of motivation. Objective and fair performance appraisal is the affirmation of employees' hard work and the basis for rewarding and punishing employees. Based on employee performance, rewarding, and punishing employees can motivate employees.

The establishment of a motivation mechanism and the proper use of various factors will not add a lot of costs to the enterprise. It will give employees a great motivation to create value for the enterprise. After the value is recognized, the employees will have a sense of belonging and satisfaction with the enterprise. Therefore, the enterprise will produce a positive, competitive, and harmonious atmosphere at the workplace.

There are different forms of motivation mechanism may be adopted by different organizations. The main forms of enterprises using motivation mechanism are discussed as follows.

(a) Target motivation -- Target motivation mainly refer to the stage and subdivision of enterprise development goals by enterprise managers, and then use this as the direction of

the joint efforts of the enterprise team and then to achieve an incentive method to mobilize the enthusiasm of team members.

(b) Material motivation -- Material motivation is relatively common and relatively simple. It mainly involves the mobilization of employees' work enthusiasm through materialized means, such as salary and bonuses. However, the lack of systematic and diverse material incentives for companies is not conducive to the mobilization of employees under team management.

(c) Trust motivation -- Managers should not doubt people and should use people without doubt. Being motivated to trust others is important because it facilitates the fulfillment of other needs ultimately contributing to the success of the organization. It is particularly important for teamwork. It is a low-cost and high-efficiency method. It can maximize the enthusiasm and creativity of employees and improve employee loyalty and self-confidence.

(d) Emotional motivation -- People are emotional, and they live in various emotional demands. Managers can establish a good relationship with team members through direct expression. The good interpersonal relationship may create a good emotional space and atmosphere and enhance the sense of belonging of employees.

(e) Competition motivation -- Enterprises are in fierce market competition at all times. If they do not advance, they will retreat or even collapse. Managers should emphasize and cultivate employees' awareness of competition and crisis. Hence, they may be aware of the close relationship between the enterprise and them and give full play to their work enthusiasm to promote the development of the enterprise.

More and more companies pay attention to the use of motivation systems in team management, continuously improve the efficiency of employees, and make the entire team operate in a more effective manner. Thereby, improve the work performance of the team may further improve the core competitiveness of the enterprise. It brings more benefits to the enterprise and greater social benefits to society.

2.7 Relationship between Job Satisfaction and Motivation

It is not easy to distinguish between satisfaction and motivation due to interchangeable usage in many pieces of literature. A satisfied teacher is more likely to be motivated and vice versa. However, some researchers believe that satisfaction is not the same as motivation. Job satisfaction is the pleasure that a job provides a person, whereas motivation is the reason that a person performs a job regardless of any job satisfaction. However, job satisfaction and motivation are interrelated and interdependent (Jalagat, 2016).

Employee motivation and job satisfaction are symbiotic concepts. High job satisfaction is directly related to high motivation and vice versa. The more satisfied employee for a particular job, the more actively and effectively an employee manages their duties. In fact, highly motivated employees also have greater job satisfaction. Thus, an increase in job satisfaction leads to an increased awareness of personal and professional motivation. Similarly, a strong motivation can lead to higher satisfaction with a particular job.

All employers are eager to improve both motivation and job satisfaction. There are many factors affecting job satisfaction include the work environment and organizational culture, compensation, and career development opportunities. Besides, an employee's ability to balance professional and personal commitments is also important. Employees are more likely to demonstrate motivation to meet or exceed company standards and report greater satisfaction with their career choices if they feel that their employers are meeting their needs in these areas.

Low motivation and low job satisfaction can positively affect morale, employee attitudes, and subsequent desire or motivation for further progress. Dissatisfied employees have no reason to help the organization succeed and thus have little motivation or interest in organizational goals. Focusing on improving job satisfaction will encourage higher levels of productivity, reduce employee turnover, and reduce absenteeism. Motivation and job satisfaction not only improve employee turnover, absenteeism, and productivity, but also improve employee physical and mental health.

Motivating employees to improve overall job satisfaction is as much an art as a science. A better understanding of human psychology allows managers, supervisors, and human resources professionals to address motivation and job satisfaction issues. Compensation, benefits, and the workplace of manual labour are all examples of external or extrinsic motivating factors. They have the least impact on motivation and least job satisfaction. In addition, many research studies have shown that intrinsic motivation, such as personal or career goals, self-esteem, challenging or interesting work, has a greater impact on employee motivation and job satisfaction. They are more willing to share their knowledge and skills and enjoy helping the others (Karna & Ko, 2022). Therefore, employers should focus on self-motivation factors rather than external ones are more likely to retain employees who express satisfaction with the work environment.

Kian, Yusoff, and Rajah (2014) stated that "Job Satisfaction is an attitude from experienced objects, whereas motivation is behaviour towards identified objects" (p.100). Singh and Tiwari (2011) found that motivation is a function of job satisfaction, and its value does not change by the value of satisfaction. Moreover, there is a strong positive correlation between job satisfaction and motivation of the employees. Oparanma (2011) also found that motivation has a strong impact on the job satisfaction of retail business managers.

Managers may utilize the job contents itself to give satisfaction to the employees. In addition, they may enhance employees' job satisfaction through different motivational techniques such as challenging job assignment, job rotation, the award of achievement, promotion, praise and recognition, designated job titles, professional training and development, and job security. However, highly achievement-orientated employees are often motivated by promotion opportunities (Roos & Eeden, 2008) and power rather than monetary rewards.

2.8 Conceptual Framework

The conceptual framework is an argumentative concept chosen for interpretation of the relationship between job satisfaction and motivation amongst secondary school teachers in

Hong Kong. The relationship is as illustrated in Figure 2.8. It is based on two major variables namely the motivation of teachers as the dependent variable, and job satisfaction of teachers as independent variables.
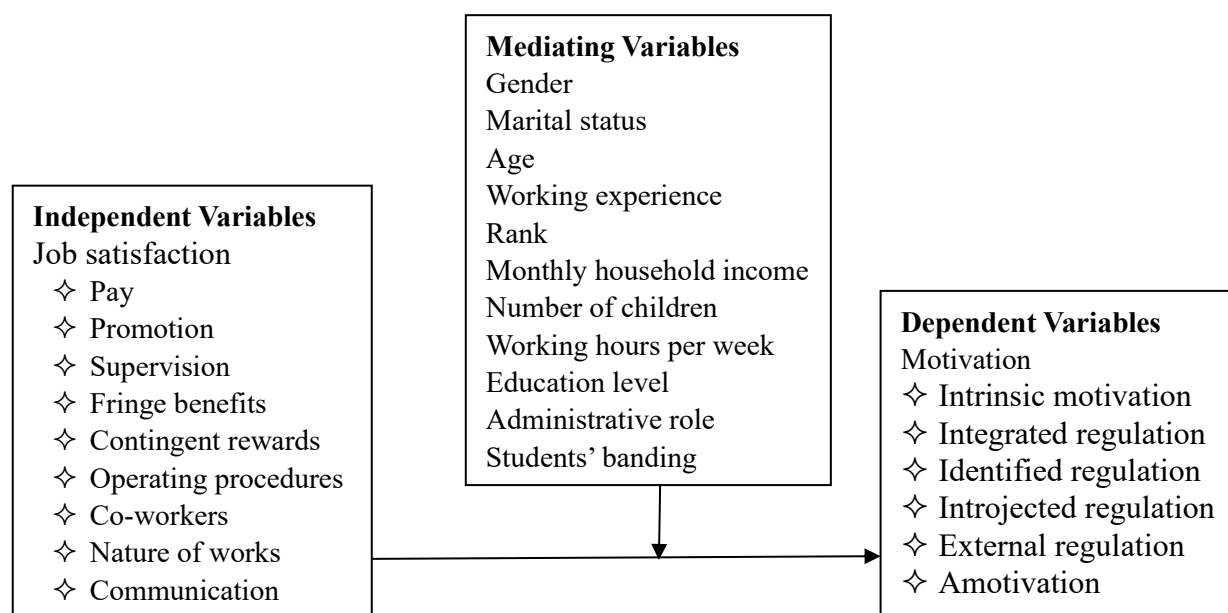
Figure 2.8: Conceptual framework of the study
Source: Figure developed by the author

The mediating variable explains the relation between the independent and the dependent variable. It explains how or why there is a relation between two variables. It also can be a potential mechanism by which an independent variable can produce changes on a dependent variable. Mediating variables such as gender, marital status, age, working experience, rank, monthly household income, number of children, working hours per week, educational level, administrative role, and students' banding may account for the effect of the motivation of secondary school teachers in Hong Kong.

2.9   Summary

The level of job satisfaction by teachers has been linked to their teaching effectiveness. Teachers with a high level of job satisfaction may enhance students' academic performance,

work harder, and more self-disciplined. They eventually improve the opportunity of success of their students in life. When teachers feel satisfied and motivated in their jobs. They are most likely to be committed and retained in the job.

Besides, the government policies, principals' leadership style, school culture, and parents' attitude may affect the level of job satisfaction and motivation of teachers. When their dissatisfaction level up to a certain amount, they may go on strike, leave the school or entry into other professions.

Chapter 3: Research Methods and Data Collection

3.1 Introduction to the Section

The purpose of the research method is to explain how the researcher answer the entire research question and the basic content that needs to be covered. It includes how to choose the research objects and variables, how to manipulate or observe these elements, how to collect data, and how to analyze all the aforementioned data. It gives a comprehensive overview of the key tasks of the research to facilitate the understanding of others who need to replicate the research.

The level of teachers' work motivation has been widely researched around the world. In fact, the level of satisfaction of work is diversified all around the globe. However, the level of job satisfaction and motivation for teachers in Hong Kong is limited. In fact, it is discovered that some teachers are having intentions to change professions owning to the high stress and pressure of the job. To relieve this problem, it is of vital importance to find out the factors that affect their level of job motivation. It needs to address the job satisfaction and motivation of secondary school teachers to minimize its adverse influence (Mansur et al., 2017) on students' performance and quality of teaching. In fact, there is a significant correlation between teachers' motivation and students' academic performance (Josely & Devi, 2018). However, this issue requires a deeper and further investigation. Therefore, the relationship between job satisfaction and motivation amongst secondary school teachers will be focused on.

The study aspires to identify the factors that contributes to the declining job satisfaction and motivation of secondary school teachers, so to address the current limitations of existing studies and research on secondary school teachers' job satisfaction and motivation. It is firmly believed that teachers with a high level of motivation can enhance students' self-esteem and willingness of learning. It is important for students to have healthy self-esteem for them to face positive and constructive criticisms and learn from their mistakes.

Moreover, it hopes to identify those factors accounting for the greatest amount of variability (Rahman, Akhter & Khan, 2017) in levels of job satisfaction across the teaching workforce in secondary schools in Hong Kong. It may help principals to improve teachers' job satisfaction levels to enhance the effectiveness of teaching and learning. It also helps principals with a clear direction for improving teachers' levels of motivation in the workplace.

The study can be explored and constructed through interaction or discussion with other people. Constructivists believed that it is socially constructed with multiple realities by different people. It cannot be generalized into a common reality. They also believed that there is no single reality. In fact, the reality is created subjectively with multiple interpretations. It is socially constructed by personal perception, social environment, and concepts of gender, culture, or race. It focuses on the interaction between the researcher and the participants. Besides, the goals are idiographic and emic (Ponterotto, 2005). The researcher allows participants to complete the questionnaire on their own. When analyzing the quantitative data, the researcher will not seek others' opinions. Different researchers looking at the same set of data may arrive at different conclusions owing to their personal knowledge or experiences.

The study is not only to understand phenomena but also need to provide a valid and reliable understanding of reality. Since reality is socially constructed, full interaction between researcher and participants is essential to capture and describe the lived experiences. It requires an extensive amount of time and effort to collect data by self-administered online questionnaire.

The role of the researcher's values such as perceptions, decisions, or actions in the research process affects the choice of topic, data collection method, and ways of analyzing data. Therefore, it should pay attention to personal ethics, prejudices, biases, or judgments that are used in collecting, analyzing, interpreting, and reporting the findings. The process and procedures of the research rely on ontological, epistemological, and axiological assumptions. It is a product of the values of the researcher, but not related to techniques or data analysis. The method used should be critical, balanced, unbiased, systematic, and controllable.

The aim of the study is to provide a deep understanding of job satisfaction and motivation amongst secondary school teachers in Hong Kong. It is more important to understand participants' subjective and lived experiences such as motives and challenges which are bounded by values, context, and time (Krauss, 2005). It should be noted that different paradigms cannot be compared directly with each other owing to their different ways of looking at reality (Van Merrienboer & De Bruin, 2014).

Moreover, how the questions are asked or the ways to ask the questions may affect the data and results. Walter (2010) criticized that "Data are data, but their political and social reality is framed by how they are garnered and interpreted, by whom, and for what purpose" (p.53). Therefore, paradigm issues are crucial in the entire research process and guide the research in the right direction (Makombe, 2017). They are not only affected the research strategy but also affected the conclusion based on results or findings.

3.2   Research Approach and Design

Research design is a set of methods and procedures used in collecting and analyzing the variables specified in the research problem. It is also a framework to be created to find the answers to research questions.

The study is to find out the level of job satisfaction and motivation amongst secondary school teachers in Hong Kong. It is descriptive research to describe a phenomenon or opinions on a given group of people (Nassaji, 2015). It attempts to examine the current situations in order to describe the norm (Waliman, 2011). It is structured in design to collect information and can be statistically inferred on a population. It also allows the researcher to measure the significance of the results on the overall population and respondent's opinions, attitudes, and behaviours over time. All the questions in the questionnaire are standardized to ensure their reliability and validity. Standardization is important to make generalizations or inferences from the results of the larger population. Therefore, a survey method by an online questionnaire

is the most appropriate approach for the current study. Participants can pick a time to suit them for completing the online questionnaire and are more likely to answer the questions honestly. It is easy to use for the researcher to collect and analyze large amounts of data without inputting the raw data individually. It is also cheaper, more accurate, and time efficient.

The research approach, research strategy, and research steps of the study are discussed in the following sections.

3.2.1 Research approach

The study is a quantitative research approach directed by an online questionnaire. The quantitative and qualitative approaches can answer different research questions. Both quantitative and qualitative approach have their strengths and weaknesses. The survey is an appropriate way to understand the job satisfaction and motivation of secondary school teachers in Hong Kong.

The study may also serve as an interpretive lens for reflecting on their career path and understanding their psychological feelings. The study is also an attempt to provide valuable information and act as a springboard for further research related to other levels of teachers in Hong Kong.

The information described by the participants is to explore ways of their experiences, thoughts, and actions about their job satisfaction and motivation in secondary schools. The study is also an attempt to find out the correlation between teachers' job satisfaction and motivation in secondary schools (Gheitani et al., 2019).

There are several benefits of questionnaire surveys. Firstly, it can save time, manpower, and physical strength and the results are easier to quantify. Secondly, it is a structured survey method. The sequence of questions and the answer given are all fixed and unchanged. Thirdly, the data of the questionnaire are easier to statistically process and analyze. It can use statistical software for data analysis which is very simple and fast. Fourthly, it can conduct large-scale

surveys. The researcher can understand the thoughts, attitudes, and behaviours of the respondents from the questionnaire. However, it is difficult to face design problems. Each question needs to know the purpose, motivation and thought process of the respondent. If the questions are open, the respondent's answers are likely to be uneven, difficult to retrieve, and difficult to use for analysis statistically. Moreover, the respondents may not be willing to write open questions in the questionnaire.

3.2.2 Research strategy

It is not only to understand the current situations of job satisfaction and motivation amongst secondary school teachers but also to provide a valid and reliable understanding of reality. Therefore, a quantitative research strategy is selected for this study. The study is intended to predict the causes and effects of secondary school teachers'job satisfaction and motivation in Hong Kong.

The data for the study were collected from the secondary school teachers in Hong Kong who are willing to provide information on a volunteer basis. Through an online self-administered questionnaire, the researcher may explore the key elements of job satisfaction and motivation amongst secondary school teachers and understand their perceptions of job satisfaction and motivation.

An online self-administered questionnaire is used to obtain quantitative data through closed-ended questions with multiple choice answer options. Teachers are most apt to respond to online surveys. It is quick and inexpensive to send out very large numbers of prospective respondents anywhere in Hong Kong.

The advantages of using an online questionnaire are listed as follows. Firstly, it can break through the limitations of time and space and conduct surveys on different participants simultaneously in a wide range. Secondly, it is convenient to conduct quantitative research on survey results. Thirdly, it does not associate the participant's name or other personally

identifiable information. Fourthly, it is more accurate to measure the generality by a standardized questionnaire. Finally, it can save manpower, time, and money (Rice et al., 2017). However, it has the following disadvantages of using an online questionnaire. Firstly, it can only obtain social information, but cannot understand vivid and specific social conditions. Secondly, it is time-consuming to conduct in-depth qualitative investigations. Thirdly, it is difficult for the researcher to know whether the participant fills in carefully or casually. They may not understand the question and unable to get guidance and instructions. Fourthly, the respondents may choose the answers by herd mentality or accordance with the mainstream social consciousness which makes the survey lose its authenticity. Finally, the response rate and effective rate are low, and it is difficult to study non-responders (Nayak & Narayan, 2019).

It may increase the online questionnaire response rate by the following strategies. Firstly, the authority and popularity of the questionnaire survey sponsor often affect the respondents' trust in the survey and their willingness to answer. Secondly, the respondent's cooperative attitude and ability to understand and answer written questions often have a great influence on the response rate of the questionnaire. Thirdly, an attractive survey topic will often affect the respondent's willingness and interest in answering. Fourthly, the design quality of the questionnaire will have a huge and even decisive influence on the response rate and efficiency of the questionnaire (Taherdoost, 2016). Finally, the survey method has a significant impact on the response rate of the questionnaire.

3.2.3 Research steps of the study

The research steps are interlinked with the other steps in the entire research process (Sonmez, 2018). They involve a systematic process to focus on the research objectives and gathering the required information for analysis to arrive at a correct and meaningful conclusion. They may use in all research, regardless of the research method. The research steps of the study can be summarized as shown in Figure 3.2.3.

(1)   Formulating the research problem – It is the first and most important step in the entire research process. It guides the researcher to arrive at his or her destination and tell the readers about the research. The research problem should be interested in research by the researcher. It is a challenging and attractive problem and closely related to the existing knowledge of the researcher. The answer can deepen or expand the original understanding by studying the research problem. It should not be an abstract and a non-specific problem or problem with too many variables. It must be feasible and can be answered through experiments, observations, or investigations. Ameen Batool and Naveed (2019) suggested addressing the issue that may enhance the amount of original knowledge or have a significant contribution to the application.

(2)   Extensive literature review – It helps the researcher to become familiar enough with the field to allow him or her to discuss the research study with others. It helps to summarize and synthesize the work done by predecessors in the same field, understand the current research level, analyze existing problems, point out possible research problems, and explore future direction (Torraco, 2016). It also helps in refining the research problem, defining the research objectives, and formulating the research questions.

(3)   Develop research questions – When establishing the research question, the key is to learn to transform a general question into a researchable question. However, not all questions can be turned into research questions. Indeed, the formulation of the research questions is often more important than their solution. They should be relevant to the research problem and feasible to evaluate. Besides, the researcher needs to have a wealth of knowledge in the corresponding field, be familiar with relevant research methods and need to think hard for a long time. After reading and mastering the existing literature, the researcher may be able to develop research questions (White, 2017). It is difficult for beginners to go deeper into the breakthrough. Therefore, the new researcher should seek more guidance and help from the supervisor, discuss with classmates or colleagues, and learn how to form a good research question to help readers with a clear focus and facilitate their understanding of the research topic.

```
┌─────────────────────────────────────┐
│   Formulating the research problem   │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│      Extensive literature review     │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│       Develop research questions     │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│      Preparing research design       │
│         ✧ Instrumentation            │
│         ✧ Sampling                   │
│         ✧ Procedure                  │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│          Collection of data          │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│   Questionnaire                      │
│         ✧ Sampling method            │
│         ✧ Sampling size              │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│           Analysis of data           │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│      ✧ Independent sample t-test     │
│      ✧ Pearson's correlation         │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│    Generalization and interpretation │
└─────────────────────────────────────┘
                 ⇩
┌─────────────────────────────────────┐
│  Preparation of the report of the thesis │
└─────────────────────────────────────┘
```

Figure 3.2.3: Research steps of the study
Source: Figure developed by author

(4) Preparing a research design – It helps the researcher to explain how to find the answers to the research questions. It includes the research approach, instrumentation and procedures, sampling method and size, data analysis, and the timeframe for the research study. It is important to select the most appropriate design (Lensen, Moons & Diederich, 2015) for the

research study. Otherwise, it cannot arrive at valid and reliable findings and conclusions. It is important for the researcher to have a well-planned research design that serves as a guide for the researcher before the starting of the research. It may help the researcher to decide the course of action during various stages of the research to save time and resources.

(5)   Collection of data – It is the process of collecting and measuring information on variables of interest to answer the research questions in the research study. It is one of the most important research steps in conducting the research study. It is also a demanding job to complete the task successfully. It starts with determining what kind of data required followed by the selections of the instrument to collect the data and samples from a suitable population by suitable sampling method and size.

(6)   Analysis of data – It is crucial to interpret the collected data based on the analysis, make inferences, and draw conclusions. It is not easy to deduce the results from the analysis of data. Statistics analysis is just a tool for quantitative data and cannot substitute for in-depth analysis and reasoning. There are different methods for analyzing qualitative data and depend on the type of research question.

(7)   Generalization and interpretation – There are three generalization models for quantitative and qualitative studies (Polit & Beck, 2010). Statistical generalization is underpinning most quantitative studies. Analytic generalization is suitable for both qualitative and quantitative research. While transferability is dealing with the apparent paradox of qualitative research. Interpretation reflects the researcher's own understanding of the research results which are guided by analyzed data, established theories, and previous findings.

(8)   Preparation of the report of the thesis – The researcher needs to relate back to the research questions before writing the final report. All the answers to the research questions should be clearly stated. It is important to evaluate how successful is to achieve the research objectives as well as highlight the strengths and weaknesses of the research study. Hence, the researcher may make recommendations for further research or suggestions for improvements.

3.3 Population and Sample of the Research Study

The population of the research study is all secondary school teachers in Hong Kong and age between 21 and 60.

The sample of the study is drawn from the sampling frame by simple random sampling method. The sampling criteria of participants in the survey are secondary school teachers in Hong Kong and age between 21 and 60. Non-secondary school teachers in Hong Kong, age below 21 or over 60, unable to speak, read and write English, or do not teach in secondary schools in Hong Kong currently cannot participate in the study. However, participants with disabilities other than mental disabilities could participate in the study only if they can provide informed consent for themselves. Teachers with visual impairment could participate in the study by the researcher read out the questions for them.

The sampling frame is obtained from the school lists by districts on the website of the Education Bureau (https://www.edb.gov.hk/en/student-parents/sch-info/sch-search/schlist-by-district/index.html). Hence, the research will contact them randomly by phone or email and invite them to participate in the study.

3.4 Instrumentation of Research Tools

A suitable research instrument should be used to obtain, measure, and analyze data from the participants in the study. The instrument should base on the type of study. Therefore, a questionnaire is appropriate for the quantitative study. Although it may establish an instrument by the researcher, it is wise to use the existing scales. It may also save time to construct a new instrument and ensure its reliability and validity.

The use of existing scales also has certain limitations, including cultural, temporal, and language limitations. The difference between Chinese traditional culture and Western culture has resulted in the cultural limitations of the measurement scale. Although the progress of the

times has shortened this difference, the connotation of national culture and the impact on people's mentality and behaviour cannot be ignored. Most of the existing scales are based on observations and summaries of Western culture. Applying them in a cross-cultural environment requires careful study of their cross-cultural practicality and feasibility. The process of a scale from creation to maturity is often relatively long. Therefore, when using existing scales, it is necessary to consider the timeliness of these scales and the continued feasibility of the scales. The use of Western scales requires accurate translation, and this is a difficult task for the researcher. The extension of vocabulary may be different from culture to culture, and the difference in semantics also makes the researcher bring in subjective wishes when translating. Therefore, the applicability of the scale should be confirmed when using the existing scale, including conceptual applicability, cultural applicability, and sample applicability.

Moreover, the researcher should actively contact the owner of the scale to obtain permission to use it in the study. Once the researcher has selected the scale, he or she should try to follow all the items on the scale instead of arbitrarily deleting them. If it is necessary to delete some items in the scale, then it needs to be very cautious. The deleting items may affect the content and reliability of the scale. Even if the deleted items are based on theory, the reliability and validity of the deleted scale must be carefully tested before using.

3.4.1 Participants and sampling

The participants are selected by stratified and simple random sampling in the sampling frame obtained from the Education Bureau. It is a probability sampling method and able to make inferences about populations based on the homogeneous samples. In addition, validity is high (Acharya et al., 2013). However, it requires a sampling frame and tends to have larger sampling errors (Sharma, 2017).

The sampling size is 355 (using Krejcie and Morgan table) owing to limited resources. According to the formula of Taherdoost (2018) with 95% confidence level, the ideal sample

size is 378. Smaller sample size may be inaccurate and not suitable for testing hypotheses (Malone, Nicholl & Coyne, 2016). However, larger sample size may be unethical and a wastage of money and time (Gupta et al., 2016). Besides, mathematical operations are only part of the sample size. Time, budget constraints, or the ability to find enough and qualified subjects are the biggest problems in grasping the sample size.

3.4.2 Instrumentations and procedures

The data will be collected by a self-administered online questionnaire with secondary school teachers in Hong Kong. They were volunteered and unpaid to participate in the study after the researcher contacted them randomly by phone or email. They may skip any questions they do not want to answer, and they may end the survey at any time.

The instrumentation is a self-administered online questionnaire which were adapted from previous studies. It consists of two readies to use scales. They are quantitative in nature, free to use for academic studies, and have solid reliability and validity. The questionnaire composes closed-ended questions related to the defining area to be explored and is categorized into 3 sections.

Section A is composed of 36 questions related to the level of job satisfaction of secondary school teachers. It adopted the Job Satisfaction Survey (JSS) developed by Spector (1985). It has been used for high school teachers (Pavalache-Ilie & Ursu, 2016; Paleksic et al., 2017), helping professionals (Mesarosova, 2016), health workers (Batura et al., 2016), physician associates (Ritsema & Roberts, 2016), and physiotherapists (Alkassabi et al., 2018). It was designed for different occupations but commonly used in knowledgeable professions. It consists of a 36-item Likert-scale questionnaire that assesses nine subscales (pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication) to assess individuals' attitudes about their job and job-related aspects. Each subscale is assessed with questions are written in both directions and 19 of them

are scored reversely. Each of the nine subscales can produce a separate facet score. It is scored by summating the four items in each subscale and each question has six choices from "disagree very much" to "agree very much". Table 3.4.2a indicates which questions go into each subscale of the job satisfaction survey. It also indicates which questions need to be reverse scored.

The responses are numbered 1 to 6 for each question from disagreeing very much to agree very much. Seventeen questions are scored positively worded to indicate job satisfaction and nineteen questions in negatively worded to indicate job dissatisfaction. All the negatively worded questions must be reversed before calculating the total score. Participants who agree with positively worded questions and disagree with negatively worded questions will have high scores representing job satisfaction. Conversely, participants who disagree with positively worded questions and agree with negatively worded questions will have low scores representing job dissatisfaction. Most participants will have middle scores without reversing the scores because they are agreed with half and disagreed with half questions which are worded in the opposition direction. All the negatively worded item responses from 6 to 1 rather than 1 to 6. The response "Disagree very much" becomes a 6. Likewise, "Disagree moderately" becomes a 5 rather than a 2, "Disagree slightly" becomes a 4 rather than a 3, and so on.

After all the negatively worded questions are reversed, the numbered responses for the appropriate questions are summed. The total of 36 items produces a total score range from 36 to 216. Individual facet scores are computed by summing the appropriate items as shown in the table. Each facet consists of 4 questions and produces a facet score range from 4 to 24.

The average score of each participant in each facet is the job satisfaction score of that aspect; the average score of all questions is the overall satisfaction score. The higher the score on the scale, the higher the job satisfaction.

There is impossible to have an absolute definition to interpret the total score of job satisfaction. Job satisfaction is on a continuum from very dissatisfied to very satisfied. It is difficult to have a specific cut score to determine whether an individual is satisfied or

dissatisfied. However, there are two approaches that can be used to draw conclusions about an individual is satisfied or dissatisfied with his or her job.

The normative approach may compare the target samples to the norms for the same or similar occupations in the national level. However, these norms may have some limitations. Firstly, there are a small number of occupations or countries with similar culture represented (Roditis, Samara & Louis, 2019). Secondly, the norms are not from a representative sample. The data may draw from non-probability sampling cannot accurately represent the population or reduce the sampling bias. Finally, the norms are mainly from Western countries. They may not assume to be represented of other countries, particularly those that are culturally dissimilar from Western countries.

The absolute approach may use an arbitrary cut score to represent job dissatisfaction and satisfaction. Because the job satisfaction survey uses 6-point agree-disagree response choices, it can assume that agreement with positively worded items and disagreement with negatively worded items would represent satisfaction. Conversely, disagreement with positive worded items and agreement with negatively worded items represents dissatisfaction. After processing the reversed scores, 4 or more represents satisfaction, 3 or less represents dissatisfaction, and mean scores between 3 and 4 are ambivalence. Therefore, for the 4-item subscales 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 score range from 36 to 216, scores between 36 and 81 are highly dissatisfied, 81 and 126 are less dissatisfied, 126 and 171 are less satisfied, and 171 and 216 are highly satisfied.

Likert scale is used to measure how people feel about something, their attitudes, or opinions (Joshi et al., 2015). The job satisfaction survey is adopted an even number of choices to force respondents to think a little deeper about a certain question. They must choose a positive or negative answer. A six-point scale is used in this study to allow finer discrimination, easier choice, and higher reliability (Chomeya, 2010). The absolute approach is adopted for data

analysis and interpretations in this study due to the Chinese participants are not culturally like

North America (Tsounis, Niakas & Sarafis, 2017).

Table 3.4.2a: The subscales of the job satisfaction survey

Subscale	Question number and description	Reverse scored
Pay	1. I feel I am being paid a fair amount for the work I do. 10. Raises are too few and far between. 19. I feel unappreciated by the organization when I think about what they pay me. 28. I feel satisfied with my chances for salary increases.	√ √
Promotion	2. There is really too little chance for promotion on my job. 11. Those who do well on the job stand a fair chance of being promoted. 20. People get ahead as fast here as they do in other places. 33. I am satisfied with my chances for promotion.	√
Supervision	3. My supervisor is quite competent in doing his/her job. 12. My supervisor is unfair to me. 21. My supervisor shows too little interest in the feelings of subordinates. 30. I like my supervisor.	√ √
Fringe benefits	4. I am not satisfied with the benefits I receive. 13. The benefits we receive are as good as most other organizations offer. 22. The benefit package we have is equitable. 29. There are benefits we do not have which we should have.	√ √
Contingent rewards	5. When I do a good job, I receive the recognition for it that I should receive. 14. I do not feel that the work I do is appreciated. 23. There are few rewards for those who work here. 32. I don't feel my efforts are rewarded the way they should be.	 √ √ √
Operating Procedures	6. Many of our rules and procedures make doing a good job difficult. 15. My efforts to do a good job are seldom blocked by red tape. 24. I have too much to do at work. 31. I have too much paperwork.	√ √ √
Coworkers	7. I like the people I work with. 16. I find I have to work harder at my job because of the incompetence of people I work with. 25. I enjoy my coworkers. 34. There is too much bickering and fighting at work.	 √ √
Nature of work	8. I sometimes feel my job is meaningless. 17. I like doing the things I do at work. 27. I feel a sense of pride in doing my job. 35. My job is enjoyable.	√
Communication	9. Communications seem good within this organization. 18. The goals of this organization are not clear to me. 26. I often feel that I do not know what is going on with the organization. 36. Work assignments are not fully explained.	 √ √ √

Section B is composed of 18 questions related to the evaluation of work extrinsic and intrinsic motivation scale (WEIMS) (Tremblay et al., 2009). It has six subscales (intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation) to measure work motivation based on self-determination theory (Deci & Ryan, 2000). Each subscale is assessed with three questions.

The WEIMS assesses each of the six types of motivation in the self-determination theory. The questions of the original scale are randomly mixed, and the same arrangement was used in the present study as shown in Table 3.4.2b. The reason was to make the respondents consider each specific question more carefully. The participants indicate on a 7-point Likert-type scale, where 1 is "Does not correspond at all", 4 is "Correspond moderately", and 7 is "Corresponds exactly".

It may use to calculate the work self-determination index (W-SDI) by the following formula. W-SDI = (3 x IM) + (2 x INTEG) + (1 x IDEN) - (1 x INTRO) - (2 x EXT) - (3 x AMO) (Vallerand, 1997). The scores of W-SDI are between -36 to 36. It indicates an individual's relative level of self-determination on the continuum. It can assess the individual's level of self-determination and the motivational profile from the total score of W-SDI. It is also useful to compare between individuals or groups of people and their motivational profiles in the study.

By summing the means from the three self-determined subscales (intrinsic motivation, integrated regulation, and identified regulation) to obtain a positive score which indicates a self-determined profile. Similarly, by summing the means from the non-self-determined subscales (introjected regulation, external regulation, and amotivation) to obtain a negative score which indicates a non-self-determined profile. The total score is the average of self-determined subscales and self-determined subscale, range from -36 to 36. The higher the score on the scale, the higher the work motivation.

The absolute approach is adopted for data analysis and interpretations in the study. Because the motivation scale uses 7-point agree-disagree response choices, it can assume that 5 or more represents satisfaction, 3 or less represents dissatisfaction, and mean scores between 3 and 5 are ambivalent. Therefore, for the motivation score (W-SDI) range from -36 to -18 are lowly motivated, scores of -18 to 0 are less motivated, scores of 0 to 18 are motivated, and scores of 18 to 36 are highly motivated. A positive W-SDI score indicates good work motivation (Chai et al., 2017) on average.

WEIMS is adopted as an odd number of Likert-scale according to the research questions and purposes. It allows for neutrality and socially desirable answer through midpoint (Tsang, 2012). It can eliminate the bias caused by the invalid responses (Willits, Theodori & Luloff, 2016) and provide more accuracy for data analysis in certain situations.

Table 3.4.2b: The subscales of the work extrinsic and intrinsic motivation scale

	Subscale	Question number and description
Self-determined subscales	Intrinsic motivation (IM x 3)	40. Because I derive much pleasure from learning new things. 44. For the satisfaction I experience from taking on interesting challenges. 51. For the satisfaction I experience when I am successful at doing difficult tasks.
	Integrated regulation (INTEG x 2)	41. Because it has become a fundamental part of who I am. 46. Because it is part of the way in which I have chosen to live my life. 54. Because this job is a part of my life.
	Identified regulation (IDEN x 1)	37. Because this is the type of work I chose to do to attain a certain lifestyle. 43. Because I chose this type of work to attain my career goals. 50. Because it is the type of work I have chosen to attain certain important objectives.
Non-self-determined subscales	Introjected regulation (INTRO x -1)	42. Because I want to succeed at this job, if not I would be very ashamed of myself. 47. Because I want to be very good at this work, otherwise I would be very disappointed. 49. Because I want to be a "winner" in life.
	External regulation (EXT x -2)	38. For the income it provides me. 45. Because it allows me to earn money. 52. Because this type of work provides me with security.
	Amotivation (AMO x -3)	39. I ask myself this question, I don't seem to be able to manage the important tasks related to this work. 48. I don't know why; we are provided with unrealistic working conditions. 53. I don't know, too much is expected of us.

While section C is composed of 11 questions related to the demographic such as gender, marital status, age, years of full-time teaching, rank, monthly household income, number of children, working hours per week, qualification, the administrative role, and banding of students as shown in Table 3.4.2c to make possible comparisons between groups of individual respondents.

Table 3.4.2c: Questions related to the demographic

55.   What is your gender?
56.   What is your marital status?
57.   What is your age?
58.   How many years of full-time teaching?
59.   What is your rank?
60.   What is your monthly household income?
61.   Number of children?
62.   How many hours are you working per week?
63.   What is your highest qualification?
64.   What is your administrative role?
65.   What is the banding of your students?

Both job satisfaction survey and work extrinsic and intrinsic motivation scale are approved by the original owner (Appendix 4) for non-commercial or educational use.

The participants of the online questionnaire were selected by simple random sampling. They are secondary school teachers and are teaching currently. They were volunteered and unpaid to participate in the study after the researcher contacted them by phone or email. They may skip any questions they do not want to answer, and they may end the survey at any time. A reminder call or email will be sent out after two weeks to follow the action.

It takes about 12 minutes to complete the online questionnaire. The time-framed of the conduction of the survey was taken two months (from 12 February to 17 March 2021) to complete.

3.4.3 Reliability and validity of the instrumentation

A reliable measuring tool can distinguish, and the measurement results are equivalence, stable, and consistent (Taherdoost, 2016). It may use Cronbach's alpha to measure reliability (Lechien et al., 2019). Within an appropriate limit and meeting the requirements of homogeneity, the more questions a test has the higher its reliability. The wider the range of the trait distribution of the members in the research group under the same conditions, the higher the reliability.

Validity represents the correctness and accuracy of the measuring tool (such as a questionnaire) and evaluation procedure in the measurement of research variables (Mohajan, 2017). The measuring tool can indeed measure the degree of the characteristic or function it wants to measure. It can achieve the measurement goal by the research. Therefore, validity can be regarded as an indicator of the value, appropriateness, and significance of further inferences.

There are many factors that may affect validity. Firstly, the selection of the scale, the length of the scale, the degree of discrimination, difficulty, and arrangement of the questionnaire are all related to the validity. Secondly, the procedure or situation of the implementation of the assessment may affect the validity such as the layout of the venue, the preparation of materials, the explanation of the answering method, and the time limit. Thirdly, the participant's interest, motivation, emotion, attitude, physical and mental health are all-sufficient to influence the behavioural response in the evaluation context (Kavanagh et al., 2016). Fourthly, the more representative the research group of the sample, the higher the validity of the evaluation tool. Finally, the reliability is too low, the validity is also low.

(a)   Job satisfaction survey (JSS)

The job satisfaction survey is a valid instrument to measure teachers' job satisfaction level (Munir & Khatoon, 2015). It has high reliability and validity (Astrauskaitė, Vaitkevicius & Perminas, 2011) and is a multidimensional instrument (Tsounis & Sarafis, 2018). It also has a high predictive validity of the JSS questionnaire (Gholami et al., 2012). The Cronbach's alpha

(coefficient of consistency) of JSS is 0.73 which indicates a high degree of internal reliability (Alghamdi, Topp & Alyami, 2017).

(b)   Work extrinsic and intrinsic motivation survey scale (WEIMS)

The six subscales of WEIMS are inter-correlated with each other (Kotera, Green & Sheffield, 2019). All of the subscales have moderate internal consistency (Chai et al., 2017). Both content and criterion validity of WEIMS are acceptable. The work self-determination index (W-SDI) has a high level of reliability and validity, and the internal consistency is 0.84 (Tremblay et al., 2009).

3.5   Operational Definition of Variables

An operational definition is a method to define the meaning of variables based on observable, measurable, and operable characteristics. That is to describe the operation of variables from specific behaviours, characteristics, and indicators, and convert abstract concepts into observable and testable items. Moreover, it is to describe in detail the operational procedures and measurement indicators of the research variables. In empirical research, operational definition is particularly important, and it is an important prerequisite for the value of research. The operational definition of variables in the conceptual framework of the study is discussed and explained as follows.

3.5.1 Independent variables

Nine facets of job satisfaction survey are the independent variables. They can improve employees' job satisfaction (Sumedho, 2015). The question numbers with an "r" indicate that reverse scoring is applied. Each facet is operationally defined as follows.

(1)   Pay --- Question number 1, 10r. 19r, and 28.

Pay is a fixed amount of money received from the employer in a fixed interval. The pay should be fair within the organization.

(2) Promotion --- Question number 2r, 11. 20, and 33.

Promotion is the opportunity to take on more responsibility and advance at their jobs to improve their career prospects and earnings. It is usually come with a salary increase. Therefore, a clear promotion and job advancement opportunities should be provided for all employees.

(3) Supervision --- Question number 3, 12r. 21r, and 30.

Employees are satisfied when they are supported by their supervisors to achieve their personal or organizational goals. Accessibility, competence, and fairness of the superiors may affect employees' satisfaction. A good working relationship between the employees and supervisors may enhance their job commitment and satisfaction.

(4) Fringe benefits --- Question number 4r. 13, 22, and 29r.

Examples of fringe benefits are annual leave, study leave, health insurance, tuition reimbursement, education assistance, employee meals, pension, company car, and other financially or non-financially related benefits. They are extra financial compensations given by employers and save employees a lot of money in the long run.

(5) Contingent rewards --- Question number 5, 14r. 23r, and 32r.

The contingent reward is a motivation-based system that is used to reward employees who are meeting organizational goals. It may also provide positive reinforcement for people who are doing a good job, meet quality metrics, or enhance the company's productivity. Merit pays, bonuses, recognition, praise, commission plans, and profit-sharing are examples of the contingent rewards.

(6) Operating procedures --- Question number 6r, 15. 24r, and 31r.

Operating procedures are described as steps of finishing tasks that have to follow the standards or regulations of the organization. They can be in form of policies such as warranty, procedures such as steps of opening a cheque, and standards such as rely on email within two working days.

(7) Co-workers --- Question number 7, 16r. 25, and 34r.

Co-workers are working on the same job or project in the organization. Their values, attitudes, and culture may affect employees' job satisfaction. They are satisfied when they are supported by their co-workers personally or professionally. It may lead to a higher level of job satisfaction and better usage of employees' full potential.

(8) Nature of works --- Question number 8r, 17. 27, and 35.

Nature of works is the variability of your work at present. It includes the job routine, job characteristics, and job description of your post. The job performance of the employees is normally evaluated based on their nature of the job.

(9) Communication --- Question number 9. 18r, 26r, and 36r.

Communication is important to the organization to enhance its productivity and efficiency. An effective workplace communication may promote employees' job engagement (Shkoler & Kimura, 2020), maintain workplace harmony, enhance the level of satisfaction, encourage innovation and creativity, and increase employees' cooperation.

3.5.2 Dependent variables

The dependent variable in the study is motivation, which is divided into six dimensions including intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external motivation, and amotivation. WEIMS with a total of 18 questions and scores range from -36 to 36. The distribution of questions and its multiply scale for each dimension is shown below.

(a) Self-determined subscales

The average score of intrinsic motivation, integrated regulation, and identified regulation, which indicates an individual's self-determined profile with a positive score of the W-SDI.

(1) Intrinsic motivation (x 3) --- Question number 40. 44, and 51.

Intrinsic motivation is described as a self-determined type of motivation. People are totally originated from their inner thrive and interest in the task. They are enjoyable and valued for their own sake.

(2) Integrated regulation (x 2) --- Question number is 41, 46, and 54.

People fully integrated into themself. They are more congruent with their identity as a person. They adopt their self-concept and their personal values.

(3) Identified regulation (x 1) ---- Question number is 37, 43, and 50.

People are identified with their values, attitudes, and structures in the surroundings and are congruent with their own personal goals and identities. They recognize their important or valuable goals.

(b) Non-self-determined subscales

The average score of introjected regulation, external regulation, and amotivation, which indicates an individual's non-self-determined profile with a negative score of the W-SDI.

(4) Introjected regulation (x -1) ---- Question number 42, 47, and 49.

The introjected regulation is internalized within the person, but the external regulation is still controlling the person. The employees are not only motivated by external rewards but also want to be worthy and maintain the feeling of being good at what they do. They behave to regulate their self-esteem based on external factors (Allan, Autin & Duffy, 2016). People are partly regulated internally and partly affected by external controls.

(5) External regulation (x -2) --- Question number is 38, 45, and 52.

The motivation arises from the intention to either reach the desired rewards such as a bonus or to avoid punishment such as an official warning. People are regulated by outside incentives, pressures, and controls rather than autonomous.

(6) Amotivation (x -3) ---- Question number is 39, 48, and 53.

No motivation towards an activity or people has a feeling that they do not possess the required competence for the activity. People lack the intention to take any action, regardless of

incentives or punishments. When individuals do not experience success between outcomes and their own actions, they may have the feelings of incompetence and uncontrollability.

3.5.3 Mediating variables

(a)   Gender: Male, or female.

(b)   Marital status: Single, married, or widowed / divorced.

(c)   Age: $\leq$ 24 or under, 25–3, 35–44, 45–54, or $\geq$ 55.

(d)   Teaching experience (in years): $\leq$ 5, 6–15, 16–25, or $\geq$ 26.

(e)   Rank: Graduate master (GM), senior graduate master (SGM), principal graduate master (PGM), principal (P).

(f)   Monthly household income (in Hong Kong dollars): < \$40,000, \$40,001–\$60,000, \$60,001–\$80,000, \$80,001–\$100,000, or $\geq$ \$100,000.

(g)   Number of children: None, 1, 2, or $\geq$ 3.

(h)   Working hours per week: $\leq$ 25, 26-40, 41-55, or $\geq$ 56.

(i)   Education level: Bachelor, PCEd / PGDE, Master, or EdD / PhD.

(j)   Administrative role: None, Panel Head, Functional Head, or Assistant / Vice Principal.

(k)   Students' banding: Band 1, Band 1-2, Band 2, Band 2-3, or Band 3.

3.6   Study Procedures and Ethical Assurances

The study was approved by the University Research Ethics Committee of Unicaf University, Malawi. It also needs to follow the code of human research ethics which was written by the Ethics Committee of the British Psychological Society (British Psychological Society, 2014) as a guideline and reference.

All sources and methods used to obtain and analyzed data are fully disclosed. When the findings are publishing, conflicts of interest are declared to the editor. Hence, readers can judge for themselves whether the research findings are trustworthy. It is important for the researcher

to ensure that the study is conducted in an ethical and responsible manner from planning to publication. When conducting the study, the researcher needs to minimize harms and risks, maximize benefits, and treat participants fairly and equally.

The proposed study relies on the trust and cooperation of the participants who have been surveyed and are willing to participate in the study by providing the information. All the information provided by the participants should be kept confidential and their identity should not be disclosed. The researcher should be bound by the code of professional standards and ethics maintained in the process. Unless the participants have given consent for their details to be revealed, all data about the participants must be preserved. All participants should not be misled on how their data will be used. Statements should be taken to explain the purpose of the study to the participants. Ethical issues and considerations should be a mandate at all stages of the study. Nevertheless, failure to follow the correct ethical approval process may result in significant delays with the study.

Participants' information was assigned a code number that is unique to the study and was kept in an electronically secured file in a locked computer. When the study is completed and the data have been analyzed, the data would be destroyed. Study findings were presented only in summary form and the information would not be used in any report. Moreover, the researcher should ensure the following ethical assurances in handling the research data in the entire process.

(a) Confidentiality

Before participation in the survey, the researcher should inform the participants of the confidentiality measures. They can promise in this research, including the confidentiality of basic information, the name of the participants, and any written information that may lead to guessing the identity of them. All use a code to indicate their data and will be properly stored. It will never be used for purposes other than research and care about the privacy of the participants. The research data will be presented anonymously, and the data will be destroyed by the researcher after one year of research.

(b) Non-judgmental

The researcher should understand and analyze the information collected by the participants in an accepting, respectful, and non-judgmental attitude, so as to avoid excessive subjective involvement of the researcher, distorted the thoughts and feelings of the participants, and reduced the authenticity of the data. The data is collected through an online questionnaire. The participants will not be physically harmed during the research, and the behaviour and thoughts of the individual during the research process will not suffer any criticism.

(c) Respect

The researcher should fully explain the research process and purpose to the participants before they are participating in the research and allow them to be terminated at any time before and during the research. In the data analysis process, the researcher should respect any decision of the participants, pay attention to the emotional changes during the analysis process, and the degree of openness to the results. When the participant is uncomfortable, the decision not to answer should be respected.

(d) Honest

Based on respecting the rights and interests of the participants, the researcher should clearly inform the research purpose and content of the research before entering the research process and should briefly explain the researcher's own background. The questions raised by the participants will also be answered appropriately.

(e) Objectively analysis and reporting

The above four ethical issues may guarantee the basic rights and interests of the participants. However, the researchers have certain rules on how to ensure the reader's related rights and interests for the analysis and reporting of research results. The researchers should objectively analyze the relevant information obtained according to the research design, and not deliberately exclude negative and unexpected research data. Otherwise, readers cannot fully grasp the results

of the research. The researchers are obliged to elaborate on the deficiencies and limitations of the research design so that readers can understand the credibility of the research.

Besides, the researchers must respect the intellectual property and the information reported must be accurate. If there is an error in the report, it should be corrected. When submitting a manuscript, an appropriate ranking should be given according to the contribution of the researchers. Moreover, it is not allowed to reuse the original materials that have been published or to submit more than one manuscript for publication. After publication, the original resources must be maintained for a certain period for the scientific and confirmatory examination.

3.7 Data Collection and Analysis

The data is collected by self-administered an online questionnaire with 355 secondary school teachers in Hong Kong. All participants can speak, read, and write English, age between 20 to 60, and teaching in secondary schools in Hong Kong.

The participants are selected by simple random sampling method according to the list of secondary schools in the 18 districts of the Education Bureau. The questionnaire is sent out by email or WhatsApp and mailed to 300 secondary school teachers. They were volunteered and unpaid to participate in the study after the researcher contacted them by phone or email. They may skip any questions they do not want to answer, and they may end the survey at any time.

Two weeks after the questionnaire was sent out, the participants were asked by email or telephone whether they had received the online questionnaire. Those who did not receive or lost it should be resent or emailed and the date of submission of the questionnaire was reminded. All the questionnaires were submitted by the online method and the data will automatically be stored in the Excel form electronically.

The online questionnaire is the most effective way to directly collect target participant data. It can reach the number of target participants more effectively, increase the response rate, speed up analysis time, and reduce time costs. Besides, its advantages are discussed as follows.

(a)   Saves time and effort

Paper questionnaires require a lot of manpower from making papers, issuing questionnaires, rewinding to analyzing. In addition, the researcher must visit the participants one by one after completing the questionnaire. Assist in filling out, and the sorting and subsequent analysis after rewinding is even more impossible to measure. Online questionnaires can save the above-mentioned time, cost, and can complete paper preparation and analysis through digital tools. Moreover, it can use the Internet to find more target participants and speed up the rollback time.

(b)   Reduce survey costs

Paper questionnaires need to spend a lot of paper printing, sending, and data key in costs and the results may not be satisfactory. Online questionnaires only need to spend a very small amount of fees and enjoy a questionnaire that is fast, highly interactive, and has a simple design interface. In addition, through the Internet, the original survey time of one week to several weeks can be reduced to 24 hours.

(c)   More attractive and interactive

Compared with paper questionnaires, online questionnaires can quickly insert pictures and colour designs. The researcher may select a template to speed up the questionnaire's design process. It is convenient and fast. In addition, online questionnaires also have the advantage of high interactivity. Videos and pictures can be placed in the questionnaire, and there is also real-time interaction to increase the willingness to fill the questionnaire.

(d)   Highly private and credibility

The researcher needs to wait for the participants to fill the paper questionnaire, it is very likely to indirectly cause pressure on the participants and prevent them from answering the true answer. After using the online questionnaire, the participants are willing to give true answers due to the increase in privacy and unlimited answering time and increase the credibility of the return.

(e)   More effective real-time analysis

After collecting the questionnaire, it can help the researcher to conduct complex and multi-dimensional analysis through the real-time analysis function.

After the respondents submitted the completed online questionnaire, the quantitative data were analyzed with the SPSS version 25 statistical software package. The analysis is aimed at understanding the job satisfaction and motivation amongst secondary school teachers in Hong Kong. It may help to explore the strategies to enhance their levels of job satisfaction and motivation to benefit students and society. The following analysis techniques are used and discuss as follows.

(a)   Descriptive Statistics

The function of descriptive statistics is data reduction. When there are a lot of original data, it is difficult to understand the information and meaning contained in the data without organizing and collating it. Using some basic descriptive statistics, these data can be condensed to give us some basic information. However, data may lose some information after reduction. Different descriptive statistics can present the same data in different ways. Therefore, it is important to choose suitable descriptive statistics to appropriately present the data. The main purpose of this analysis is to understand the basic characteristics of the participants, such as mean, standard deviation, variance, percentage, skewness, kurtosis, and so on.

(b)   Cross-tabulation

It is most often used to analyze categorical or nominal data. It is a two or more-dimensional table that records the number (frequency) of respondents that have the specific characteristics described in the cells of the table. It provides a wealth of information about the relationship between the variables.

(c)   Quantile-quantile Plot (Q-Q plot)

Q-Q plot is a graphical tool to assess whether a set of data plausibly came from some

theoretical distribution such as a normal or exponential. If the assumption of the dependent variable is normally distributed, then the line is roughly straight. It is just a visual check and somewhat subjective. However, it allows seeing at-a-glance if the assumption is plausible or not.

(d)   Pearson's Correlation

Pearson's correlation is used to analyze the degree of correlation between the two variables. It is a statistical method to analyze the direction and degree of the relationship between variables, and the correlation coefficient represents the degree of closeness between two variables. The correlation coefficient is between -1 and +1. The positive and negative signs indicate the direction of correlation, the negative correlation indicates that the slope of linear correlation is negative, and the positive correlation indicates that the slope of linear correlation is positive.

(e)   Independent sample t-test

Whether the characteristics of the two groups are consistent or not can often be judged by the expected value of the characteristics of the two groups. The independent sample T-test is a commonly used statistical method to test whether the expected values of two population characteristics are equal. This method is suitable for testing the difference between two groups of averages, such as comparing the difference in job satisfaction of secondary school teachers of different bandings.

3.8   Rigorousness of the Data

It is important to use appropriate research as a tool to meet the stated objectives of the study. The data collection tool (questionnaire in this study) should produce information at the appropriate level of precision and detail needed for addressing the research questions. The researcher should adopt multiple approaches (Seale & Silverman, 1997) to the study to enhance the level of rigor in quantitative research. Statistical tests should be used to check reliability and validity and confirm the accuracy of the findings.

The data collection process of the quantitative method is easy to be sloppy and perfunctory. It is easy to collect hundreds of questionnaires, but the data is not necessary highly credible. In fact, it is difficult to check who is filling out the questionnaire. People are often receiving a lot of questionnaires. Because they are too busy at work and have no time to reply to these questionnaires, they often must fill out these forms due to favours or answer randomly. Moreover, some participants are not telling the truth or fill out the answers unceremoniously.

In addition, the quantitative approach is often oversimplifying the problem. Many humanistic issues are often intricate and complicated, and it is difficult to analyze the issues in a linear causal relationship. It is easy to produce conclusions but at the expense of in-depth analysis of the nature of the problem. Linear causality can easily over-simplify our understanding of the connotation of the problem. It is impossible to have good medicine to cure all diseases. It is silly to think there are universal laws in the world. Any knowledge must be able to adapt to changes, and the method of application should be modified according to people, events, places, and times. A few simple laws of causality cannot understand complex social phenomena. Although the quantitative approach shows the limits of the sample that can be inferred, it still claims that its theory is universally applicable within the scope of inference.

Therefore, the researcher should employ the following strategies to enhance the accuracy of the data analysis, interpretations, and conclusions.

(a)   Credibility

After collecting the data and doing a preliminary analysis, the researcher will discuss the method of analysis with his or her supervisor to check whether the results and the conclusion reflect reality.

(b)   Transferability

The researcher may ask an experienced scholar to check whether the findings of the study are applicable in another context or setting. Besides, the data are analyzed and checked whether

the information obtained is sufficient to reflect the real situation and achieve the generalization of the research.

(c) Dependability

The researcher may invite an experienced scholar to follow the process and procedures that the researcher used in the study. In the process of data analysis, an experienced scholar will assist in checking whether the classification is appropriate to increase the reliability and consistency of data analysis.

(d) Confirmability

The findings, conclusions and recommendations are supported by the data and that there is an internal agreement between the researcher's interpretations and the actual evidence. The findings come from the participants and the context of the research, rather than from the researcher's own motivations, opinions, interests, or prejudices in the entire research process to enhance the rigorousness of the data.

3.9 Pilot Study

The designed questionnaire can be regarded as a preliminary questionnaire. Before the formal test, several experts in education field should be invited to check whether the content of the questionnaire is appropriate and whether it can fully express the answers required for the research purpose, and then modify it according to the experts' suggestions. After the revision, researcher can ask some respondents for the pilot study. At this time, the researcher had better conduct the survey in person and communicate with the pilot study sample to easily find out whether the sample found any flawed questions in the process of answering, including the semantic meaning. If the wording is unclear or easily misunderstood, the researcher can correct or delete these questions according to the responses of the samples, and the corrected questionnaire is the official questionnaire.

After the above process is over, researchers will find a group of 50 samples to conduct a

formal pre-test, then use statistical methods to analyze the test items, test the reliability and validity, and finally decide each item. It is necessary to complete a formal questionnaire only if it is necessary to leave or revise. Validity of the questionnaire may be improved owing to the high ability of secondary school teachers. They can provide some useful suggestions or comments.

It is important to construct an effective questionnaire to enhance its reliability and validity. Therefore, the following steps should be adopted before the formal implementation of the questionnaire survey. Researcher invited 50 teachers from a Band 3 secondary as pilot study samples and implemented the questionnaire pilot study in advance to ensure that the appropriateness of the questionnaire. The pilot study is carried out according to the following steps.

(1) Ask the pilot study samples to fill in the questionnaire without any prompt. They can express opinions to the researcher on any issue at any time.

(2) After completing the questionnaire, explore the opinions of the pilot study samples and conduct further discussions with experts to make sure the questions are clear and without any ambiguous.

(3) Review the pilot study questionnaires with experts and scholars, pick out invalid questionnaires and explore their causes, further check the content of the question, delete the question item, or correct the semantics.

Pilot study allow researcher to design and execute large-scale study with as much methodological rigour as possible and can save time and costs by reducing the risk of errors or problems. It is common in quantitative research but is also frequently used by qualitative research. There are many advantages for pilot study. First of all, it can identify or improve a research question or set of questions. Secondly, it can identify and evaluate sample populations, research area websites, or datasets. Thirdly, it can test research tools (Muresherwa & Jita, 2022)

such as questionnaires, interviews, or discussion guides for focus groups. Fourthly, it can identify and resolve as many potential problems or difficulties as possible. Fifthly, it can estimate the time, cost of the research, and assess whether the research designs are realistic. Finally, it can produce preliminary results that facilitate access to funding and other forms of institutional investment.

3.9.1 Study design and participants

The polit study was based on two written questionnaire survey in job satisfaction and work extrinsic and intrinsic motivation. Data were collected from a Band 3 secondary school in Hong Kong on 8 January 2021. All teachers were contacted to participate on the online questionnaire survey. Fifty teachers were participated in the survey and signed the informed consent form physically. No reminder was sent out.

3.9.2 Data analysis

Analyses were performed using SPSS version 25. A descriptive analysis was performed concerning the 9 facets of the job satisfaction scale and 6 facets of work motivation. Means, standard deviation, skewness, kurtosis, and Cronbach's alpha as well as a summarization of the participants were reported. Moreover, the overall job satisfaction scores as well the work motivation score were calculated. The overall score of job satisfaction varies between 6 (no stress) and 30 (very stressful). The score of work motivation ranges between 11 (lowest reward) and 55 (high level of reward). Independent t test will be used for significant difference analyses for various demographic variables. The relationship between dependent variable 'overall job satisfaction' as well as the independent variables were presented. Pearson's correlation was used to find out which the independent variables individual characteristics, workload, aspect of job satisfaction and effort, reward and overcommitment showed a significant correlation with the dependent variable 'overall job satisfaction'. Afterwards, an alpha level of $P < 0.05$ was used

for tests of statistical significance.

The independent samples t test is used to compare the means of two subsets of demographic data. For example, it may find out whether the job satisfaction scores of males and females are significant different or not. If the collected data are less than 30, then reliable conclusions about reality cannot be guaranteed. Since there were only 50 samples participating in the pilot study, it may not have enough data for analysis the significant differences between subgroups.

3.9.3 Results of pilot study

There were 50 teachers to participate in the pilot study on 8 January 2021 in Hong Kong. Participants were teachers come from a Band 3 secondary school and teaching currently in Hong Kong. They were selected by simple random sampling and participated by voluntary and unpaid. They have the right to withdraw at any time.

The questionnaire lasts for 10 minutes to complete online. It is made up of closed-ended questions in defining area to be explored. It is divided into 3 parts, including 36 questions that determined the level of job satisfaction, 18 questions that determined the work extrinsic and intrinsic motivation, and 11 demographic questions.

The demographic characteristics of participants for the pilot study were shown in Table 3.9.1. The male (48.0%) and female (52.0%) participants were proportional to the gender distribution of secondary school teachers in Hong Kong (Census and Statistics Department, 2020). Married participants were equal to single participants, and they accounted for 92.0% of the participants. The age of participants between 31 and 50 was accounts for 62.0%.

Participants were worked for less than or equal to 5 years, 6 to 15 years, 16 to 25 years, and more than or equal to 26 years account for 18.0%, 40.0%, 26.0%, and 16.0% respectively. Graduate Master were accounted for 66.0% and Senior or Principal Graduate Master were accounted for 22.0%. Participants' monthly family income less than or equal to $40,000,

$40,001 to $70,000, $70,001 to $100,000, and more than or equal to $100,00 were accounted for 14.0%, 40.0%, 42.0%, and 4.0% respectively.

Table 3.9.1: Demographic characteristics of participants for pilot study

Characteristics of participants (n = 355)		Number	Percentage (%)
Gender	Male	24	48.0
	Female	26	52.0
Marital status	Single	23	46.0
	Married	23	46.0
	Widowed / Divorced	4	8.0
Age	≤ 30	9	18.0
	31-40	20	40.0
	41-50	13	26.0
	≥ 51	8	16.0
Years of full-time teaching	≤ 5	9	18.0
	6-15	20	40.0
	16-25	13	26.0
	≥ 26	8	16.0
Rank	Contract	6	12.0
	GM	33	66.0
	SGM	9	18.0
	PGM	2	4.0
Family monthly income	$\leq \$40,000$	7	14.0
	$40,001–$70,000	20	40.0
	$70,001–$100,000	21	42.0
	$\geq \$100,000$	2	4.0
Number of children	None	22	44.0
	1	18	36.0
	2	8	16.0
	≥ 3	2	4.0
Working hours per week	≤ 25	1	2.0
	26-40	7	14.0
	41-55	39	78.0
	≥ 56	3	6.0
Highest qualification	Bachelor	5	10.0
	PCEd / PGDE	19	38.0
	Master	26	52.0
	EdD / PhD	0	0.0
Administrative role	None	20	40.0
	Panel Head	20	40.0
	Functional Head	7	14.0
	Assistant / Vice Principal	3	6.0

Source: Data from pilot study

44.0% of the participants did not have children. They have one child, two children, and three children or more were accounted for 36.0%, 16.0% and 4.0% respectively. The working hours per week 26 to 40 hours, 41 to 55 hours, and more than or equal to 56 hours were accounted for 14.0%, 78.0%, and 6.0% respectively.

Participants with Postgraduate Certificate or Diploma in Education and Master were accounted for 38.0% and 52.0% respectively. In fact, teachers in secondary schools with a bachelor's degree or above are accounted for 99.2% (Census and Statistics Department, 2020) in 2020. 40.0% of the participants were not taking any administrative role in school, while 60.0% of teachers were bear the duties of panel head, functional head, and assistant or vice principals. All participants of pilot study are coming from a Band 3 school in Hong Kong.

The Cronbach's alpha of six subscales of motivation is 0.170 which indicated unacceptable reliability or consistency. The Cronbach's alpha of each subscale is shown in Table 3.9.2. If a factor's value of alpha is lower than 0.5, then it should be revised or discarded.

Table 3.9.2: Cronbach's alpha of six subscales of motivation

Subscales	Cronbach's alpha if item deleted
Intrinsic motivation	0.586
Integrated regulation	0.522
Identified regulation	0.081
Introjected regulation	0.173
External regulation	-0.220
Amotivation	-0.253
Motivation	0.033

Source: Data from pilot study

Table 3.9.3 shown that identified regulation (M = 4.29, σ = 0.639), external regulation (M = 4.27, σ = 0.699), and amotivation (M = 4.25, σ = 0.669) were rated as the three highest scores for secondary school teachers. Intrinsic motivation (M = 4.02, σ = 0.682) was the least score

for participants. Both skewness and kurtosis were close to zero which indicate that the motivation were normally distributed.

Table 3.9.3: The means, standard deviations, skewness, and kurtosis of motivation

Subscale	Mean	Standard Deviation	Skewness	Kurtosis
Intrinsic motivation	4.02	0.682	0.408	-0.239
Integrated regulation	4.15	0.629	0.150	-0.604
Identified regulation	4.29	0.639	-0.300	-0.308
Introjected regulation	4.22	0.637	-0.384	-0.468
External regulation	4.27	0.699	-0.416	0.615
Amotivation	4.25	0.669	0.123	0.411
Motivation (W-SDI)	-0.87	2.891	-0.232	-0.393

Source: Data from pilot study

There were weak correlations among six subscales of motivation. Intrinsic regulation displayed moderate correlations to identified regulation (0.506) as shown in Table 3.9.4. Besides, identified regulation displayed very week correlations to introjected regulation, external regulation, and amotivation (0.081, 0.065 and 0.156). External regulation displayed very week negative correlation to amotivation (-0.064).

Table 3.9.4: Correlations among six subscales of motivation

	IM	INTEG	IDEN	INTRO	EXT
INTEG	0.173				
IDEN	-0.180	0.204			
INTRO	0.506**	-0.007	0.081		
EXT	0.079	0.109	0.065	0.127	
AMO	0.183	0.175	0.156	0.117	-0.064

** Correlation is significant at the 0.01 level (two-tailed).

Source: Data from pilot study

The following formula was used to calculate the motivation score for each participant. The work motivation score is calculated by the following formula of work self-determination index (W-SDI). W-SDI = (3 x IM) + (2 x INTEG) + (1 x IDEN) - (1 x INTRO) - (2 x EXT) - (3 x AMO) (Vallerand, 1997). The total score is the average of self-determined subscales and self-

determined subscale, range from -36 to 36. The higher the score on the scale, the higher the work motivation.

It indicates an individual's relative level of self-determination on the continuum. It can assess the individual's level of self-determination and the motivation profile from the total score of W-SDI. It is also useful to compare between individuals or groups of people and their motivation profiles in the study.

Table 3.9.5 shown that only 40.0% was categorized as motivated secondary school teachers, while categorized as less motivated was 60.0% of the participants. There were no lowly motivated participant or highly motivated participant. A negative W-SDI score (-0.87 ± 2.891) indicates poor work motivation on average.

Table 3.9.5: Frequency distribution of motivation scores

Motivational score (M)	Description	Frequency	Percentage
$-36 \leq M < -18$	Lowly motivated	0	0 %
$-18 \leq M < 0$	less motivated	30	60.0 %
$0 \leq M < 18$	motivated	20	40.0 %
$18 \leq M < 36$	Highly motivated	0	0 %

Source: Data from pilot study

The Job Satisfaction Survey (JSS) is used to measure the level of job satisfaction of secondary school teachers in Hong Kong. It consists of a 36-item Likert-scale questionnaire that assesses nine subscales (pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication) to assess individuals' attitudes about their job and job-related aspects. The totally disagree and totally agree is assigned for 1 and 6 respectively to calculate the participant's score on the job satisfaction, hence the mean, standard deviations, skewness, and kurtosis for each subscale were found and shown in Table 3.9.6.

Table 3.9.6: The mean, standard deviation, skewness, kurtosis, and alpha of JSS subscales

Subscale	Mean	Standard Deviation	Skewness	Kurtosis	Cronbach α
Pay	14.28	1.727	-0.676	0.079	0.678
Promotion	13.86	1.784	0.175	-0.033	0.646
Supervision	13.88	2.047	-0.159	0.358	0.697
Fringe benefits	13.42	1.655	-0.008	-0.343	0.666
Contingent rewards	13.72	1.750	0.306	-0.533	0.663
Operating procedures	14.08	2.165	-0.308	0.163	0.624
Coworkers	13.80	2.176	0.168	-0.720	0.639
Nature of work	14.50	2.003	0.381	-0.738	0.686
Communication	13.26	2.275	0.131	-0.098	0.661
Job satisfaction	124.80	7.987	0.402	-0.352	0.512

Source: Data from pilot study

Nature of work has the highest mean score and high standard deviation (M = 14.50, σ = 2.003). Participants are most satisfied with their nature of work. High standard deviation indicates the score tend to be far from the mean of the data set. Communication has the lowest mean score and high standard deviation (M = 13.26, σ = 2.275). Participants are most unsatisfied with the communication in the school. Principal need to improve the quality of communication between superiors and subordinates. It requires more mutual understanding amongst staff and share meaning of personal and organizational goals.

The mean and standard deviation of job satisfaction (M = 124.80, σ = 7.987) is just below the average score 126. It means more than half of the participants are not satisfied with their teaching jobs at this Band 3 secondary school. Principal should take action immediately to improve teachers' motivation and job satisfaction.

Skewness measures the degree and direction of asymmetry. A normal distribution has a skewness of 0. When the mean is greater than the median, the distribution has a positive skewness (0.402) and is skewed to the right. Kurtosis is a measure of the heaviness of the tails of the distribution. A distribution with kurtosis > 3 is called leptokurtic. Both skewness and kurtosis shown in Table 3.9.6 indicate that the collected data of JSS are closed to normally distributed.

The Cronbach's alpha of nine JSS subscales is range from 0.624 to 0.697 which indicated good reliability or consistency. Internal consistency reliability coefficient α of job satisfaction is 0.512.

The correlations between the JSS subscales showed that they were low positive correction in Table 3.9.7. Coworkers were negatively related to pay, supervision, and fringe benefits. Nature of work were also negatively related to pay, supervision, fringe benefits, and contingent rewards.

Table 3.9.7: Correlations among nine JSS subscales

	Pay	Promotion	Supervision	Fringe	Rewards	Operating	Coworker	Nature
Promotion	0.344							
Supervision	0.246	0.208						
Fringe	0.108	0.214	0.166					
Rewards	0.202	0.085	-0.055	0.337				
Operating	0.174	0.172	0.085	0.401	0.200			
Coworker	-0.077	0.192	-0.326	-0.016	0.296	0.424		
Nature	-0.384	0.197	-0.219	-0.120	-0.186	0.052	0.427	
Communication	-0.128	0.135	-0.291	-0.100	0.116	0.302	0.613	0.468

[**] Correlation is significant at the 0.01 level (two-tailed).
Source: Data from pilot study

Figure 3.9.1 has reflected the histogram of job satisfaction scores for 50 participants in pilot study. Histogram provides a visual estimation whether the distribution is normally distributed or not. It also gives an idea about skewness or symmetry (Das & Imon, 2016).

The mean for 50 participants is 124.8 which is 1.2 below the overall mean. Thus, less than 50% of the secondary school teachers were satisfied with their job. The standard deviation is 7.987 which indicates that the scores are spread out over a narrow range. The mode is 118 which indicates that it occurs the most often. The median is 123.5 which indicates that the middle scores of all participants. It was skewed positively (0.402) and approximated normally distributed.
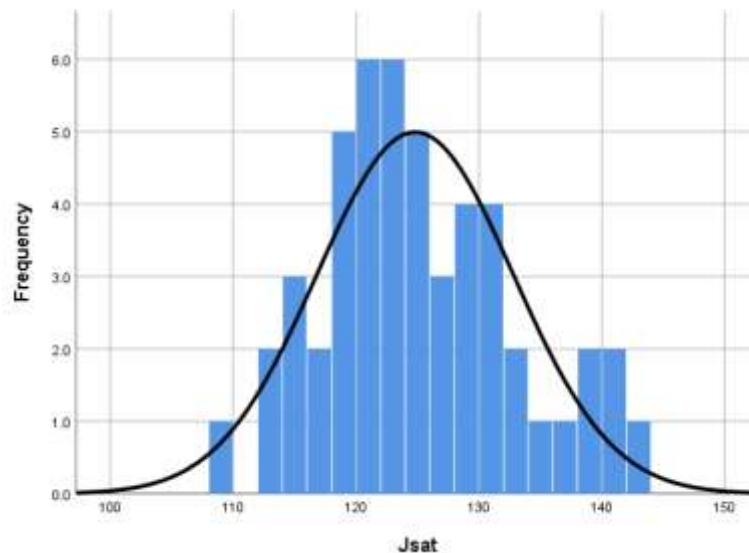
Figure 3.9.1: Histogram graph of job satisfaction for pilot study

The normal "Q-Q plot" as depicted in Figure 3.9.2 was a "graphical method of assessing normality" to the collecting data of job satisfaction scores for pilot study. It may also use to find the skewness or kurtosis of a distribution. Whereas the scatter has been falling as close to the straight-line with best possibility having no clear pattern coming away from the straight-line. Hence, the data has been taken as normally distributed. It is one of the most commonly used graphical tools for verifying whether a particular statistical distribution fits the data (Veleza & Morales, 2015).
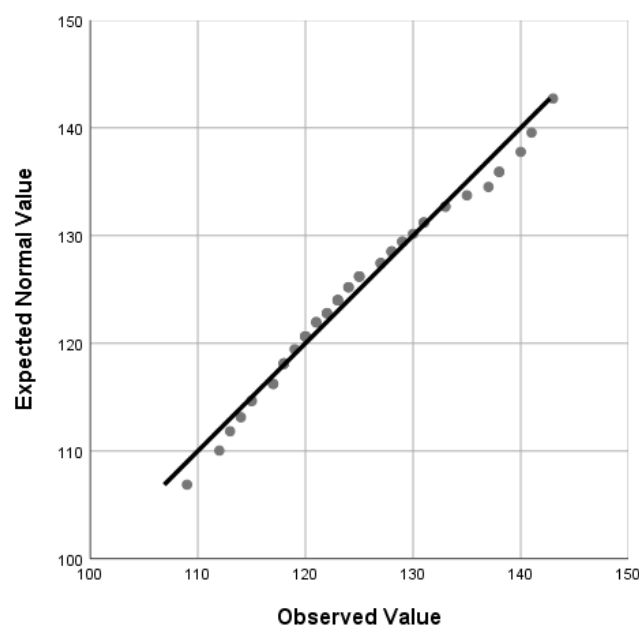
Figure 3.9.2: Normal Q-Q plot of job satisfaction for pilot study

Figure 3.9.3 shown the scatter plot with fit line of W-SDI by job satisfaction scores. Scatter plot can be used to determine whether a relationship is linear, detect outliers, and graphically present a relationship between two continuous variables. There is a linear relationship between the work motivation (W-SDI) and job satisfaction of the employees.

The higher the level of job satisfaction, the greater the motivation of teachers at work. Therefore, it is important for principals of schools to improve their teachers' motivation. Hence, teachers will be able to make better contribution to the school and enhance students' performance by carrying out their jobs in a positive and constructive ways. However, principals need to pay attention to other factors that can affect teachers' job satisfaction such as leadership style (Tentama, Subardjo & Dewi, 2020), school culture, and teacher commitment to the school.
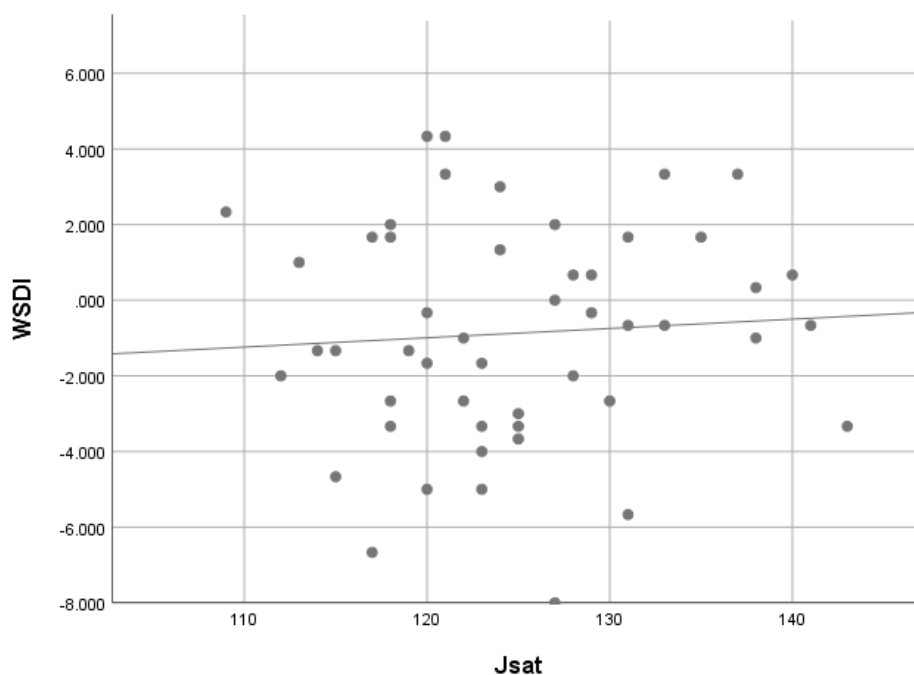
Figure 3.9.3: Scatter plot with fit line of W-SDI by job satisfaction scores for pilot study

Motivating employees is the responsibility of the principals and all senior staff. A school's most important asset is its people, and everyone must meet certain needs. Principals should keep employees motivated and should lead, coach, and motivate them. They should instruct

employees how to meet their own needs while achieving the organization's goals. When the employees are motivated, they will be happy at work and strive to be more productive. It is important to remember that everyone's needs are different. Therefore, the incentives that should be obtained are also slightly different.

3.9.4 Conclusion

This pilot study presents preliminary data that suggest that the study of motivation and job satisfaction of secondary school teachers in Hong Kong. The wordings of the questionnaire are free from ambiguity and misunderstanding. No further actions are needed for improvement or amendment. Therefore, the questionnaire is valid and reliable to use for collecting the data.

The pilot study concludes that teachers' motivation and job satisfaction are below average. The results might support the modification of the teaching profession in Hong Kong and could have implications for other level of education or other occupations in Hong Kong. It is important for government to invest in a continuing professional development to enhance teachers' motivation and job satisfaction. Based on the current pilot results, a national comprehensive study that includes different kind s of secondary schools to assess the level of motivation and job satisfaction is warranted.

3.10 Summary

This chapter has explained and discussed the research design, research strategy, and research method to answer the research questions. It also described the rationale for sampling the method, instrument, sample size, data collection, and data analysis procedures. The ethical issues and rigorousness of the data are discussed in detail. An online self-administered questionnaire is used to explore job satisfaction and motivation amongst secondary school teachers in Hong Kong.

A pilot study is an initial small-scale study that help researcher to decide how best to conduct a large-scale research study. It can identify or refine questions on the questionnaire, find out which approaches are best suited to the research questions, and estimate the time and resources needed to complete a larger version. The next chapter presents the quantitative findings obtained from the questionnaire data.

Chapter 4: Results' Reporting & Trustworthiness of Data

This chapter presents the results of the survey. The data is collected by a self-administered online questionnaire with 355 secondary school teachers. All participants able to speak, read and write Chinese and teach in secondary schools in Hong Kong. The participants are selected by random sampling. They were volunteered and unpaid to participate in the study after the researcher randomly contacted them by phone or email. They may skip any questions they do not want to answer, and they may end the survey at any time.

The aim of the study is to provide a deep understanding on job satisfaction and motivation amongst secondary school teachers in Hong Kong. It hopes to find out any differences among secondary school teachers toward job satisfaction and motivation related to demographic data such as gender, marital status, age, teaching experience, rank, monthly household income, number of children, working hours per week, education level, administrative role, and banding of school. It hopes to find valuable information of teachers' job satisfaction and motivation and acts as a springboard for further research related to other levels of teachers in Hong Kong.

The audiences of this study are policy makers, teacher training institutions, principals, and teachers at secondary schools, parents, and particularly to those people who are considering a career in secondary schools in a Chinese context. It may serve as a starting point for considering the career choice.

4.1 Trustworthiness of Data

The trustworthiness of data (Pouryazdan et al., 2017) is the cornerstone of each stage of research life cycle management. Validity and reliability of the measuring tool can ensure data quality and data integrity which is conducive to make informed decisions. If the reliability and validity of the data are poor, then the research cannot play an explanatory or descriptive function or verify issues that people already know.

4.1.1 Validity

Validity refers to the degree to which measurement tools or methods can accurately measure the things that need to be measured. It also refers to the degree to which the measured result reflects the content of the investigation. The more consistent the measurement result and the content to be investigated, the higher the validity. There are two types of validity: internal validity and external validity.

(a) Internal validity

It refers to the degree of clarity with which a certain relationship exists between the independent variable and the dependent variable in the study. If the relationship between the independent variable and the dependent variable is not affected by the existence of other variables, and thus becomes ambiguous or complicated, then this study has internal validity (Lin, Werner & Inzlicht, 2021). Hence, it may have a certain relationship between two or more variables under the study. It is true that the change of the independent variable caused the change of the dependent variable.

The research design should effectively control and eliminate the various variables that may be involved, so that variables that are not related to the research objectives have little or no impact on the research results. Therefore, the relationship between the independent variable and the dependent variable is definite and real, which means that a study has a high internal validity.

There are many factors that affect internal validity (Flannelly, Flannelly & Jankowski, 2018), including history, research subjects, research methods and procedures, and statistical regression effects. Hence, they should be controlled during research. The most effective way is to use randomization procedures. For various specific situations of scientific research, there will be certain differences in the types, numbers, and effects of factors that affect internal validity. They should be analyzed, estimated, identified, and adopted according to the specific conditions. Measures should be controlled or eliminated to improve the internal validity (Lopez-Cepero, 2020) of the research.

Therefore, the internal validity of the study will not be formed automatically. It is obtained mainly through research design, careful selection of variables, effective control of various variables, ensuring the definite relationship between research variables, and eliminating the influence of variables unrelated to the research objectives on the research results.

(b) External validity

It refers to the degree to which the research results can be generalized and universally applied to the population from which the sample comes and to other populations, that is, the representativeness and universal applicability of the research results and variable conditions, time, and background. It can be subdivided into overall validity and ecological validity.

The overall validity refers to the degree and ability of the research results to adapt to the population from which the research sample comes, or the general significance to the population. To make the research results applicable to the population, a sample must be selected randomly from the population so that the sample is representative of the population. If the selected samples are biased or too small to represent the population, the results will be difficult to summarize the characteristics of the population.

Ecological validity refers to the degree and ability of research results that can be generalized and adapted to other research conditions and scenarios. To make the research results applicable to other research conditions and scenarios (for example, the differences between independent and dependent variables, research procedures, research background, research time, and researchers), they must be specially designed to ensure that the conditions and scenarios are representative.

It is generally believed that internal validity is a necessary condition for external validity, but not a sufficient condition. Research results with low internal validity cannot be said to be universally meaningful to other scenarios. However, research results with high internal validity may not necessarily be generalized to other overalls and contexts. The important significance of scientific research is to discover the universal laws. Therefore, it is very important to improve

the external validity (Westreich et al., 2018) of research results. If the results are only adapted to a specific scope, specific measurement tools, specific research procedures, and specific research conditions, then their values and significances are not great. Therefore, the external validity and internal validity of the study are not inferior in importance.

There are four main factors affecting external validity: research subjects, variable definitions and testing, research methods and procedures, and experimenters. They are sometimes existing alone, and sometimes have several influences at the same time. To improve the external validity of the research, it must pay attention to eliminating and controlling the various influencing factors in the research. The requirement of external validity is that the research can meet the objective conditions and be applicable to a larger population. Among them, the key part is to do a good job of sampling. Sampling work includes not only the sampling of subjects, but also the selection of representative research background, research tools, research procedures, and time. The closer the sampling background is to the actual scenario, the stronger the availability, applicability, and generalization of the research results. Generally speaking, random sampling, increasing the degree of simulating realistic scenarios, using a variety of related research methods, and changing research conditions to seek universally meaningful conclusions are important conditions for obtaining external validity and improving the applicability of research results.

4.1.2 Reliability

When the same evaluation tool is used for the same object in the evaluation process, the evaluation results are the same to the extent that the evaluation is repeated. Reliability (Mohajan, 2017) refers to the consistency or stability of the scores measured by a test or scale. It indicates whether the items used in the assessment are consistent with each other. Stability represents the degree to which the scores of the same group of subjects on the same test or scale repeated

multiple times must be consistent. The same research object, the same questionnaire, within a certain period of time, the degree of consistency of the measurement.

There are several factors affecting reliability. The more questions a test has (within an appropriate limit and in line with the requirements of homogeneity), the higher its reliability. Under the same other conditions, the wider the range of the trait distribution of the basic units (members in the group) within the research group, the greater the reliability coefficient. Besides, the test environment: factors such as ventilation, temperature, humidity, light, sound, desktop, and space may affect the reliability. Test content factors such as test question design, consistency, number of questions may also affect the reliability. Retest or duplicate method may use to obtain the reliability. The shorter the interval between the two tests, the higher the reliability.

The researcher may submit the questionnaire to relevant experts or scholars to evaluate the suitability of the question to enhance its reliability. When evaluating a specific construct, multiple indicators or items should be used to increase the chance of obtaining the broad connotation of construct. Besides, the prediction of the questionnaire must be executed and repeated if the target is not reached.

Reliability analysis (Taylan, Ozkan & Celik, 2020) is used to measure whether the sample answer is reliable and whether the sample has answered scale items (it is only for scale data, and non-scale data is generally not subject to reliability analysis). If the Cronbach's reliability coefficient (Ozyurek, Kahraman & Pekdogan, 2020) is above 0.8, the reliability of the test or scale is very good; the reliability coefficient above 0.7 is acceptable; if it is above 0.6, the scale should be revised, but its value is still not lost. If it is lower than 0.6, the scale needs to be redesigned.

4.1.3 Objectivity

The researchers must remain calm and independent when collecting and interpreting data. If they cannot remain objective and independent, they can selectively collect data and ignore

any data that does not conform to their pre-existing ideas. Therefore, they should take a more practical post-positivist standpoint in terms of objectivity. They need to be objective as much as possible. In fact, quantitative research adopts structured procedures and formal instruments for data collection. The data are collected objectively and systematically (Queiros, Faria & Almeida, 2017).

4.1.4 Reproducibility

If the universe is organized in an orderly and consistent way of positivism, then results should be repeatable. Reproducibility (Park et al., 2019) is generally considered essential to research. It is not accepted that the results of a single study are valid. Instead, different researchers can replicate results in different locations and under similar conditions.

4.1.5 Parsimony

All collected data should be interpreted in the simplest and most concise form. It should avoid unnecessary complicated explanations. If it has two or more competing theories that can explain the data well, then the simplest theory is the best. It is wise to describe a simple explanation of the observations (Jansson & Tallant, 2016).

4.2 Demographic Characteristics of Participants

There were 355 teachers to participate in the survey from the 12 February to 31 March in 2021 in Hong Kong. Participants were secondary school teachers and teaching currently in Hong Kong. They were selected by simple random sampling and participated by voluntary and unpaid. They have the right to withdraw at any time.

The quantitative data through 6-point and 7-point Likert scale questions in the questionnaire were analyzed by the Statistical Package for Social Sciences (SPSS) Version 25.

The questionnaire lasts for 10 minutes to complete online. It is made up of closed-ended questions in defining area to be explored. It is divided into 3 parts, including 36 questions that determined the level of job satisfaction, 18 questions that determined the work extrinsic and intrinsic motivation, and 11 demographic questions.

The demographic characteristics of participants for the questionnaire were shown in Table 4.2. The male (58.3%) and female (41.7%) participants were opposite to the gender distribution of secondary school teachers in Hong Kong (Census and Statistics Department, 2020). Married participants were doubled of the single participants, and they accounted for 95.4% of the participants. The age of participants between 31 and 50 was accounts for 62.0%.

Participants were worked for less than or equal to 5 years, 6 to 15 years, 16 to 25 years, and more than or equal to 26 years account for 14.4%, 38.4%, 25.6%, and 21.1% respectively. Graduate Master were accounted for 77.7% and Senior or Principal Graduate Master were accounted for 12.7%. Participants' monthly family income less than or equal to $40,000, $40,001 to $70,000, $70,001 to $100,000, and more than or equal to $100,00 were accounted for 15.2%, 32.7%, 37.2%, and 14.9% respectively.

42.5% of the participants did not have children. They have one child, two children, and three children or more were accounted for 26.8%, 23.9% and 6.8% respectively. The working hours per week 26 to 40 hours, 41 to 55 hours, and more than or equal to 56 hours were accounted for 4.8%, 79.2%, and 15.8% respectively.

Participants with Postgraduate Certificate or Diploma in Education and Master were accounted for 45.6% and 45.1% respectively. In fact, teachers in secondary schools with a bachelor's degree or above are accounted for 99.2% (Census and Statistics Department, 2020) in 2020. Most (61.7%) of the participants were not taking any administrative role in school, while 39.3% of teachers were bear the duties of panel head, functional head, and assistant or vice principals. Participants are coming from different academic groupings of school.

Table 4.2: Demographic characteristics of participants for questionnaire

Characteristics of participants (n = 355)		Number	Percentage (%)
Gender	Male	207	58.3
	Female	148	41.7
Marital status	Single	112	31.5
	Married	227	63.9
	Widowed / Divorced	16	4.5
Age	≤ 30	57	16.1
	31-40	133	37.5
	41-50	87	24.5
	≥ 51	78	22.0
Years of full-time teaching	≤ 5	51	14.4
	6-15	138	38.9
	16-25	91	25.6
	≥ 26	75	21.1
Rank	Contract	34	9.6
	GM	276	77.7
	SGM	34	9.6
	PGM	11	3.1
Family monthly income	$\leq \$40,000$	54	15.2
	$40,001–$70,000	116	32.7
	$70,001–$100,000	132	37.2
	$\geq \$100,000$	53	14.9
Number of children	None	151	42.5
	1	95	26.8
	2	85	23.9
	≥ 3	24	6.8
Working hours per week	≤ 25	1	0.3
	26-40	17	4.8
	41-55	281	79.2
	≥ 56	56	15.8
Highest qualification	Bachelor	32	9.0
	PCEd / PGDE	162	45.6
	Master	160	45.1
	EdD / PhD	1	0.3
Administrative role	None	219	61.7
	Panel Head	75	21.1
	Functional Head	46	13.0
	Assistant / Vice Principal	15	4.2
Banding of students	Band 1	70	19.7
	Band 1-2	68	19.2
	Band 2	74	20.8
	Band 2-3	73	20.6
	Band 3	70	19.7

Source: Data from questionnaire

4.3 Job Satisfaction of Secondary School Teachers

The Job Satisfaction Survey (JSS) developed by Spector (1985) is used to measure the level of work satisfaction of secondary school teachers in Hong Kong. It consists of a 36-item Likert-scale questionnaire that assesses nine subscales (pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication) to assess individuals' attitudes about their job and job-related aspects. The totally disagree and totally agree is assigned for 1 and 6 respectively to calculate the participant's score on the job satisfaction, hence the mean, standard deviations, skewness, and kurtosis for each subscale were found and shown in Table 4.3.1.

Pay has the highest mean score and low standard deviation (M = 15.434, σ = 0.595). Participants are most satisfied with their pay. Low standard deviation indicates the score tend to be close to the mean of the data set. Operating procedures has the lowest mean score and low standard deviation (M = 13.403, σ = 0.628). Participants are most unsatisfied with the operating procedures in the school.

The mean and standard deviation of job satisfaction (M = 131.24, σ = 15.446) is just above the average score 126. It means more than half of the participants are satisfied with their teaching jobs at secondary school.

Table 4.3.1: The mean, standard deviation, skewness, kurtosis, and alpha of JSS subscales

Subscale	Mean	Standard Deviation	Skewness	Kurtosis	Cronbach α
Pay	15.434	2.380	0.459	1.166	0.809
Promotion	14.051	2.535	0.040	1.268	0.813
Supervision	14.834	3.126	0.040	1.268	0.781
Fringe benefits	14.563	2.637	0.602	0.707	0.803
Contingent rewards	14.538	2.764	0.402	1.059	0.792
Operating procedures	13.403	2.513	-0.664	1.620	0.845
Coworkers	14.820	2.592	0.596	0.530	0.799
Nature of work	14.854	2.251	0.163	-0.247	0.831
Communication	14.741	2.989	0.766	1.108	0.791
Job satisfaction	131.24	15.446	1.554	3.774	0.867

Source: Data from questionnaire

Skewness measures the degree and direction of asymmetry. A normal distribution has a skewness of 0. When the mean is greater than the median, the distribution has a positive skewness (1.554) and is skewed to the right. Kurtosis is a measure of the heaviness of the tails of the distribution. A distribution with kurtosis > 3 is called leptokurtic. When comparing to a normal distribution, its central peak is higher and sharper, and its tails are longer and fatter. Both skewness and kurtosis shown in Table 4.3.1 indicate that the collected data of JSS are closed to normally distributed.

The Cronbach's alpha of nine JSS subscales is range from 0.781 to 0.845 which indicated good reliability or consistency. Internal consistency reliability coefficient α of job satisfaction is 0.867.

The correlations between the JSS subscales showed that they were highly significant in Table 4.3.2. Nature of work was negatively related to operating procedures.

Table 4.3.2: Correlations among nine JSS subscales

	Pay	Promotion	Supervision	Fringe	Rewards	Operating	Coworker	Nature
Promotion	0.423**							
Supervision	0.441**	0.438**						
Fringe	0.493**	0.343**	0.493**					
Rewards	0.389**	0.400**	0.609**	0.466**				
Operating	0.006	0.230**	0.259**	0.061	0.275**			
Coworker	0.401**	0.285**	0.489**	0.389**	0.435**	0.097		
Nature	0.165**	0.148**	0.290**	0.270**	0.195**	-0.175**	0.397**	
Communication	0.407**	0.290**	0.595**	0.418**	0.530**	0.170**	0.616**	0.312**

** Correlation is significant at the 0.01 level (two-tailed).
Source: Data from questionnaire

Figure 4.3.1 shown the histogram of job satisfaction scores for 355 participants. The overall mean, mode, and median of job satisfaction scores were 131.24, 125, and 128.00, respectively. It helps researchers and readers to see whether the data are normally distributed and identify trends of patterns. Therefore, it is an extremely effective way to summarize large quantities of data.
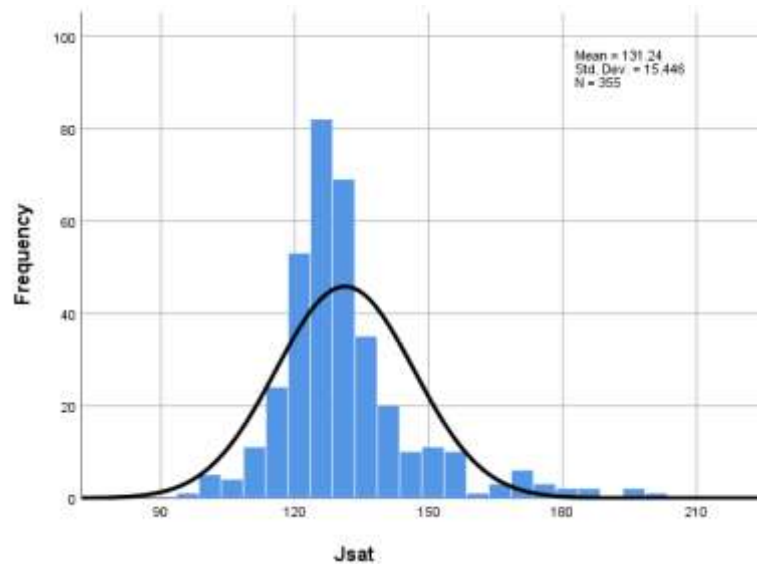
Figure 4.3.1: Histogram of job satisfaction scores

Source: Data from questionnaire

The normal Q-Q plot as shown in Figure 4.3.2 was an alternative graphical method of assessing normality to the histogram. The scatter was lie as close to the straight line as possible with no obvious pattern coming away from the straight line. Hence, the data were considered normally distributed.
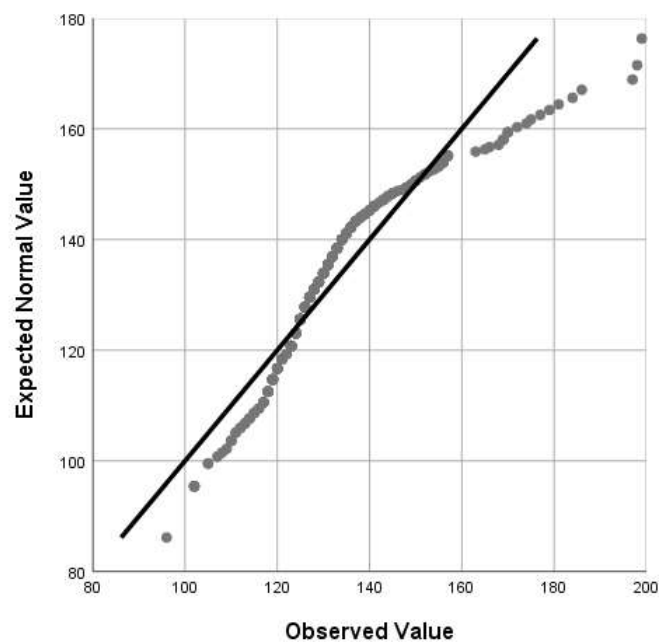
Figure 4.3.2: Normal Q-Q plot of job satisfaction scores

Source: Data from questionnaire

Table 4.3.3 shown the relationships between job satisfaction subscales and gender. Pay (M = 15.309, σ = 2.467), supervision (M = 14.966, σ = 2.948), and coworkers (M = 14.870, σ = 2.475) were rated as the three highest levels of job satisfaction subscales for male participants in secondary schools. The least satisfied for male participants is operating procedures (M = 13.546, σ = 2.316).

The three highest levels of job satisfaction subscales for female participants were pay (M = 15.608, σ = 2.249), nature of work (M = 15.007, σ = 2.299), and communication (M = 14.878, σ = 3.099). The least satisfied for female participants is operating procedures (M = 13.203, σ = 2.760).

The job satisfaction score for male was slightly higher than that of female. The scores of promotion, supervision, fringe benefits, operating procedures, and coworkers for male were also slightly higher than that of female.

Table 4.3.3: Mean of the job satisfaction subscales and gender

Gender	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
Male	mean	15.309	14.188	14.966	14.686	14.478	13.546	14.870	14.744	14.643	131.43
207	Std. dev	2.467	2.352	2.948	2.703	2.463	2.316	2.475	2.216	2.911	14.237
Female	mean	15.608	13.858	14.649	14.392	14.622	13.203	14.750	15.007	14.878	130.97
148	Std. dev	2.249	2.768	3.360	2.541	3.107	2.760	2.755	2.299	3.099	17.039
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

Table 4.3.4 shown there were no significant differences between the pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, job satisfaction, and gender.

Table 4.3.4: Independent samples t-test of job satisfaction subscales and gender

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	1.907	0.168	-1.167	353	0.244
	Equal variances not assumed			-1.186	332.961	0.237
Promotion	Equal variances assumed	1.822	0.178	1.211	353	0.227
	Equal variances not assumed			1.179	283.978	0.239
Supervision	Equal variances assumed	1.934	0.165	0.943	353	0.346
	Equal variances not assumed			0.923	290.557	0.357
Fringe benefits	Equal variances assumed	0.427	0.514	1.036	353	0.301
	Equal variances not assumed			1.047	327.875	0.296
Contingent rewards	Equal variances assumed	4.166	0.042	-0.484	353	0.628
	Equal variances not assumed			-0.466	269.907	0.641
Operating procedures	Equal variances assumed	2.643	0.105	1.270	353	0.205
	Equal variances not assumed			1.234	281.400	0.218
Coworkers	Equal variances assumed	1.549	0.214	0.428	353	0.669
	Equal variances not assumed			0.420	295.370	0.674
Nature of work	Equal variances assumed	0.006	0.937	-1.085	353	0.279
	Equal variances not assumed			-1.078	309.637	0.282
Communication	Equal variances assumed	0.062	0.804	-0.733	353	0.464
	Equal variances not assumed			-0.725	304.491	0.469
Job satisfaction	Equal variances assumed	2.086	0.150	0.279	353	0.781
	Equal variances not assumed			0.270	280.505	0.787

Source: Data from questionnaire

Table 4.3.5 shown the relationships between job satisfaction subscales and marital status. Pay (M = 15.438, σ = 2.309), coworkers (M = 15.036, σ = 2.627) , and supervision (M = 14.973, σ = 3.463) were rated as the three highest levels of job satisfaction subscales for single participants in secondary schools. The least satisfied for single participants is operating procedures (M = 13.563, σ = 2.684).

The three highest levels of job satisfaction subscales for married participants were pay (M = 15.507, σ = 2.436), nature of work (M = 14.811, σ = 2.219), and coworkers (M = 14.806, σ = 2.572). The least satisfied for married participants is operating procedures (M = 13.260, σ = 2.416).

The three highest levels of job satisfaction subscales for windowed or divorced participants were supervision (M = 15.625, σ = 2.895), communication (M = 15.125, σ = 2.473), and nature of work (M = 14.750, σ = 1.949). The least satisfied for windowed or divorced participants is coworkers (M = 13.500, σ = 2.366).

The order of job satisfaction scores from the highest to lowest was single teachers, married teachers, and windowed or divorced, respectively.

Table 4.3.5: Mean of the job satisfaction score and marital status

Gender	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
Single	mean	15.438	14.313	14.973	14.625	14.955	13.563	15.036	14.955	14.938	132.79
112	Std. dev	2.309	2.658	3.463	2.579	2.772	2.684	2.627	2.369	3.222	16.745
Married	mean	15.507	13.912	14.709	14.555	14.392	13.260	14.806	14.811	14.617	130.57
227	Std. dev	2.436	2.519	2.965	2.700	2.738	2.416	2.572	2.219	2.905	15.111
Windowed	mean	14.375	14.188	15.625	14.250	13.688	14.313	13.500	14.750	15.125	129.81
16	Std. dev	1.893	1.721	2.895	2.206	2.414	2.522	2.366	1.949	2.473	9.638
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

Table 4.3.6 shown there were no significant differences between the pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, job satisfaction, and marital status.

Table 4.3.6: Independent samples t-test of job satisfaction score and marital status

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	0.009	0.924	-0.250	337	0.803
	Equal variances not assumed			-0.255	232.034	0.799
Promotion	Equal variances assumed	0.461	0.498	1.352	337	0.177
	Equal variances not assumed			1.328	210.868	0.186
Supervision	Equal variances assumed	2.820	0.094	0.729	337	0.467
	Equal variances not assumed			0.691	210.868	0.490
Fringe benefits	Equal variances assumed	0.005	0.943	0.228	337	0.820
	Equal variances not assumed			0.231	230.456	0.817
Contingent rewards	Equal variances assumed	0.069	0.793	1.774	337	0.077
	Equal variances not assumed			1.757	218.703	0.079
Operating procedures	Equal variances assumed	0.464	0.496	1.045	337	0.297
	Equal variances not assumed			1.008	201.701	0.314
Coworkers	Equal variances assumed	0.198	0.656	0.767	353	0.443
	Equal variances not assumed			0.762	217.035	0.447
Nature of work	Equal variances assumed	1.845	0.175	0.552	337	0.581
	Equal variances not assumed			0.540	208.723	0.590
Communication	Equal variances assumed	0.276	0.600	0.922	337	0.357
	Equal variances not assumed			0.890	201.943	0.375
Job satisfaction	Equal variances assumed	2.298	0.130	1.231	337	0.219
	Equal variances not assumed			1.188	202.094	0.236

Source: Data from questionnaire

Table 4.3.7 shown the relationships between job satisfaction subscales and age. Pay (M = 15.614, σ = 2.068), contingent rewards (M = 15.333, σ = 2.423), and supervision (M = 15.333, σ = 2.475) were rated as the three highest levels of job satisfaction subscales for less than or equal to 30 years old teachers. The least satisfied for less than or equal to 30 years old teachers is operating procedures (M = 13.877, σ = 2.493).

The three highest levels of job satisfaction subscales for 31 to 40 years old teachers were pay (M = 15.361, σ = 2.165), nature of work (M = 14.835, σ = 2.189), and supervision (M = 14.759, σ = 2.623). The least satisfied for 31 to 40 years old teachers are operating procedures (M = 13.877, σ = 2.211).

The three highest levels of job satisfaction subscales for 41 to 50 years old teachers were pay (M = 15.425, σ = 2.756), contingent rewards (M = 14.851, σ = 2.666), and fringe benefits (M = 14.713, σ = 2.753). The least satisfied for 41 to 50 years old teachers are operating procedures (M = 13.299, σ = 2.800).

The three highest levels of job satisfaction subscales for elder than or equal to 51 years old teachers were pay (M = 15.436, σ = 2.526), communication (M = 15.385, σ = 3.521), and coworkers (M = 15.256, σ = 2.965). The least satisfied for elder than or equal to 51 years old teachers is operating procedures (M = 13.013, σ = 2.651).

Table 4.3.7: Mean of the job satisfaction score and age

Age	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
≤ 30	mean	15.614	14.579	15.105	14.544	15.333	13.877	15.333	14.877	15.053	134.32
57	Std. dev	2.068	2.017	3.524	2.300	2.423	2.493	2.475	2.465	3.073	15.721
31-40	mean	15.361	13.774	14.759	14.331	14.008	13.496	14.489	14.835	14.331	129.38
133	Std. dev	2.165	2.411	2.623	2.376	2.436	2.211	2.382	2.189	2.619	12.675
41-50	mean	15.425	14.241	14.609	14.713	14.851	13.299	14.598	14.678	14.586	131.00
87	Std. dev	2.756	2.799	2.990	2.753	2.666	2.800	2.399	2.054	2.876	15.474
≥ 51	mean	15.436	13.923	15.013	14.808	14.513	13.013	15.256	15.064	15.385	132.41
78	Std. dev	2.526	2.734	3.736	3.129	3.353	2.651	2.965	2.425	3.521	18.968
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

The order of job satisfaction scores from the highest to lowest was less than or equal to 30 years old teachers, elder than or equal to 51 years old teachers, 41 to 50 years old teachers, and 31 to 40 years old teachers, respectively.

Table 4.3.8 shown promotion was significantly difference between less than or equal to 30 years old teachers (14.579 ± 2.017) and 31 to 40 years old teachers (13.774 ± 2.411), t(188) = 0.748, p = 0.028. The contingent rewards was significantly difference between less than or equal to 30 years old teachers (15.333 ± 2.423) and 31 to 40 years old teachers (14.008 ± 2.436), t(188) = 3.444, p = 0.001. The coworkers was significantly difference between less than or equal to 30 years old teachers (15.333 ± 2.475) and 31 to 40 years old teachers (14.489 ± 2.382), t(188) = 2.150, p = 0.033. The job satisfaction was significantly difference between less than or equal to 30 years old teachers (134.32 ± 15.721) and 31 to 40 years old teachers (129.38 ± 12.675), t(188) = 2.282, p = 0.024.

Table 4.3.8: Independent samples t-test of job satisfaction score and age

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2 -tailed)
Pay	Equal variances assumed	0.009	0.925	0.748	188	0.455
	Equal variances not assumed			0.762	110.604	0.448
Promotion	Equal variances assumed	2.147	0.145	2.209	188	0.028
	Equal variances not assumed			2.371	125.577	0.019
Supervision	Equal variances assumed	5.148	0.024	0.748	188	0.455
	Equal variances not assumed			0.666	83.754	0.507
Fringe benefits	Equal variances assumed	0.027	0.870	0.572	188	0.568
	Equal variances not assumed			0.579	109.278	0.564
Contingent rewards	Equal variances assumed	0.085	0.771	3.444	188	0.001
	Equal variances not assumed			3.451	106.539	0.001
Operating procedures	Equal variances assumed	0.038	0.846	1.047	188	0.297
	Equal variances not assumed			0.998	95.501	0.321
Coworkers	Equal variances assumed	1.291	0.257	2.150	188	0.033
	Equal variances not assumed			2.044	95.075	0.044
Nature of work	Equal variances assumed	3.719	0.055	0.118	188	0.906
	Equal variances not assumed			0.113	95.622	0.910
Communication	Equal variances assumed	1.024	0.313	1.651	188	0.100
	Equal variances not assumed			1.549	92.489	0.125
Job satisfaction	Equal variances assumed	5.010	0.026	2.282	188	0.024
	Equal variances not assumed			2.095	88.628	0.039

Source: Data from questionnaire

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between less than or equal to 30 years old teachers and 41 to 50 years old teachers or elder than or equal to 51 years old teachers.

Similarly, the contingent rewards was significantly difference between 31 to 40 years old teachers (14.008 ± 2.436) and 41 to 50 years old teachers (14.851 ± 2.666), $t(218) = -2.418$, $p = 0.016$. The pay, promotion, supervision, fringe benefits, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between 31 to 40 years old teachers and 41 to 50 years old teachers.

The coworkers was significantly difference between 31 to 40 years old teachers (14.489 ± 2.382) and elder than or equal to 51 years old teachers (15.256 ± 2.965), $t(209) = -2.061$, $p = 0.041$. The communication was significantly difference between 31 to 40 years old teachers (14.331 ± 2.619) and elder than or equal to 51 years old teachers (15.385 ± 3.521), $t(209) = -0.477$, $p = 0.014$. The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, nature of work, and job satisfaction were not significantly different between t31 to 40 years old teachers and elder than or equal to 51 years old teachers.

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between 41 to 50 years old teachers and elder than or equal to 51 years old teachers.

Table 4.3.9 shown the three highest levels of job satisfaction subscales for less than or equal to 5 years of working were pay ($M = 15.784$, $\sigma = 2.239$), contingent rewards ($M = 15.647$, $\sigma = 2.481$), and coworkers ($M = 15.529$, $\sigma = 2.781$). The least satisfied for less than or equal to 5 years of working is operating procedures ($M = 14.000$, $\sigma = 2.458$).

The three highest levels of job satisfaction subscales for 6 to 15 years of working were pay ($M = 15.297$, $\sigma = 2.200$), nature of work ($M = 14.790$, $\sigma = 2.143$), and supervision ($M = 14.703$,

σ = 2.538). The least satisfied for 6 to 15 years of working is operating procedures (M = 13.464, σ = 2.283).

The three highest levels of job satisfaction subscales for 16 to 25 years of working were pay (M = 15.297, σ = 2.523), nature of work (M = 14.747, σ = 2.137), and contingent rewards (M = 14.714, σ = 2.630). The least satisfied for 16 to 25 years of working is operating procedures (M = 13.209, σ = 2.702).

The three highest levels of job satisfaction subscales for more than or equal to 26 years of working were pay (M = 15.613, σ = 2.614), communication (M = 15.400, σ = 3.738), and coworkers (M = 15.333, σ = 2.942). The least satisfied for more than or equal to 26 years of working is operating procedures (M = 13.403, σ = 2.513).

The order of job satisfaction scores from the highest to lowest was less than or equal to 5 years of working, more than or equal to 26 years of working, 16 to 25 years of working, and 6 to 15 years of working, respectively.

Table 4.3.9: Mean of the job satisfaction score and years of working

Years	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
≤ 5	mean	15.784	14.569	15.451	14.804	15.647	14.000	15.529	14.922	15.431	136.14
51	Std. dev	2.239	2.110	3.646	2.482	2.481	2.458	2.781	2.505	3.195	16.683
6 – 15	mean	15.297	13.725	14.703	14.261	13.935	13.464	14.580	14.790	14.312	129.07
138	Std. dev	2.200	2.481	2.538	2.444	2.378	2.283	2.410	2.143	2.514	12.259
16 – 25	mean	15.297	14.154	14.527	14.527	14.714	13.209	14.363	14.747	14.462	130.00
91	Std. dev	2.523	2.595	2.865	2.465	2.630	2.702	2.317	2.137	2.713	14.148
≥ 26	mean	15.613	14.173	15.027	15.000	14.680	13.120	15.333	15.053	15.400	133.40
75	Std. dev	2.614	2.782	3.925	3.201	3.386	2.686	2.942	2.427	3.738	14.988
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

Table 4.3.10 shown promotion was significantly difference between less than or equal to 5 years of working (14.569 ± 2.110) and 6 to 15 years of working (13.725 ± 2.481), t(187) = 2.157, p = 0.032. The contingent rewards was significantly difference between less than or equal to 5 years of working (15.647 ± 2.481) and 6 to 15 years of working (13.935 ± 2.378), t(187) = 4.344, p = 0.000. The coworkers was significantly difference between less than or equal to 5 years of working (15.529 ± 2.781) and 6 to 15 years of working (14.580 ± 2.410), t(187) = 2.305, p = 0.022. The communication was significantly difference between less than or equal to 5 years of working (15.431 ± 3.195) and 6 to 15 years of working (14.312 ± 2.514), t(187) = 2.519, p = 0.013. The job satisfaction was significantly difference between less than or equal to 5 years of working (136.514 ± 16.683) and 6 to 15 years of working (129.07 ± 12.259), t(187) = 3.177, p = 0.007.

The pay, supervision, fringe benefits, operating procedures, and nature of work were not significantly different between less than or equal to 5 years of working and 6 to 15 years of working.

Table 4.3.10: Independent samples t-test of job satisfaction score and years of working

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	0.598	0.440	1.345	187	0.180
	Equal variances not assumed			1.334	87.948	0.186
Promotion	Equal variances assumed	1.499	0.222	2.157	187	0.032
	Equal variances not assumed			2.324	104.257	0.022
Supervision	Equal variances assumed	11.364	0.001	1.587	187	0.114
	Equal variances not assumed			1.349	68.716	0.182
Fringe benefits	Equal variances assumed	0.023	0.879	1.350	187	0.179
	Equal variances not assumed			1.341	88.135	0.184
Contingent rewards	Equal variances assumed	0.007	0.934	4.344	187	0.000
	Equal variances not assumed			4.259	66.039	0.000
Operating procedures	Equal variances assumed	0.477	0.491	1.404	187	0.162
	Equal variances not assumed			1.357	83.876	0.179
Coworkers	Equal variances assumed	1.913	0.168	2.305	187	0.022
	Equal variances not assumed			2.158	79.370	0.034
Nature of work	Equal variances assumed	5.149	0.024	0.358	187	0.721
	Equal variances not assumed			0.333	78.600	0.740
Communication	Equal variances assumed	4.006	0.047	2.519	187	0.013
	Equal variances not assumed			2.258	74.071	0.027
Job satisfaction	Equal variances assumed	10.940	0.001	3.177	187	0.002
	Equal variances not assumed			2.764	70.917	0.007

Source: Data from questionnaire

Similarly, the contingent rewards was significantly difference between less than or equal to 5 years of working (15.647 ± 2.481) and 16 to 25 years of working (14.714 ± 2.630), t(140) = 2.069, p = 0.040. The coworkers was significantly difference between less than or equal to 5 years of working (15.529 ± 2.781) and 16 to 25 years of working (14.363 ± 2.317), t(140) = 2.676, p = 0.008. The job satisfaction was significantly difference between less than or equal to 5 years of working (136.14 ± 16.683) and 16 to 25 years of working (130.00 ± 14.148), t(140) = 2.323, p = 0.022. The pay, promotion, supervision, fringe benefits, operating procedures, nature of work, and communication were not significantly different between less than or equal to 5 years of working and 16 to 25 years of working.

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and job satisfaction were not significantly different between less than or equal to 5 years of working and more than or equal to 26 years of working.

The contingent rewards was significantly difference between 6 to 15 years of working (13.935 ± 2.378) and 16 to 25 years of working (14.714 ± 2.630), t(227) = -2.327, p = 0.021. The pay, promotion, supervision, fringe benefits, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between 6 to 15 years of working and 16 to 25 years of working.

The coworkers was significantly difference between 6 to 15 years of working (14.580 ± 2.410) and more than or equal to 26 years of working (15.333 ± 2.942), t(211) = -2.014, p = 0.045. The communication was significantly difference between 6 to 15 years of working (14.312 ± 2.514) and more than or equal to 26 years of working (15.400 ± 3.738), t(211) = -2.529, p = 0.012. The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, nature of work, and job satisfaction were not significantly different between 6 to 15 years of working and more than or equal to 26 years of working.

The coworkers was significantly difference between 16 to 25 years of working (14.363 ± 2.317) and more than or equal to 26 years of working (15.333 ± 2.942), t(164) = -2.378, p =

0.019. The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, nature of work, communication, and job satisfaction were not significantly different between 16 to 25 years of working and more than or equal to 26 years of working.

Table 4.3.11 shown the three highest levels of job satisfaction subscales for contract teachers were pay (M = 15.118, σ = 1.966), coworkers (M = 14.971, σ = 2.007), and promotion (M = 14.735, σ = 1.896). The least satisfied for contract teachers is operating procedures (M = 13.647, σ = 2.411).

The three highest levels of job satisfaction subscales for graduate teachers (GM) were pay (M = 15.293, σ = 2.256), nature of work (M = 14.750, σ = 2.179), and supervision (M = 14.620, σ = 2.732). The least satisfied for graduate teachers is operating procedures (M = 13.406, σ = 2.493).

Table 4.3.11: Mean of the job satisfaction score and rank

Rank	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
Contract	mean	15.118	14.735	14.294	14.353	14.529	13.647	14.971	14.353	14.412	130.41
34	Std. dev	1.996	1.896	3.451	2.116	2.809	2.411	2.007	2.347	3.211	13.207
GM	mean	15.293	13.841	14.620	14.308	14.272	13.406	14.583	14.750	14.478	129.55
276	Std. dev	2.256	2.420	2.732	2.443	2.462	2.493	2.494	2.179	2.662	13.225
SGM	mean	15.971	14.147	15.618	15.765	15.412	13.176	15.794	15.529	15.824	137.24
34	Std. dev	2.769	3.115	4.335	3.331	3.500	2.504	3.112	2.351	3.973	21.939
PGM	mean	18.273	16.909	19.455	17.909	18.545	13.273	17.273	16.909	19.000	157.55
11	Std. dev	3.379	3.270	3.387	3.390	3.417	3.524	3.165	2.256	3.000	22.509
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

The three highest levels of job satisfaction subscales for senior graduate teachers (SGM) were pay (M = 15.971, σ = 2.769), communication (M = 15.824, σ = 3.973), and coworkers (M = 15.794, σ = 3.112). The least satisfied for senior graduate teachers is operating procedures (M = 13.273, σ = 3.524).

The three highest levels of job satisfaction subscales for principal graduate teachers (PGM) were supervision (M = 19.455, σ = 3.387), communication (M = 19.000, σ = 3.000), and contingent rewards (M = 18.545, σ = 3.417). The least satisfied for principal graduate teachers is operating procedures (M = 13.273, σ = 3.524).

The order of job satisfaction scores from the highest to lowest was principal graduate teachers, senior graduate teachers, contract teachers, and graduate teachers, respectively.

Table 4.3.12 shown promotion was significantly difference between contract teachers (14.735 ± 1.896) and graduate teachers (13.841 ± 2.420), t(308) = 2.077, p = 0.039. The pay, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between contract teachers and graduate teachers.

Table 4.3.12: Independent samples t-test of job satisfaction score and rank

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	1.332	0.249	-0.434	308	0.665
	Equal variances not assumed			-0.477	44.064	0.635
Promotion	Equal variances assumed	1.932	0.166	2.077	308	0.039
	Equal variances not assumed			2.511	47.352	0.016
Supervision	Equal variances assumed	1.190	0.276	-0.635	308	0.526
	Equal variances not assumed			-0.530	38.265	0.599
Fringe benefits	Equal variances assumed	1.039	0.309	0.103	308	0.918
	Equal variances not assumed			0.115	44.579	0.909
Contingent rewards	Equal variances assumed	0.404	0.526	0.567	308	0.571
	Equal variances not assumed			0.511	39.496	0.612
Operating procedures	Equal variances assumed	0.023	0.879	0.534	308	0.593
	Equal variances not assumed			0.549	42.177	0.586
Coworkers	Equal variances assumed	2.871	0.091	0.871	308	0.385
	Equal variances not assumed			1.031	46.547	0.308
Nature of work	Equal variances assumed	1.153	0.284	-0.994	308	0.321
	Equal variances not assumed			-0.938	40.326	0.354
Communication	Equal variances assumed	0.426	0.514	-0.134	308	0.893
	Equal variances not assumed			-0.116	38.792	0.908
Job satisfaction	Equal variances assumed	0.050	0.824	0.358	308	0.720
	Equal variances not assumed			0.359	41.580	0.722

Source: Data from questionnaire

Similarly, fringe benefits was significantly difference between contract teachers (14.353 ± 2.116) and senior graduate teachers (15.765 ± 3.331), t(66) = -2.086, p = 0.041. The nature of work was significantly difference between contract teachers (14.353 ± 2.347) and senior graduate teachers (15.529 ± 2.351), t(66) = -2.065, p = 0.043. The pay, promotion, supervision, contingent rewards, operating procedures, coworkers, communication, and job satisfaction were not significantly different between contract teachers and senior graduate teachers.

Owing to the sample size of principal graduate teachers is 11 (less than or equal to 30), it may ignore the differences between principal graduate teachers and contract teachers, graduate teachers, or senior graduate teachers.

The fringe benefits was significantly difference between graduate teachers (14.308 ± 2.443) and senior graduate teachers (15.765 ± 3.331), t(308) = -3.140, p = 0.002. The contingent rewards was significantly difference between graduate teachers (14.272 ± 2.462) and senior graduate teachers (15.412 ± 3.500), t(308) = -2.419, p = 0.016. The coworkers was significantly difference between graduate teachers (14.583 ± 2.494) and senior graduate teachers (15.794 ± 3.112), t(308) = -2.594, p = 0.010. The communication was significantly difference between graduate teachers (14.478 ± 2.662) and senior graduate teachers (15.824 ± 3.973), t(308) = -2.614, p = 0.009. The job satisfaction was significantly difference between graduate teachers (129.55 ± 13.225) and senior graduate teachers (137.24 ± 21.939), t(308) = -2.933, p = 0.004. The pay, promotion, supervision, operating procedures, and nature of work were not significantly different between graduate teachers and senior graduate teachers.

Table 4.3.13 shown the three highest levels of job satisfaction subscales for teachers' monthly household income less than or equal to $40,000 were pay (M = 15.352, σ = 2.182), contingent rewards (M = 14.870, σ = 2.340), and coworkers (M = 14.759, σ = 2.347). The least satisfied for teachers' monthly household income less than or equal to $40,000 is operating procedures (M = 13.611, σ = 2.167).

Table 4.3.13: Mean of the job satisfaction score and monthly household income

Income	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
≤ $40,000	mean	15.352	14.667	14.444	14.556	14.870	13.611	14.759	14.481	14.389	131.13
54	Std. dev	2.182	2.995	2.995	2.377	2.340	2.167	2.347	2.501	2.498	12.685
$40,001–$70,000	mean	15.241	13.724	14.793	14.276	14.190	13.647	14.414	14.948	14.233	129.47
116	Std. dev	2.185	2.430	2.839	2.339	2.699	2.450	2.561	2.059	2.887	14.471
$70,001–$100,000	mean	15.508	14.098	14.773	14.621	14.644	13.023	14.894	14.917	14.909	131.39
132	Std. dev	2.398	2.612	3.226	2.751	2.744	2.736	2.665	2.364	2.946	16.074
≥$100,000	mean	15.755	14.019	15.472	15.057	14.698	13.604	15.585	14.868	15.792	134.85
53	Std. dev	2.908	2.919	3.571	3.159	3.202	2.340	2.598	2.122	3.499	18.047
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

The three highest levels of job satisfaction subscales for teachers' monthly household income between $40,001 and $70,000 were pay (M = 15.241, σ = 2.185), nature of work (M = 14.948, σ = 2.059), and supervision (M = 14.793, σ = 2.839). The least satisfied for teachers' monthly household income between $40,001 and $70,000 is operating procedures (M = 13.647, σ = 2.450).

The three highest levels of job satisfaction subscales for teachers' monthly household income between $70,001 and $100,000 were pay (M = 15.508, σ = 2.398), nature of work (M = 14.917, σ = 2.364), and communication (M = 14.909, σ = 2.946). The least satisfied for teachers' monthly household income between $70,001 and $100,000 is operating procedures (M = 13.023, σ = 2.736).

The three highest levels of job satisfaction subscales for teachers' monthly household income more than or equal to $100,000 were communication (M = 15.792, σ = 3.499), pay (M = 15.755, σ = 2.908), and coworkers (M = 15.585, σ = 2.598). The least satisfied for teachers' monthly household income more than or equal to $100,000 is operating procedures (M = 13.604, σ = 2.340).

The order of job satisfaction scores from the highest to lowest was teachers' monthly

household income more than or equal to $100,000, monthly household income between $70,001 and $100,000, monthly household income less than or equal to $40,000, and monthly household income between $40,001 and $70,000, respectively.

Table 4.3.14 shown promotion was significantly difference between teachers' monthly household income less than or equal to $40,000 (14.667 ± 2.995) and monthly household income between $40,001 and $70,000 (13.724 ± 2.430), t(168) = 2.465, p = 0.015. The pay, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers' monthly household income less than or equal to $40,000 and monthly household income between $40,001 and $70,000.

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers' monthly household income less than or equal to $40,000 and monthly household income between $70,001 and $100,000.

Table 4.3.14: Independent samples t-test of job satisfaction score and monthly household income

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	0.058	0.810	0.307	168	0.759
	Equal variances not assumed			0.307	103.645	0.759
Promotion	Equal variances assumed	2.636	0.106	2.465	168	0.015
	Equal variances not assumed			2.615	120.323	0.010
Supervision	Equal variances assumed	0.000	0.995	-0.733	168	0.465
	Equal variances not assumed			-0.718	98.670	0.474
Fringe benefits	Equal variances assumed	0.002	0.961	0.722	168	0.471
	Equal variances not assumed			0.718	98.670	0.474
Contingent rewards	Equal variances assumed	0.408	0.524	1.595	168	0.113
	Equal variances not assumed			1.680	118.127	0.096
Operating procedures	Equal variances assumed	0.715	0.399	-0.091	168	0.928
	Equal variances not assumed			-0.095	115.952	0.924
Coworkers	Equal variances assumed	0.740	0.391	0.840	168	0.402
	Equal variances not assumed			0.868	112.162	0.387
Nature of work	Equal variances assumed	5.471	0.021	-1.283	168	0.201
	Equal variances not assumed			-1.196	87.711	0.235
Communication	Equal variances assumed	0.205	0.651	0.342	168	0.733
	Equal variances not assumed			0.361	118.312	0.719
Job satisfaction	Equal variances assumed	0.643	0.424	0.725	168	0.469
	Equal variances not assumed			0.761	116.895	0.448

Source: Data from questionnaire

Similarly, communication was significantly difference between teachers' monthly household income less than or equal to $40,000 (14.389 ± 2.498) and monthly household income more than or equal to $100,000 (15.792 ± 3.499), t(105) = -2.391, p = 0.019. The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and job satisfaction were not significantly different between contract teachers and senior graduate teachers.

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers' monthly household income between $40,001 and $70,000 and monthly household income between $70,001 and $100,000.

The coworkers was significantly difference between teachers' monthly household income between $40,001 and $70,000 (14.414 ± 2.561) and monthly household income more than or equal to $100,000 (15.585 ± 2.598), t(167) = -2.746, p = 0.007. The communication was significantly difference between teachers' monthly household income between $40,001 and $70,000 (14.233 ± 2.887) and monthly household income more than or equal to $100,000 (15.792 ± 3.499), t(167) = -3.044, p = 0.003. The job satisfaction was significantly difference between teachers' monthly household income between $40,001 and $70,000 (129.47 ± 14.471) and monthly household income more than or equal to $100,000 (134.85 ± 18.047), t(167) = -2.072, p = 0.040. The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, and nature of work were not significantly different between teachers' monthly household income between $40,001 and $70,000 and monthly household income more than or equal to $100,000.

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers' monthly household income between $70,001 and $100,000 and monthly household income more than or equal to $100,000.

Table 4.3.15 shown the three highest levels of job satisfaction subscales for teachers without child were pay (M = 15.642, σ = 2.407), supervision (M = 15.132, σ = 3.322), and coworkers (M = 15.079, σ = 2.662). The least satisfied for teachers without child is operating procedures (M = 13.517, σ = 2.566).

The three highest levels of job satisfaction subscales for teachers with one child were pay (M = 15.442, σ = 2.413), supervision (M = 14.863, σ = 2.640), and communication (M = 14.863, σ = 2.879). The least satisfied for teachers with one child is operating procedures (M = 13.411, σ = 2.323).

The three highest levels of job satisfaction subscales for teachers with two children were pay (M = 15.042, σ = 2.375), coworkers (M = 14.953, σ = 2.544), and nature of work (M = 14.576, σ = 2.067). The least satisfied for teachers with two children is operating procedures (M = 13.071, σ = 2.703).

Table 4.3.15: Mean of the job satisfaction score and number of children

Child	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
None	mean	15.642	14.166	15.132	14.801	14.940	13.517	15.079	15.033	14.947	133.26
151	Std. dev	2.407	2.697	3.322	2.752	2.723	2.566	2.662	2.373	3.083	16.487
1	mean	15.442	13.905	14.863	14.579	14.337	13.411	14.326	14.811	14.863	130.54
95	Std. dev	2.413	2.493	2.640	2.731	2.676	2.322	2.587	2.209	2.879	14.687
2	mean	15.024	13.976	14.459	14.118	14.012	13.071	14.953	14.576	14.471	128.66
85	Std. dev	2.375	2.350	3.438	2.437	2.873	2.703	2.544	2.067	3.100	15.173
≥ 3	mean	15.542	14.167	14.167	14.583	14.667	13.833	14.667	14.875	13.917	130.42
24	Std. dev	2.021	2.390	2.278	2.083	2.582	2.200	2.130	2.290	2.283	11.069
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

The three highest levels of job satisfaction subscales for teachers with three or more children were pay (M = 15.542, σ = 2.021), nature of work (M = 14.875, σ = 2.290), and coworkers (M = 14.667, σ = 2.130). The least satisfied for teachers with three or more children is operating procedures (M = 13.833, σ = 2.200).

The order of job satisfaction scores from the highest to lowest was teachers without child, teachers with one child, teachers with three or more children, and teachers with two children, respectively.

Table 4.3.16 shown the pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers without child and teachers with one child.

Table 4.3.16: Independent samples t-test of job satisfaction score and number of children

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	0.289	0.592	1.170	178	0.243
	Equal variances not assumed			1.171	176.371	0.243
Promotion	Equal variances assumed	0.108	0.742	-0.197	178	0.844
	Equal variances not assumed			-0.197	177.503	0.844
Supervision	Equal variances assumed	4.018	0.047	0.890	178	0.375
	Equal variances not assumed			0.877	156.966	0.382
Fringe benefits	Equal variances assumed	0.294	0.588	1.190	178	0.236
	Equal variances not assumed			1.198	177.999	0.233
Contingent rewards	Equal variances assumed	0.930	0.336	0.790	178	0.431
	Equal variances not assumed			0.787	172.883	0.432
Operating procedures	Equal variances assumed	0.828	0.364	0.907	178	0.365
	Equal variances not assumed			0.900	166.653	0.369
Coworkers	Equal variances assumed	0.006	0.940	-1.635	178	0.104
	Equal variances not assumed			-1.637	176.392	0.103
Nature of work	Equal variances assumed	0.368	0.545	0.732	178	0.465
	Equal variances not assumed			0.734	177.635	0.464
Communication	Equal variances assumed	0.370	0.544	0.884	178	0.380
	Equal variances not assumed			0.877	172.095	0.382
Job satisfaction	Equal variances assumed	1.387	0.241	0.843	178	0.400
	Equal variances not assumed			0.842	174.367	0.401

Source: Data from questionnaire

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers without child and teachers with two children.

Owing to the sample size of teachers with three or more children is 24 (less than or equal to 30), it may ignore the differences between teachers with three or more children and teachers without child, teachers with one child, or teachers with two children.

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures,

coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers with two children and teachers with three or more children.

Table 4.3.17 shown the three highest levels of job satisfaction subscales for teachers' working 26 to 40 hours per week were contingent rewards (M = 17.647, σ = 2.597), supervision (M = 17.588, σ = 4.017), and communication (M = 17.471, σ = 4.048). The least satisfied for teachers' working 26 to 40 hours per week is operating procedures (M = 14.588, σ = 2.526).

The three highest levels of job satisfaction subscales for teachers' working 41 to 55 hours per week were pay (M = 15.167, σ = 2.203), supervision (M = 14.530, σ = 2.523), and nature of work (M = 14.473, σ = 2.065). The least satisfied for teachers' working 41 to 55 hours per week is operating procedures (M = 13.694, σ = 2.037).

Table 4.3.17: Mean of the job satisfaction score and working hour per week

Hours	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
≤ 25	mean	13.000	15.000	13.000	15.000	14.000	13.000	15.000	16.000	13.000	127.00
1	Std. dev	---	---	---	---	---	---	---	---	---	---
26-40	mean	16.765	15.235	17.588	15.706	17.647	14.588	16.941	16.000	17.471	147.94
17	Std. dev	2.278	2.016	4.017	3.549	2.597	2.526	2.926	2.236	4.048	19.804
41-55	mean	15.167	14.075	14.530	14.235	14.249	13.694	14.473	14.473	14.342	129.24
281	Std. dev	2.203	2.234	2.523	2.326	2.303	2.037	2.388	2.065	2.525	11.973
≥ 56	mean	16.411	13.554	15.554	15.857	15.054	11.589	15.911	16.393	15.946	136.27
56	Std. dev	2.872	3.751	4.733	3.300	3.988	3.667	2.919	2.425	3.952	23.639
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

The three highest levels of job satisfaction subscales for teachers' working 56 hours or more per week were pay (M = 16.411, σ = 2.872), nature of work (M = 16.393, σ = 2.425), and communication (M = 15.946, σ = 3.952). The least satisfied for teachers' working 56 hours or more per week is operating procedures (M = 11.589, σ = 3.667).

The order of job satisfaction scores from the highest to lowest was teachers' working 26

to 40 hours per week, working 56 hours or more per week, working 41 to 55 hours per week, and working less than or equal to 25 hours per week, respectively.

Table 4.3.18 shown the pay was significantly difference between teachers' working 41 to 55 hours per week (15.167 ± 2.203) and working 56 hours or more per week (16.411 ± 2.872), $t(335) = -3.653$, $p = 0.000$. The supervision was significantly difference between teachers' working 41 to 55 hours per week (14.530 ± 2.523) and working 56 hours or more per week (15.554 ± 4.733), $t(335) = -2.331$, $p = 0.020$. The fringe benefits was significantly difference between teachers' working 41 to 55 hours per week (14.235 ± 2.326) and working 56 hours or more per week (15.857 ± 3.300), $t(335) = -4.414$, $p = 0.000$. The contingent rewards was significantly difference between teachers' working 41 to 55 hours per week (14.249 ± 2.303) and working 56 hours or more per week (15.054 ± 3.988), $t(335) = -2.071$, $p = 0.039$.

Table 4.3.18: Independent samples t-test of job satisfaction score and working hour per week

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	5.225	0.023	-3.653	335	0.000
	Equal variances not assumed			-1.186	68.475	0.003
Promotion	Equal variances assumed	27.781	0.000	1.399	335	0.163
	Equal variances not assumed			1.005	62.989	0.319
Supervision	Equal variances assumed	42.901	0.000	-2.331	335	0.020
	Equal variances not assumed			-1.574	61.367	0.121
Fringe benefits	Equal variances assumed	17.183	0.000	-4.414	335	0.000
	Equal variances not assumed			-3.509	66.301	0.001
Contingent rewards	Equal variances assumed	28.513	0.000	-2.071	335	0.039
	Equal variances not assumed			-1.462	62.496	0.149
Operating procedures	Equal variances assumed	42.596	0.000	6.037	335	0.000
	Equal variances not assumed			4.169	61.926	0.000
Coworkers	Equal variances assumed	2.685	0.102	-3.957	335	0.000
	Equal variances not assumed			-3.462	70.400	0.001
Nature of work	Equal variances assumed	3.868	0.050	-6.163	335	0.000
	Equal variances not assumed			-5.538	71.756	0.000
Communication	Equal variances assumed	30.017	0.000	-3.903	335	0.000
	Equal variances not assumed			-2.922	64.231	0.005
Job satisfaction	Equal variances assumed	46.095	0.000	-3.302	335	0.001
	Equal variances not assumed			-2.170	60.736	0.034

Source: Data from questionnaire

The operating procedures was significantly difference between teachers' working 41 to 55 hours per week (13.694 ± 2.037) and working 56 hours or more per week (11.589 ± 3.667),

t(335) = 6.037, p = 0.000. The coworkers was significantly difference between teachers' working 41 to 55 hours per week (14.473 ± 2.388) and working 56 hours or more per week (15.911 ± 2.919), t(335) = -3.957, p = 0.000. The nature of work was significantly difference between teachers' working 41 to 55 hours per week (14.473 ± 2.065) and working 56 hours or more per week (16.393 ± 2.425), t(335) = -6.163, p = 0.000. The communication was significantly difference between teachers' working 41 to 55 hours per week (14.342 ± 2.525) and working 56 hours or more per week (15.946 ± 3.952), t(335) = -3.903, p = 0.000. The job satisfaction was significantly difference between teachers' working 41 to 55 hours per week (129.24 ± 11.973) and working 56 hours or more per week (136.27 ± 23.639), t(335) = -3.302, p = 0.001. The promotion was not significantly different between teachers' teachers' working 41 to 55 hours per week and working 56 hours or more per week.

Owing to the sample sizes of both teachers' working less than or equal to 25 hours per week and working 26 to 40 hours per week are less than or equal to 30, it may ignore their differences between teachers working 41 to 55 hours per week or working 56 hours or more per week.

Table 4.3.19 shown the three highest levels of job satisfaction subscales for teachers with bachelor's degree were pay (M = 16.438, σ = 2.699), coworkers (M = 16.375, σ = 3.024), and nature of work (M = 15.906, σ = 2.519). The least satisfied for teachers with bachelor's degree are operating procedures (M = 13.031, σ = 2.559).

The three highest levels of job satisfaction subscales for teachers with PCEd or PGDE were pay (M = 15.142, σ = 1.952), supervision (M = 14.963, σ = 2.599), and nature of work (M = 14.673, σ = 2.234). The least satisfied for teachers with PCEd or PGDE is operating procedures (M = 13.901, σ = 2.124).

The three highest levels of job satisfaction subscales for teachers with master's degree were pay (M = 15.513, σ = 2.645), coworkers (M = 14.825, σ = 2.116), and nature of work (M

= 14.800, σ = 2.151). The least satisfied for teachers with master's degree is operating procedures (M = 12.969, σ = 2.782).

Owing to the sample size of teachers with EdD or PhD is 1 (less than or equal to 30), it may ignore the differences between teachers with EdD or PhD and teachers without bachelor's degree, teachers with PCEd or PGDE, or teachers with master's degree.

The order of job satisfaction scores from the highest to lowest was teachers with bachelor's degree, teachers with PCEd or PGDE, and teachers with master's degree, respectively.

Table 4.3.19: Mean of the job satisfaction score and qualification

Qual	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
Bachelor	mean	16.438	14.438	15.688	14.688	15.094	13.031	16.375	15.906	15.656	137.31
32	Std. dev	2.699	2.564	3.864	3.364	2.998	2.559	3.024	2.519	3.598	19.059
PCEd PGDE	mean	15.142	14.136	14.963	14.333	14.586	13.901	14.469	14.673	14.475	130.68
162	Std. dev	1.952	2.066	2.599	2.207	2.506	2.124	2.503	2.234	2.930	13.156
Master	mean	15.513	13.856	14.481	14.725	14.331	12.969	14.825	14.800	14.775	130.28
160	Std. dev	2.645	2.911	3.361	2.813	2.868	2.782	2.116	2.151	2.828	16.149
EdD/PhD	mean	18.000	19.000	23.000	22.000	22.000	14.000	21.000	19.000	23.000	181.00
1	Std. dev	---	---	---	---	---	---	---	---	---	---
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

Table 4.3.20 shown the pay was significantly difference between teachers with bachelor degree (16.438 ± 2.699) and teachers with PCEd or PGDE (15.142 ± 1.952), t(192) = 3.023, p = 0.002. The operating procedure was significantly difference between teachers with bachelor degree (13.031 ± 2.559) and teachers with PCEd or PGDE (13.091 ± 2.124), t(192) = -2.044, p = 0.042. The coworkers was significantly difference between teachers with bachelor degree (16.375 ± 3.024) and teachers with PCEd or PGDE (14.469 ± 2.234), t(192) = 3.798, p = 0.000. The nature of work was significantly difference between teachers with bachelor degree (15.906 ± 2.519) and teachers with PCEd or PGDE (14.673 ± 2.234), t(192) = 2.793, p = 0.006. The

communication was significantly difference between teachers with bachelor degree (15.656 ± 3.598) and teachers with PCEd or PGDE (14.475 ± 2.930), t(192) = 2.003, p = 0.047. The job satisfaction was significantly difference between teachers with bachelor degree (137.31 ± 19.059) and teachers with PCEd or PGDE (130.68 ± 13.156), t(192) = 2.402, p = 0.017.

The promotion, supervision, fringe benefits, and contingent rewards were not significantly different between teachers with bachelor's degree and teachers with PCEd or PGDE.

Table 4.3.20: Independent samples t-test of job satisfaction score and qualification

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	10.803	0.001	3.203	192	0.002
	Equal variances not assumed			2.585	37.661	0.014
Promotion	Equal variances assumed	0.055	0.814	0.724	192	0.470
	Equal variances not assumed			0.627	39.331	0.535
Supervision	Equal variances assumed	8.957	0.003	1.318	192	0.189
	Equal variances not assumed			1.016	36.733	0.316
Fringe benefits	Equal variances assumed	10.904	0.001	0.753	192	0.452
	Equal variances not assumed			0.572	36.442	0.571
Contingent rewards	Equal variances assumed	1.366	0.244	1.012	192	0.313
	Equal variances not assumed			0.897	40.000	0.375
Operating procedures	Equal variances assumed	2.770	0.098	-2.044	192	0.042
	Equal variances not assumed			-1.804	39.872	0.079
Coworkers	Equal variances assumed	3.744	0.054	3.798	192	0.000
	Equal variances not assumed			3.346	39.814	0.002
Nature of work	Equal variances assumed	0.583	0.446	2.793	192	0.006
	Equal variances not assumed			2.577	41.191	0.014
Communication	Equal variances assumed	0.062	0.065	2.003	192	0.047
	Equal variances not assumed			1.746	39.527	0.089
Job satisfaction	Equal variances assumed	11.572	0.001	2.402	192	0.017
	Equal variances not assumed			1.882	37.047	0.068

Source: Data from questionnaire

Table 4.3.21 shown the three highest levels of job satisfaction subscales for teachers without administrative role were pay (M = 15.251, σ = 2.044), nature of work (M = 14.575, σ = 2.207), and coworkers (M = 14.557, σ = 2.383). The least satisfied for teachers without administrative role is operating procedures (M = 13.461, σ = 2.380).

The three highest levels of job satisfaction subscales for teachers with panel head were pay (M = 15.347, σ = 2.362), supervision (M = 15.160, σ = 2.687), and nature of work (M = 15.053, σ = 2.072). The least satisfied for teachers with panel head are operating procedures (M = 13.627, σ = 2.415).

The three highest levels of job satisfaction subscales for teachers with functional head were pay (M = 15.652, σ = 2.362), coworkers (M = 15.609, σ = 2.629), and nature of work (M = 15.304, σ = 2.356). The least satisfied for teachers with functional head are operating procedures (M = 12.870, σ = 2.697).

Table 4.3.21: Mean of the job satisfaction score and administrative role

Admin	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
None	mean	15.251	13.890	14.507	14.315	14.320	13.461	14.557	14.575	14.516	129.39
219	Std. dev	2.044	2.334	2.829	2.380	2.510	2.380	2.383	2.207	2.664	13.092
Panel	mean	15.347	14.427	15.160	14.227	14.227	13.627	14.707	15.053	14.573	131.44
75	Std. dev	2.362	2.261	2.687	2.704	2.704	2.415	2.750	2.072	2.800	13.830
Functional	mean	15.652	13.500	14.761	15.000	15.000	12.870	15.609	15.304	14.978	132.80
46	Std. dev	2.900	2.834	3.640	2.733	2.733	2.697	2.629	2.356	3.803	17.736
Vice Principal	mean	17.867	16.200	18.200	17.867	17.867	13.067	16.800	16.533	18.133	152.33
15	Std. dev	3.815	4.212	5.226	4.015	4.015	3.990	3.448	2.588	3.739	28.336
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

The three highest levels of job satisfaction subscales for assistant or vice principal were supervision (M = 18.200, σ = 5.226), communication (M = 18.133, σ = 3.739), and pay (M = 17.867, σ = 3.815). The least satisfied for assistant or vice principal is operating procedures (M = 13.067, σ = 3.990).

The order of job satisfaction scores from the highest to lowest was assistant or vice principal, teachers with functional head, teachers with panel head, and teachers without administrative role, respectively.

Owing to the sample size of assistant or vice principal is 15 (less than or equal to 30), it may ignore the differences between assistant or vice principal and teachers without administrative role, teachers with panel head, or teachers with functional head.

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers without administrative role and teachers with panel head.

Table 4.3.22 shown the fringe benefits was significantly difference between teachers without administrative role (14.315 ± 2.308) and teachers with functional head (15.000 ± 2.733), $t(263) = -2.007$, $p = 0.046$. The coworkers was significantly difference between teachers without administrative role (14.557 ± 2.383) and teachers with functional head (15.609 ± 2.629), $t(263) = -2.672$, $p = 0.008$. The nature of work was significantly difference between teachers without administrative role (14.575 ± 2.207) and teachers with functional head (15.304 ± 2.356), $t(263) = -2.013$, $p = 0.045$. The pay, promotion, supervision, contingent rewards, operating procedures, communication, and job satisfaction were not significantly different between teachers without administrative role and teachers with functional head.

Table 4.3.22: Independent samples t-test of job satisfaction score and administrative role

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	9.033	0.003	-1.117	263	0.265
	Equal variances not assumed			-0.892	54.763	0.376
Promotion	Equal variances assumed	1.372	0.242	0.992	263	0.322
	Equal variances not assumed			0.874	58.485	0.386
Supervision	Equal variances assumed	5.746	0.017	-0.525	263	0.600
	Equal variances not assumed			-0.446	56.951	0.657
Fringe benefits	Equal variances assumed	6.419	0.012	-2.007	263	0.046
	Equal variances not assumed			-1.713	57.161	0.092
Contingent rewards	Equal variances assumed	0.236	0.628	-1.645	263	0.101
	Equal variances not assumed			-1.556	61.965	0.125
Operating procedures	Equal variances assumed	0.410	0.523	1.497	263	0.136
	Equal variances not assumed			1.379	60.590	0.173
Coworkers	Equal variances assumed	0.163	0.687	-2.672	263	0.008
	Equal variances not assumed			-2.506	61.499	0.015
Nature of work	Equal variances assumed	0.445	0.505	-2.013	263	0.045
	Equal variances not assumed			-1.929	62.675	0.058
Communication	Equal variances assumed	7.834	0.006	-0.986	263	0.325
	Equal variances not assumed			-0.785	54.629	0.436
Job satisfaction	Equal variances assumed	5.272	0.022	-1.503	263	0.134
	Equal variances not assumed			-1.236	55.739	0.222

Source: Data from questionnaire

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers with panel head and teachers with functional head.

Table 4.3.23 shown the three highest levels of job satisfaction subscales for teachers working in band 1 schools were pay (M = 15.443, σ = 2.237), coworkers (M = 15.229, σ = 2.480), and nature of work (M = 14.857, σ = 2.292). The least satisfied for teachers working in band 1 schools is operating procedures (M = 13.443, σ = 2.717).

The three highest levels of job satisfaction subscales for teachers working in band 1 to 2 schools were pay (M = 15.529, σ = 2.276), supervision (M = 14.500, σ = 2.359), and nature of work (M = 14.353, σ = 1.998). The least satisfied for teachers working in band 1 to 2 schools is operating procedures (M = 13.559, σ = 1.633).

The three highest levels of job satisfaction subscales for teachers working in band 2 schools pay (M = 15.432, σ = 1.973), nature of work (M = 14.649, σ = 2.230), and supervision (M = 14.622, σ = 3.387). The least satisfied for teachers working in band 2 schools is operating procedures (M = 13.370, σ = 2.383).

Table 4.3.23: Mean of the job satisfaction score and banding

Banding	Statistics	pay	promot	super	fringe	rewards	operating	coworker	nature	comm	JSat
Band 1	mean	15.443	14.529	14.200	14.371	14.471	13.443	15.229	14.857	14.229	130.77
70	Std. dev	2.237	2.569	3.188	2.474	2.518	2.717	2.480	2.292	2.757	13.909
Band 1-2	mean	15.529	14.015	14.500	14.000	14.015	13.559	14.265	14.353	14.176	128.41
68	Std. dev	2.276	2.161	2.359	2.130	1.958	1.633	2.328	1.998	2.467	10.334
Band 2	mean	15.432	13.581	14.622	14.392	14.176	13.311	14.338	14.649	14.500	129.00
74	Std. dev	1.973	2.300	3.387	2.918	3.058	3.020	2.854	2.230	3.076	16.688
Band 2-3	mean	15.425	14.329	14.699	14.671	14.849	13.370	14.521	14.795	14.808	131.47
73	Std. dev	2.608	2.688	2.807	2.734	2.742	2.383	2.298	2.327	2.777	15.294
Band 3	mean	15.343	13.814	16.157	15.371	15.171	13.343	15.771	15.614	15.986	138.57
70	Std. dev	2.792	2.845	3.442	2.698	3.158	2.609	2.682	2.254	3.470	18.594
Total	mean	15.434	14.051	14.834	14.563	14.538	13.403	14.820	14.854	14.741	131.24
355	Std. dev	2.380	2.535	3.126	2.637	2.746	2.513	2.592	2.251	2.989	15.446

Source: Data from questionnaire

The three highest levels of job satisfaction subscales for teachers working in band 2 to 3 schools were pay (M = 15.425, σ = 2.608), contingent rewards (M = 14.849, σ = 2.742), and communication (M = 14.808, σ = 2.777). The least satisfied for teachers working in band 2 to 3 schools is operating procedures (M = 13.370, σ = 2.383).

The three highest levels of job satisfaction subscales for teachers working in band 3 schools were supervision (M = 16.157, σ = 3.442), communication (M = 15.986, σ = 3.470), and coworkers (M = 15.771, σ = 2.682). The least satisfied for teachers working in band 3 schools is operating procedures (M = 13.343, σ = 2.609).

The order of job satisfaction scores from the highest to lowest was teachers working in band 3 schools, teachers working in band 2 to 3 schools, teachers working in band 1 schools, teachers working in band 2 schools, and teachers working in band 1 to 2 schools, respectively.

Table 4.3.24 shown the coworkers was significantly difference between teachers working in band 1 schools (14.315 ± 2.308) and teachers working in band 1 to 2 schools (15.000 ± 2.733), t(263) = -2.007, p = 0.046. The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, nature of work, communication, and job satisfaction were not significantly different between teachers working in band 1 schools and teachers working in band 1 to 2 schools.

Similarly, the promotion was significantly difference between teachers working in band 1 schools (14.529 ± 2.569) and teachers working in band 2 schools (13.581 ± 2.300), t(142) = 2.334, p = 0.021. The coworkers was significantly difference between teachers working in band 1 schools (15.229 ± 2.480) and teachers working in band 2 schools (14.338 ± 2.854), t(142) = 1.994, p = 0.048. The pay, supervision, fringe benefits, contingent rewards, operating procedures, nature of work, communication, and job satisfaction were not significantly different between teachers working in band 1 schools and teachers working in band 2 schools.

Table 4.3.24: Independent samples t-test of job satisfaction score and banding

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Pay	Equal variances assumed	0.100	0.753	-0.225	136	0.822
	Equal variances not assumed			-0.225	135.790	0.822
Promotion	Equal variances assumed	0.384	0.538	1.270	136	0.206
	Equal variances not assumed			1.273	133.299	0.205
Supervision	Equal variances assumed	2.448	0.120	-0.627	136	0.532
	Equal variances not assumed			-0.630	127.130	0.530
Fringe benefits	Equal variances assumed	1.680	0.197	0.944	136	0.347
	Equal variances not assumed			0.946	134.079	0.346
Contingent rewards	Equal variances assumed	5.272	0.023	1.187	136	0.237
	Equal variances not assumed			1.191	129.843	0.236
Operating procedures	Equal variances assumed	8.746	0.004	-0.303	136	0.763
	Equal variances not assumed			-0.305	113.695	0.761
Coworkers	Equal variances assumed	0.142	0.707	2.352	136	0.020
	Equal variances not assumed			2.355	135.845	0.020
Nature of work	Equal variances assumed	0.615	0.434	1.376	136	0.171
	Equal variances not assumed			1.378	134.447	0.170
Communication	Equal variances assumed	0.019	0.889	0.117	136	0.907
	Equal variances not assumed			0.117	135.105	0.907
Job satisfaction	Equal variances assumed	1.885	0.172	1.129	136	0.261
	Equal variances not assumed			1.133	127.348	0.259

Source: Data from questionnaire

The pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were not significantly different between teachers working in band 1 schools and teachers working in band 2 to 3 schools.

The supervision was significantly difference between teachers working in band 1 schools (14.200 ± 3.188) and teachers working in band 3 schools (16.157 ± 3.442), t(138) = -3.491, p = 0.001. The fringe benefits was significantly difference between teachers working in band 1 schools (14.371 ± 2.474) and teachers working in band 3 schools (15.371 ± 2.698), t(138) = -2.285, p = 0.024. The communication was significantly difference between teachers working in band 1 schools (14.229 ± 2.757) and teachers working in band 3 schools (15.986 ± 3.470), t(138) = -3.317, p = 0.001. The job satisfaction was significantly difference between teachers working in band 1 schools (130.77 ± 13.909) and teachers working in band 3 schools (138.57 ± 18.594), t(138) = -2.090, p = 0.038. The pay, promotion, contingent rewards, operating procedures, coworkers, and nature of work were not significantly different between teachers working in band 1 schools and teachers working in band 3 schools.

4.4 Motivation of Secondary School Teachers

The Cronbach's alpha of six subscales of motivation is 0.361 which indicated unacceptable reliability or consistency. The Cronbach's alpha of each subscale is shown in Table 4.4.1. If a factor's value of alpha is lower than 0.5, then it should be revised or discarded. If a factor's value of alpha is too high, then it can be cancelled. Tavakol and Dennick (2011) recommended that the maximum alpha value is 0.90.

Table 4.4.1: Cronbach's alpha of six subscales of motivation

Subscales	Cronbach's alpha if item deleted
Intrinsic motivation	0.165
Integrated regulation	0.213
Identified regulation	0.281
Introjected regulation	0.334
External regulation	0.329
Amotivation	0.504
Motivation	0.557

Source: Data from questionnaire

Table 4.4.2 shown that identified regulation (M = 4.51, σ = 0.728), external regulation (M = 4.39, σ = 0.907), and integrated regulation (M = 4.36, σ = 0.889) were rated as the three highest scores for secondary school teachers. Amotivation (M = 3.93, σ = 0.875) was the least score for participants. Both skewness and kurtosis were close to zero which indicate that the motivation were normally distributed.

Table 4.4.2: The means, standard deviations, skewness, and kurtosis of motivation

Subscale	Mean	Standard Deviation	Skewness	Kurtosis
Intrinsic motivation	4.33	0.935	0.420	-0.015
Integrated regulation	4.36	0.889	0.523	0.482
Identified regulation	4.51	0.728	0.542	0.492
Introjected regulation	4.06	0.854	-0.002	0.633
External regulation	4.39	0.907	0.458	0.130
Amotivation	3.93	0.875	-0.573	0.364
Motivation	1.59	5.293	1.077	1.600

Source: Data from questionnaire

There were moderate correlations among six subscales of motivation. Integrated regulation displayed moderate correlations to intrinsic motivation and identified regulation (0.491 and 0.433) as shown in Table 4.4.3. Besides, introjected regulation displayed week correlations to identified regulation and external regulation (0.285 and 0.288). External regulation displayed week negative correlation to amotivation (-0.188).

Table 4.4.3: Correlations among six subscales of motivation

	M	NTEG	DEN	NTRO	XT
INTEG	0.491**				
IDEN	0.412**	0.433**			
INTRO	0.372**	0.239**	0.285**		
EXT	0.300**	0.444**	0.410**	0.288**	
AMO	-0.372**	-0.282**	-0.140**	0.006	-0.188**

** Correlation is significant at the 0.01 level (two-tailed).
Source: Data from questionnaire

Figure 4.4.1 shown the histogram of motivation scores for 355 participants. The overall mean, median, and standard deviation of motivation scores were 1.594, 0.667, and 5.293, respectively. It was positively skewed (1.077) and approximated normally distributed.

Mean = 1.59437
Std. Dev. = 5.29323
N = 355
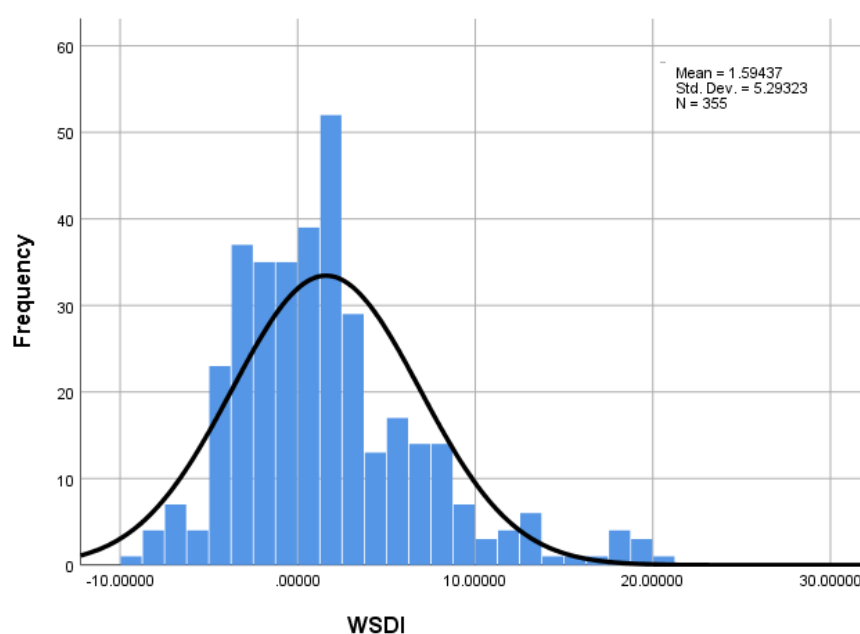
Figure 4.4.1 Histogram of motivation scores
Source: Data from questionnaire

170

The normal Q-Q plot as shown in Figure 4.4.2 was an alternative graphical method of assessing normality to the histogram. The data were considered normally distributed.
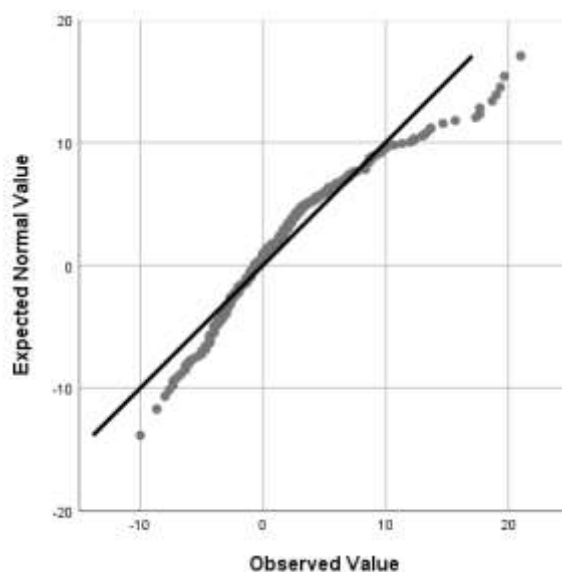
Figure 4.4.2: Normal Q-Q plot of motivation scores
Source: Data from questionnaire

The following formula was used to calculate the motivation score for each participant. Each subscale was multiplied by an assigned weight according to its position on the self-determination continuum (Taylor, Ntoumanis & Standage, 2008; Hegarty, 2010).

It may calculate the work motivation score by the following formula of work self-determination index (W-SDI). W-SDI = (3 x IM) + (2 x INTEG) + (1 x IDEN) - (1 x INTRO) - (2 x EXT) - (3 x AMO) (Vallerand, 1997). The scores of W-SDI are between -36 to 36. It indicates an individual's relative level of self-determination on the continuum. It can assess the individual's level of self-determination and the motivation profile from the total score of W-SDI. It is also useful to compare between individuals or groups of people and their motivation profiles in the study.

By summing the means from the three self-determined subscales (intrinsic motivation, integrated regulation, and identified regulation) to obtain a positive score which indicates a self-determined profile. Similarly, by summing the means from the non-self-determined subscales (introjected regulation, external regulation, and amotivation) to obtain a negative score which

indicates a non-self-determined profile. The total score is the average of self-determined subscales and self-determined subscale, range from -36 to 36. The higher the score on the scale, the higher the work motivation.

Table 4.4.4 shown that majority of the participants (56.1 %) was categorized as motivated secondary school teachers, while categorized as less motivated was 42.5% of the participants. There was no lowly motivated participant and 1.4 % of the participants were highly motivated. A positive W-SDI score (1.594 ± 5.293) indicates good work motivation (Chai et al., 2017) on average.

Table 4.4.4: Frequency distribution of motivation scores

Motivational score (M)	Description	Frequency	Percentage
$-36 \leq M < -18$	Lowly motivated	0	0 %
$-18 \leq M < 0$	less motivated	151	42.5 %
$0 \leq M < 18$	motivated	199	56.1 %
$18 \leq M < 36$	Highly motivated	5	1.4 %

Source: Data from questionnaire

Table 4.4.5 shown the relationships between motivation subscales and gender. Identified regulation (M = 4.533, σ = 0.737), external regulation (M = 4.415, σ = 0.900), and integrated regulation (M = 4.362, σ = 0.881) were rated as the three highest scores of motivation subscales for male participants in secondary schools. The least motivated for male participants is amotivation (M = 3.960, σ = 0.878).

The three highest scores of motivation subscales for female participants were identified regulation (M = 4.471, σ = 0.718), integrated regulation (M = 4.363, σ = 0.918), and external regulation (M = 4.363, σ = 0.919). The least motivated for female participants is amotivation (M = 3.885, σ = 0.872).

The motivation scores for male were slightly higher than that of female.

Table 4.4.5: Mean of the motivation subscales and gender

Gender	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
Male	mean	4.324	4.362	4.533	4.106	4.415	3.960	1.412
207	Std. dev	0.916	0.881	0.737	0.827	0.900	0.878	5.166
Female	mean	4.345	4.363	4.471	4.000	4.363	3.885	1.849
148	Std. dev	0.965	0.918	0.718	0.889	0.919	0.872	5.474
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

Table 4.4.6 shown there were no significant differences between the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI.

Table 4.4.6: Independent samples t-test of job satisfaction subscales and gender

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2 -tailed)
Intrinsic motivation	Equal variances assumed	0.003	0.955	-0.208	353	0.836
	Equal variances not assumed			-0.206	306.714	0.837
Integrated regulation	Equal variances assumed	0.499	0.480	-0.003	353	0.998
	Equal variances not assumed			-0.003	312.401	0.998
Identified regulation	Equal variances assumed	0.638	0.425	0.794	353	0.428
	Equal variances not assumed			0.797	321.550	0.426
Introjected regulation	Equal variances assumed	0.307	0.580	1.157	353	0.248
	Equal variances not assumed			1.143	302.571	0.254
External regulation	Equal variances assumed	0.022	0.883	0.541	353	0.589
	Equal variances not assumed			0.539	312.646	0.590
Amotivation	Equal variances assumed	0.055	0.814	0.792	353	0.429
	Equal variances not assumed			0.793	318.185	0.429
W-SDI	Equal variances assumed	0.119	0.730	-0.766	353	0.444
	Equal variances not assumed			-0.759	305.435	0.449

Source: Data from questionnaire

Table 4.4.7 shown the relationships between motivation subscales and marital status. Identified regulation (M = 4.568, σ = 0.799), integrated regulation (M = 4.503, σ = 0.932) , and external regulation (M = 4.476, σ = 0.875) were rated as the three highest scores of motivation subscales for single participants in secondary schools. The least motivated for single participants is amotivation (M = 3.955, σ = 0.854).

The three highest scores of motivation subscales for married participants were identified regulation (M = 4.467, σ = 0.712), intrinsic motivation (M = 4.398, σ = 0.890), and external regulation (M = 4.373, σ = 0.932). The least motivated for married participants is amotivation (M = 3.903, σ = 0.880).

The three highest scores of motivation subscales for windowed or divorced participants were identified regulation (M = 4.646, σ = 0.310), introjected regulation (M = 4.146, σ = 0.632), and external regulation (M = 4.104, σ = 0.707). The least motivated for windowed or divorced participants is integrated regulation (M = 3.792, σ = 0.918).

The order of motivation scores from the highest to lowest was married teachers, single teachers, and windowed or divorced, respectively.

Table 4.4.7: Mean of the motivation score and marital status

Gender	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
Single 112	mean	4.265	4.503	4.568	4.018	4.476	3.955	1.533
	Std. dev	1.031	0.932	0.799	0.945	0.875	0.854	5.237
Married 227	mean	4.398	4.333	4.467	4.078	4.373	3.903	1.794
	Std. dev	0.890	0.849	0.712	0.822	0.932	0.880	5.291
Windowed 16	mean	3.875	3.792	4.646	4.146	4.104	4.104	-0.813
	Std. dev	0.719	0.918	0.310	0.632	0.707	0.979	5.445
Total 355	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

Table 4.4.8 shown there were no significant differences between single teachers and married teachers for the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI.

Owing to the sample size of widowed or divorced teachers is 16 (less than or equal to 30), it may ignore the differences between widowed or divorced teachers and single teachers, or married teachers.

Table 4.4.8: Independent samples t-test of motivation score and marital status

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	2.192	0.140	-1.227	337	0.221
	Equal variances not assumed			-1.168	194.688	0.244
Integrated regulation	Equal variances assumed	2.594	0.108	1.675	337	0.095
	Equal variances not assumed			1.622	203.696	0.106
Identified regulation	Equal variances assumed	2.754	0.098	1.185	337	0.237
	Equal variances not assumed			1.140	199.958	0.256
Introjected regulation	Equal variances assumed	4.513	0.034	-0.601	337	0.548
	Equal variances not assumed			-0.573	195.992	0.567
External regulation	Equal variances assumed	0.541	0.463	0.978	337	0.329
	Equal variances not assumed			0.999	234.014	0.319
Amotivation	Equal variances assumed	0.300	0.585	0.519	337	0.604
	Equal variances not assumed			0.525	227.072	0.600
W-SDI	Equal variances assumed	0.027	0.869	-0.430	337	0.668
	Equal variances not assumed			-0.431	223.143	0.667

Source: Data from questionnaire

Table 4.4.9 shown the relationships between motivation subscales and age. Integrated regulation (M = 4.556, σ = 0.900), identified regulation (M = 4.550, σ = 0.783), and external regulation (M = 4.404, σ = 0.715) were rated as the three highest scores of motivation subscales for less than or equal to 30 years old teachers. The least motivated for less than or equal to 30 years old teachers is introjected regulation (M = 3.947, σ = 0.833).

The three highest scores of motivation subscales for 31 to 40 years old teachers were pay (M = 4.424, σ = 0.734), external regulation (M = 4.368, σ = 0.892), and integrated regulation (M = 4.281, σ = 0.851). The least motivated for 31 to 40 years old teachers are amotivation (M = 4.018, σ = 0.800).

The three highest scores of motivation subscales for 41 to 50 years old teachers were identified regulation (M = 4.506, σ = 0.704), external regulation (M = 4.387, σ = 0.934), and intrinsic motivation (M = 4.375, σ = 0.964). The least motivated for 41 to 50 years old teachers are amotivation (M = 3.881, σ = 0.946).

The three highest scores of motivation subscales for elder than or equal to 51 years old teachers were identified regulation (M = 4.620, σ = 0.700), intrinsic motivation (M = 4.436, σ = 1.013), and external regulation (M = 4.436, σ = 1.034). The least motivated for elder than or equal to 51 years old teachers is amotivation (M = 3.769, σ = 0.940).

The order of motivation scores from the highest to lowest was elder than or equal to 51 years old teachers, 41 to 50 years old teachers, less than or equal to 30 years old teachers, and 31 to 40 years old teachers, respectively.

Table 4.4.9: Mean of the motivation score and age

Age	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
≤ 30	mean	4.263	4.556	4.550	3.947	4.404	4.012	1.661
57	Std. dev	1.021	0.900	0.783	0.833	0.715	0.824	5.073
31-40	mean	4.273	4.281	4.424	4.080	4.368	4.018	0.935
133	Std. dev	0.829	0.851	0.734	0.872	0.892	0.800	4.546
41-50	mean	4.375	4.326	4.506	4.069	4.387	3.881	1.797
87	Std. dev	0.964	0.916	0.704	0.818	0.934	0.946	5.504
≥ 51	mean	4.436	4.402	4.620	4.107	4.436	3.769	2.444
78	Std. dev	1.013	0.906	0.700	0.887	1.034	0.940	6.269
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

Table 4.4.10 shown integrated regulation was significantly difference between less than or equal to 30 years old teachers (4.556 ± 0.900) and 31 to 40 years old teachers (4.281 ± 0.851), $t(188) = 2.005$, $p = 0.046$. The intrinsic motivation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI were not significantly different between less than or equal to 30 years old teachers and 31 to 40 years old teachers.

Table 4.4.10: Independent samples t-test of motivation score and age

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	2.578	0.110	-0.071	188	0.943
	Equal variances not assumed			-0.065	89.061	0.948
Integrated regulation	Equal variances assumed	0.700	0.404	2.005	188	0.046
	Equal variances not assumed			1.960	100.775	0.053
Identified regulation	Equal variances assumed	1.561	0.213	1.064	188	0.289
	Equal variances not assumed			1.037	100.116	0.302
Introjected regulation	Equal variances assumed	0.010	0.921	-0.975	188	0.331
	Equal variances not assumed			-0.993	110.564	0.323
External regulation	Equal variances assumed	1.250	0.265	0.263	188	0.793
	Equal variances not assumed			0.287	130.909	0.775
Amotivation	Equal variances assumed	0.061	0.806	-0.046	188	0.964
	Equal variances not assumed			-0.045	103.292	0.964
W-SDI	Equal variances assumed	0.194	0.660	0.974	188	0.331
	Equal variances not assumed			0.932	96.342	0.354

Source: Data from questionnaire

Similarly, the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI were not significantly different between less than or equal to 30 years old teachers and 41 to 50 years old teachers or elder than or equal to 51 years old teachers. Besides, the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI were not significantly different between 31 to 40 years old teachers and 41 to 50 years old teachers.

The amotivation was significantly difference between 31 to 40 years old teachers (4.018 ± 0.800) and elder than or equal to 51 years old teachers (3.769 ± 0.940), t(209) = 2.038, p = 0.043. The W-SDI was significantly difference between 31 to 40 years old teachers (0.935 ± 4.546) and elder than or equal to 51 years old teachers (2.444 ± 6.269), t(209) = -2.017, p = 0.045. The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, and external regulation were not significantly different between 31 to 40 years old teachers and elder than or equal to 51 years old teachers.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI were not significantly different between 41 to 50 years old teachers and elder than or equal to 51 years old teachers.

Table 4.4.11 shown the three highest scores of motivation subscales for less than or equal to 5 years of working were identified regulation (M = 4.595, σ = 0.809), integrated regulation (M = 4.588, σ = 0.918), and external regulation (M = 4.405, σ = 0.770). The least motivated for less than or equal to 5 years of working is amotivation (M = 3.895, σ = 0.818).

The three highest scores of motivation subscales for 6 to 15 years of working were identified regulation (M = 4.418, σ = 0.713), external regulation (M = 4.365, σ = 0.900), and integrated regulation (M = 4.261, σ = 0.839). The least motivated for 6 to 15 years of working is amotivation (M = 4.036, σ = 0.808).

The three highest scores of motivation subscales for 16 to 25 years of working were identified regulation (M = 4.505, σ = 0.717), external regulation (M = 4.399, σ = 0.993), and integrated regulation (M = 4.333, σ = 0.871). The least motivated for 16 to 25 years of working is amotivation (M = 3.956, σ = 0.892).

The three highest scores of motivation subscales for more than or equal to 26 years of working were identified regulation (M = 4.613, σ = 0.706), intrinsic motivation (M = 4.484, σ = 1.031), and integrated regulation (M = 4.431, σ = 0.961). The least motivated for more than or equal to 26 years of working is amotivation (M = 3.720, σ = 0.983).

The order of motivation scores from the highest to lowest was more than or equal to 26 years of working, less than or equal to 5 years of working, 16 to 25 years of working, and 6 to 15 years of working, respectively.

Table 4.4.11: Mean of the motivation score and years of working

Years	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
≤ 5	mean	4.353	4.588	4.595	3.915	4.405	3.895	2.418
51	Std. dev	1.047	0.918	0.809	0.874	0.770	0.818	4.958
6 – 15	mean	4.242	4.261	4.418	4.089	4.365	4.036	0.737
138	Std. dev	0.823	0.839	0.713	0.840	0.900	0.808	4.594
16 – 25	mean	4.333	4.333	4.505	4.081	4.399	3.956	1.425
91	Std. dev	0.945	0.871	0.717	0.832	0.933	0.892	5.230
≥ 26	mean	4.484	4.431	4.613	4.089	4.431	3.720	2.818
75	Std. dev	1.031	0.961	0.706	0.899	0.988	0.983	6.457
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

Table 4.4.12 shown integrated regulation was significantly difference between less than or equal to 5 years of working (4.588 ± 0.918) and 6 to 15 years of working (4.261 ± 0.839), t(187) = 2.321, p = 0.021. The W-SDI was significantly difference between less than or equal to 5 years of working (2.418 ± 4.958) and 6 to 15 years of working (0.737 ± 4.594), t(187) = 2.186, p = 0.030. The intrinsic motivation, identified regulation, introjected regulation, external

regulation, and amotivation were not significantly different between less than or equal to 5 years of working and 6 to 15 years of working.

Table 4.4.12: Independent samples t-test of motivation score and years of working

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	4.235	0.041	0.765	187	0.445
	Equal variances not assumed			0.686	74.068	0.495
Integrated regulation	Equal variances assumed	1.368	0.244	2.321	187	0.021
	Equal variances not assumed			2.226	82.743	0.029
Identified regulation	Equal variances assumed	3.729	0.055	1.459	187	0.146
	Equal variances not assumed			1.376	80.362	0.173
Introjected regulation	Equal variances assumed	0.685	0.409	-1.253	187	0.212
	Equal variances not assumed			-1.230	86.261	0.222
External regulation	Equal variances assumed	0.329	0.567	0.285	187	0.776
	Equal variances not assumed			0.306	103.581	0.760
Amotivation	Equal variances assumed	0.083	0.774	-1.060	187	0.291
	Equal variances not assumed			-1.054	88.401	0.295
W-SDI	Equal variances assumed	0.114	0.736	2.186	187	0.030
	Equal variances not assumed			2.110	83.698	0.038

Source: Data from questionnaire

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between less than or equal to 5 years of working and 16 to 25 years of working or more than or equal to 26 years of working.

Similarly, the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between 6 to 15 years of working and 16 to 25 years of working.

The amotivation was significantly difference between 6 to 15 years of working (4.036 ± 0.808) and more than or equal to 26 years of working (3.720 ± 0.983), t(211) = 2.523, p = 0.012. The W-SDI was significantly difference between 6 to 15 years of working (0.737 ± 4.594) and more than or equal to 26 years of working (2.818 ± 6.457), t(211) = -2.726, p = 0.007. The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, and external regulation were not significantly different between 6 to 15 years of working and more than or equal to 26 years of working.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between 16 to 25 years of working and more than or equal to 26 years of working.

Table 4.4.13 shown the three highest scores of motivation subscales for contract teachers were identified regulation (M = 4.402, σ = 0.795), integrated regulation (M = 4.333, σ = 0.906), and external regulation (M = 4.167, σ = 0.775). The least motivated for contract teachers is introjected regulation (M = 3.971, σ = 0.842).

The three highest scores of job satisfaction subscales for graduate teachers (GM) were identified regulation (M = 4.483, σ = 0.727), external regulation (M = 4.400, σ = 0.933), and integrated regulation (M = 4.321, σ = 0.858). The least motivated for graduate teachers is amotivation (M = 3.977, σ = 0.826).

The three highest scores of job satisfaction subscales for senior graduate teachers (SGM) were identified regulation (M = 4.765, σ = 0.689), intrinsic motivation (M = 4.549, σ = 1.044), and external regulation (M = 4.529, σ = 0.841). The least motivated for senior graduate teachers is amotivation (M = 3.775, σ = 0.949).

Table 4.4.13: Mean of the motivation score and rank

Rank	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
Contract	mean	4.147	4.333	4.402	3.971	4.167	4.069	1.000
34	Std. dev	0.982	0.906	0.795	0.842	0.775	0.887	5.117
GM	mean	4.278	4.321	4.483	4.103	4.400	3.977	1.126
276	Std. dev	0.885	0.858	0.727	0.845	0.933	0.826	4.718
SGM	mean	4.549	4.441	4.765	3.824	4.529	3.775	3.088
34	Std. dev	1.044	0.997	0.689	0.933	0.841	0.949	6.704
PGM	mean	5.606	5.242	4.636	4.061	4.515	2.758	10.576
11	Std. dev	0.696	0.883	0.547	0.841	0.780	1.034	6.438
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

The three highest scores of job satisfaction subscales for principal graduate teachers (PGM) were intrinsic motivation (M = 5.606, σ = 0.696), integrated regulation (M = 5.242, σ = 0.883), and identified regulation (M = 4.636, σ = 1.034). The least motivated for principal graduate teachers is amotivation (M = 2.758, σ = 3.524).

The order of motivation scores from the highest to lowest was principal graduate teachers, senior graduate teachers, graduate teachers, and contract teachers, respectively.

Table 4.4.14 shown identified regulation was significantly difference between contract teachers (4.402 ± 0.795) and senior graduate teachers (4.765 ± 0.689), t(66) = -2.011, p = 0.048. The intrinsic motivation, integrated regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between contract teachers and senior graduate teachers.

Table 4.4.14: Independent samples t-test of motivation score and rank

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	0.614	0.436	-1.635	66	0.107
	Equal variances not assumed			-1.635	65.753	0.107
Integrated regulation	Equal variances assumed	1.215	0.274	-0.467	66	0.642
	Equal variances not assumed			-0.467	65.405	0.642
Identified regulation	Equal variances assumed	0.625	0.432	-2.011	66	0.048
	Equal variances not assumed			-2.011	64.704	0.049
Introjected regulation	Equal variances assumed	0.736	0.394	0.682	66	0.497
	Equal variances not assumed			0.682	65.324	0.498
External regulation	Equal variances assumed	0.005	0.941	-1.849	66	0.069
	Equal variances not assumed			-1.849	65.563	0.069
Amotivation	Equal variances assumed	0.647	0.424	1.320	66	0.191
	Equal variances not assumed			1.320	65.700	0.191
W-SDI	Equal variances assumed	2.749	0.102	-1.444	66	0.154
	Equal variances not assumed			-1.444	61.710	0.154

Source: Data from questionnaire

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different contract teachers and graduate teachers.

Similarly, identified regulation was significantly difference between graduate teachers

(4.483 ± 0.727) and senior graduate teachers (4.765 ± 0.689), t(308) = -2.143, p = 0.033. The W-SDI was significantly difference between contract teachers (1.126 ± 4.718) and senior graduate teachers (3.088 ± 6.704), t(308) = -2.173, p = 0.031. The intrinsic motivation, integrated regulation, introjected regulation, external regulation, and amotivation were not significantly different between graduate teachers and senior graduate teachers.

Owing to the sample size of principal graduate teachers is 11 (less than or equal to 30), it may ignore the differences between principal graduate teachers and contract teachers, graduate teachers, or senior graduate teachers.

Table 4.4.15 shown the three highest scores of motivation subscales for teachers' monthly household income less than or equal to $40,000 were identified regulation (M = 4.432, σ = 0.737), integrated regulation (M = 4.395, σ = 0.819), and external regulation (M = 4.327, σ = 0.773). The least motivated for teachers' monthly household income less than or equal to $40,000 is introjected regulation (M = 3.821, σ = 0.811).

Table 4.4.15: Mean of the motivation score and monthly household income

Income	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
≤ $40,000	mean	4.198	4.395	4.432	3.821	4.327	4.006	1.321
54	Std. dev	0.910	0.819	0.737	0.811	0.773	0.768	4.416
$40,001-$70,000	mean	4.261	4.259	4.471	4.112	4.328	4.092	0.730
116	Std. dev	0.846	0.851	0.706	0.788	0.846	0.775	4.507
$70,001-$100,000	mean	4.386	4.434	4.571	4.101	4.455	3.859	2.013
132	Std. dev	0.969	0.905	0.762	0.907	1.012	0.892	5.480
≥$100,000	mean	4.491	4.377	4.503	4.101	4.453	3.667	2.723
53	Std. dev	1.047	0.994	0.688	0.883	0.897	1.064	6.841
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

The three highest scores of motivation subscales for teachers' monthly household income between $40,001 and $70,000 were identified regulation (M = 4.471, σ = 0.706), external regulation (M = 4.328, σ = 0.846), and integrated regulation (M = 4.259, σ = 0.851). The least

motivated for teachers' monthly household income between $40,001 and $70,000 is amotivation (M = 4.092, σ = 0.775).

The three highest scores of motivation subscales for teachers' monthly household income between $70,001 and $100,000 were identified regulation (M = 4.571, σ = 0.762), external regulation (M = 4.455, σ = 1.012), and integrated regulation (M = 4.434, σ = 0.905). The least motivated for teachers' monthly household income between $70,001 and $100,000 is amotivation (M = 3.859, σ = 0.892).

The three highest scores of motivation subscales for teachers' monthly household income more than or equal to $100,000 were identified regulation (M = 4.503, σ = 0.688), intrinsic motivation (M = 4.491, σ = 1.047), and external regulation (M = 4.453, σ = 0.897). The least motivated for teachers' monthly household income more than or equal to $100,000 is amotivation (M = 3.667, σ = 1.064).

The order of motivation scores from the highest to lowest was teachers' monthly household income more than or equal to $100,000, monthly household income between $70,001 and $100,000, monthly household income less than or equal to $40,000, and monthly household income between $40,001 and $70,000, respectively.

Table 4.4.16 shown introjected regulation was significantly difference between teachers' monthly household income less than or equal to $40,000 (3.821 ± 0.811) and monthly household income between $40,001 and $70,000 (4.112 ± 0.788), t(168) = 2.465, p = 0.015. The intrinsic motivation, integrated regulation, identified regulation, external regulation, amotivation and W-SDI were not significantly different between teachers' monthly household income less than or equal to $40,000 and monthly household income between $40,001 and $70,000.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers'

monthly household income less than or equal to $40,000 and monthly household income between $70,001 and $100,000 or monthly household income more than or equal to $100,000.

Table 4.4.16: Independent samples t-test of motivation score and monthly household income

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	0.668	0.415	-0.448	168	0.655
	Equal variances not assumed			-0.436	97.036	0.664
Integrated regulation	Equal variances assumed	0.233	0.630	0.984	168	0.326
	Equal variances not assumed			0.998	107.197	0.320
Identified regulation	Equal variances assumed	0.766	0.383	-0.332	168	0.740
	Equal variances not assumed			-0.327	99.571	0.745
Introjected regulation	Equal variances assumed	0.068	0.795	-2.223	168	0.028
	Equal variances not assumed			-2.199	100.834	0.030
External regulation	Equal variances assumed	0.055	0.814	-0.003	168	0.997
	Equal variances not assumed			-0.003	112.418	0.997
Amotivation	Equal variances assumed	0.327	0.568	-0.674	168	0.501
	Equal variances not assumed			-0.676	104.377	0.500
W-SDI	Equal variances assumed	0.366	0.546	0.801	168	0.424
	Equal variances not assumed			0.807	105.430	0.421

Source: Data from questionnaire

Similarly, amotivation was significantly difference between teachers' monthly household income between $40,001 and $70,000 ($4.092 \pm 0.775$) and monthly household income between $70,001 and $100,000 ($3.859 \pm 0.892$), $t(246) = 2.185$, $p = 0.030$. The W-SDI was significantly difference between teachers' monthly household income between $40,001 and $70,000 ($0.730 \pm 4.507$) and monthly household income between $70,001 and $100,000 ($2.013 \pm 5.480$), $t(246) = -1.996$, $p = 0.047$. The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, and external regulation were not significantly different between teachers' monthly household income between $40,001 and $70,000 and monthly household income between $70,001 and $100,000.

The amotivation was significantly difference between teachers' monthly household income between $40,001 and $70,000 ($4.092 \pm 0.775$) and monthly household income more than or equal to $100,000 ($3.667 \pm 1.064$), $t(167) = 2.931$, $p = 0.004$. The W-SDI was significantly difference between teachers' monthly household income between $40,001 and $70,000 ($0.730 \pm 4.507$) and monthly household income more than or equal to $100,000 ($2.723$

± 6.841), t(167) = -2.250, p = 0.026. The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, and external regulation were not significantly different between teachers' monthly household income between \$40,001 and \$70,000 and monthly household income more than or equal to \$100,000.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers' monthly household income between \$70,001 and \$100,000 and monthly household income more than or equal to \$100,000.

Table 4.4.17 shown the three highest scores of motivation subscales for teachers without child were identified regulation (M = 4.578, σ = 0.794), integrated regulation (M = 4.501, σ = 0.941), and external regulation (M = 4.457, σ = 0.960). The least motivated for teachers without child is amotivation (M = 3.892, σ = 0.882).

The three highest scores of motivation subscales for teachers with one child were external regulation (M = 4.404, σ = 0.845), identified regulation (M = 4.393, σ = 0.675), and integrated regulation (M = 4.323, σ = 0.837). The least motivated for teachers with one child are amotivation (M = 3.867, σ = 0.918).

Table 4.4.17: Mean of the job satisfaction score and number of children

Child	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
None	mean	4.283	4.501	4.578	4.018	4.457	3.892	1.821
151	Std. dev	1.013	0.941	0.794	0.926	0.960	0.882	5.506
1	mean	4.312	4.323	4.393	4.056	4.404	3.867	1.512
95	Std. dev	0.922	0.837	0.675	0.759	0.845	0.918	5.864
2	mean	4.447	4.263	4.561	4.200	4.310	4.020	1.549
85	Std. dev	0.814	0.870	0.626	0.804	0.902	0.853	4.499
≥ 3	mean	4.319	4.000	4.319	3.875	4.250	4.083	0.653
24	Std. dev	0.898	0.667	0.789	0.894	0.824	0.724	4.216
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

The three highest scores of motivation subscales for teachers with two children were identified regulation (M = 4.561, σ = 0.626), intrinsic motivation (M = 4.447, σ = 0.814), and external regulation (M = 4.310, σ = 0.902). The least motivated for teachers with two children is amotivation (M = 4.020, σ = 0.853).

The three highest scores of motivation subscales for teachers with three or more children were identified regulation (M = 4.319, σ = 0.789), intrinsic motivation (M = 4.319, σ = 0.898), and external regulation (M = 4.250, σ = 0.824). The least motivated for teachers with three or more children is introjected regulation (M = 3.875, σ = 0.894).

The order of motivation scores from the highest to lowest was teachers without child, teachers with two children, teachers with one child, and teachers with three or more children, respectively.

Table 4.4.18 shown the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers without child and teachers with one child.

Table 4.4.18: Independent samples t-test of motivation score and number of children

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	0.861	0.355	-1.034	178	0.302
	Equal variances not assumed			-1.041	177.971	0.299
Integrated regulation	Equal variances assumed	0.935	0.335	0.472	178	0.638
	Equal variances not assumed			0.471	174.072	0.638
Identified regulation	Equal variances assumed	0.9116	0.734	-1.722	178	0.087
	Equal variances not assumed			-1.729	177.768	0.085
Introjected regulation	Equal variances assumed	0.315	0.575	-1.235	178	0.219
	Equal variances not assumed			-1.231	173.061	0.220
External regulation	Equal variances assumed	0.957	0.329	-0.719	178	0.473
	Equal variances not assumed			-0.717	172.570	0.475
Amotivation	Equal variances assumed	0.765	0.383	-1.153	178	0.250
	Equal variances not assumed			-1.158	177.728	0.248
W-SDI	Equal variances assumed	3.292	0.071	-0.047	178	0.963
	Equal variances not assumed			-0.047	174.065	0.962

Source: Data from questionnaire

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers

without child and teachers with two children.

Owing to the sample size of teachers with three or more children is 24 (less than or equal to 30), it may ignore the differences between teachers with three or more children and teachers without child, teachers with one child, or teachers with two children.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers with one child and teachers with two children.

Table 4.4.19 shown the three highest scores of motivation subscales for teachers' working 26 to 40 hours per week were identified regulation (M = 5.157, σ = 0.817), integrated regulation (M = 5.059, σ = 0.915), and intrinsic motivation (M = 4.922, σ = 1.044). The least motivated for teachers' working 26 to 40 hours per week is amotivation (M = 3.784, σ = 1.111).

The three highest scores of motivation subscales for teachers' working 41 to 55 hours per week were identified regulation (M = 4.390, σ = 0.663), external regulation (M = 4.287, σ = 0.812), and integrated regulation (M = 4.204, σ = 0.780). The least motivated for teachers' working 41 to 55 hours per week is introjected regulation (M = 4.021, σ = 0.788).

Table 4.4.19: Mean of the motivation score and working hour per week

Hours	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
≤ 25	mean	4.000	4.333	4.000	4.000	4.667	3.667	0.333
1	Std. dev	---	---	---	---	---	---	---
26-40	mean	4.922	5.059	5.157	4.314	4.882	3.784	4.608
17	Std. dev	1.044	0.915	0.817	0.931	1.124	1.111	5.677
41-55	mean	4.159	4.204	4.390	4.021	4.287	4.044	0.548
281	Std. dev	0.827	0.780	0.663	0.788	0.812	0.776	4.329
≥ 56	mean	5.030	4.946	4.905	4.190	4.774	3.399	5.952
56	Std. dev	1.035	1.056	0.786	1.113	1.134	1.068	6.913
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

The three highest scores of motivation subscales for teachers' working 56 hours or more per week were intrinsic motivation (M = 5.030, σ = 1.035), integrated regulation (M = 4.946, σ = 1.056), and identified regulation (M = 4.905, σ = 0.786). The least motivated for teachers' working 56 hours or more per week is amotivation (M = 3.399, σ = 1.068).

The order of motivation scores from the highest to lowest was teachers' working 56 hours or more per week, working 26 to 40 hours per week, working 41 to 55 hours per week, and working less than or equal to 25 hours per week, respectively.

Owing to the sample sizes of both teachers' working less than or equal to 25 hours per week and working 26 to 40 hours per week are less than or equal to 30, it may ignore their differences between teachers working 41 to 55 hours per week or working 56 hours or more per week.

Table 4.4.20 shown the intrinsic motivation was significantly difference between teachers' working 41 to 55 hours per week (4.159 ± 0.827) and working 56 hours or more per week (5.030 ± 1.035), t(335) = -6.881, p = 0.000. The integrated regulation was significantly difference between teachers' working 41 to 55 hours per week (4.204 ± 0.780) and working 56 hours or more per week (4.946 ± 1.056), t(335) = -6.099, p = 0.000. The identified regulation was significantly difference between teachers' working 41 to 55 hours per week (4.390 ± 0.663) and working 56 hours or more per week (4.905 ± 0.786), t(335) = -5.135, p = 0.000.

The external regulation was significantly difference between teachers' working 41 to 55 hours per week (4.287 ± 0.812) and working 56 hours or more per week (4.774 ± 1.134), t(335) = -3.808, p = 0.000. The amotivation was significantly difference between teachers' working 41 to 55 hours per week (4.044 ± 0.776) and working 56 hours or more per week (3.399 ± 1.068), t(335) = 5.303, p = 0.000. The W-SDI was significantly difference between teachers' working 41 to 55 hours per week (0.548 ± 4.329) and working 56 hours or more per week (5.952 ± 6.913), t(335) = -7.616, p = 0.000. The introjected regulation weas not significantly

different between teachers' working 41 to 55 hours per week and working 56 hours or more per week.

Table 4.4.20: Independent samples t-test of motivation score and working hour per week

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	8.296	0.004	-6.881	335	0.000
	Equal variances not assumed			-5.929	69.662	0.000
Integrated regulation	Equal variances assumed	10.290	0.001	-6.099	335	0.000
	Equal variances not assumed			-4.998	67.477	0.000
Identified regulation	Equal variances assumed	1.900	0.169	-5.135	335	0.000
	Equal variances not assumed			-4.587	71.444	0.000
Introjected regulation	Equal variances assumed	8.197	0.004	-1.360	335	0.175
	Equal variances not assumed			-1.084	66.383	0.282
External regulation	Equal variances assumed	11.607	0.001	-3.808	335	0.000
	Equal variances not assumed			-3.060	66.699	0.003
Amotivation	Equal variances assumed	13.906	0.000	5.303	335	0.000
	Equal variances not assumed			4.299	67.037	0.000
W-SDI	Equal variances assumed	33.964	0.000	-7.616	335	0.000
	Equal variances not assumed			-5.634	63.855	0.000

Source: Data from questionnaire

Table 4.4.21 shown the three highest scores of motivation subscales for teachers with bachelor's degree were integrated regulation (M = 4.823, σ = 0.976), external regulation (M = 4.740, σ = 1.157), and identified regulation (M = 4.635, σ = 0.827). The least motivated for teachers with bachelor's degree are amotivation (M = 3.740, σ = 1.008).

The three highest scores of motivation subscales for teachers with PCEd or PGDE were identified regulation (M = 4.450, σ = 0.711), integrated regulation (M = 4.257, σ = 0.829), and external regulation (M = 4.224, σ = 0.766). The least motivated for teachers with PCEd or PGDE is amotivation (M = 4.010, σ = 0.762).

The three highest scores of motivation subscales for teachers with master's degree were identified regulation (M = 4.583, σ = 0.718), external regulation (M = 4.500, σ = 0.953), and intrinsic motivation (M = 4.477, σ = 0.940). The least motivated for teachers with master's degree is amotivation (M = 3.896, σ = 0.938).

Owing to the sample size of teachers with EdD or PhD is 1 (less than or equal to 30), it may ignore the differences between teachers with EdD or PhD and teachers without bachelor's degree, teachers with PCEd or PGDE, or teachers with master's degree.

The order of motivation scores from the highest to lowest was teachers with bachelor's degree, teachers with master's degree, and teachers with PCEd or PGDE, respectively.

Table 4.4.21: Mean of the motivation score and qualification

Qual	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
Bachelor	mean	4.521	4.823	4.635	3.938	4.740	3.740	3.208
32	Std. dev	1.040	0.976	0.827	0.985	1.157	1.008	5.766
PCEd / PGDE	mean	4.140	4.257	4.405	4.047	4.224	4.010	0.813
162	Std. dev	0.867	0.829	0.711	0.801	0.766	0.762	4.603
Master	mean	4.477	4.365	4.583	4.106	4.500	3.896	1.950
160	Std. dev	0.940	0.893	0.718	0.881	0.953	0.938	5.578
EdD/PhD	mean	6.333	6.333	4.667	3.333	3.667	2.000	19.667
1	Std. dev	---	---	---	---	---	---	---
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

Table 4.4.22 shown the intrinsic motivation was significantly difference between teachers with bachelor degree (4.521 ± 1.040) and teachers with PCEd or PGDE (4.140 ± 0.867), t(192) = 2.194, p = 0.029. The integrated regulation was significantly difference between teachers with bachelor degree (4.823 ± 0.976) and teachers with PCEd or PGDE (4.257 ± 0.829), t(192) = -3.421, p = 0.001. The external regulation was significantly difference between teachers with bachelor degree (4.740 ± 1.157) and teachers with PCEd or PGDE (4.224 ± 0.766), t(192) = 3.166, p = 0.002. The W-SDI was significantly difference between teachers with bachelor degree (3.208 ± 5.766) and teachers with PCEd or PGDE (0.813 ± 4.603), t(192) = 2.575, p = 0.011.

The identified regulation, introjected regulation, and amotivation were not significantly different between teachers with bachelor's degree and teachers with PCEd or PGDE.

Similarly, the integrated regulation was significantly difference between teachers with bachelor degree (4.823 ± 0.976) and teachers with master degree (4.365 ± 0.893), t(190) = 2.458, p = 0.010. The intrinsic motivation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI were not significantly different between teachers with

bachelor's degree and teachers with master's degree.

The intrinsic motivation was significantly difference between teachers with PCEd or PGDE (4.140 ± 0.867) and teachers with master degree (4.477 ± 0.940), t(320) = -3.346, p = 0.001. The identified regulation was significantly difference between teachers with PCEd or PGDE (4.405 ± 0.711) and teachers with master degree (4.583 ± 0.718), t(320) = -2.234, p = 0.026. The external regulation was significantly difference between teachers with PCEd or PGDE (4.224 ± 0.766) and teachers with master degree (4.500 ± 0.953), t(320) = -2.863, p = 0.004. The W-SDI was significantly difference between teachers with PCEd or PGDE (0.813 ± 4.603) and teachers with master degree (1.950 ± 5.578), t(320) = -1.996, p = 0.047. The integrated regulation, introjected regulation, and amotivation were not significantly different between teachers with PCEd or PGDE and teachers with master's degree.

Table 4.4.22: Independent samples t-test of motivation score and qualification

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	2.012	0.158	2.194	192	0.029
	Equal variances not assumed			1.943	39.949	0.059
Integrated regulation	Equal variances assumed	1.728	0.190	3.421	192	0.001
	Equal variances not assumed			3.066	40.307	0.004
Identified regulation	Equal variances assumed	3.365	0.068	1.626	192	0.106
	Equal variances not assumed			1.470	40.565	0.149
Introjected regulation	Equal variances assumed	1.050	0.307	-0.681	192	0.497
	Equal variances not assumed			-0.593	39.493	0.557
External regulation	Equal variances assumed	10.633	0.001	3.166	192	0.002
	Equal variances not assumed			2.417	36.544	0.021
Amotivation	Equal variances assumed	4.456	0.036	-1.735	192	0.084
	Equal variances not assumed			-1.440	38.295	0.158
W-SDI	Equal variances assumed	4.420	0.037	2.575	192	0.011
	Equal variances not assumed			2.215	39.177	0.033

Source: Data from questionnaire

Table 4.4.23 shown the three highest scores of motivation subscales for teachers without administrative role were identified regulation (M = 4.426, σ = 0.661), external regulation (M = 4.333, σ = 0.878), and integrated regulation (M = 4.285, σ = 0.835). The least motivated for teachers without administrative role is amotivation (M = 3.989, σ = 0.790).

The three highest scores of motivation subscales for teachers with panel head were identified regulation (M = 4.511, σ = 0.817), external regulation (M = 4.369, σ = 0.915), and integrated regulation (M = 4.364, σ = 0.896). The least motivated for teachers with panel head is amotivation (M = 4.044, σ = 0.876).

The three highest scores of motivation subscales for teachers with functional head were identified regulation (M = 4.739, σ = 0.795), external regulation (M = 4.587, σ = 0.979), and intrinsic motivation (M = 4.478, σ = 0.866). The least motivated for teachers with functional head is amotivation (M = 3.739, σ = 1.008).

The three highest scores of motivation subscales for assistant or vice principal were intrinsic motivation (M = 5.422, σ = 1.027), integrated regulation (M = 5.178, σ = 1.068), and identified regulation (M = 4.956, σ = 0.744). The least motivated for assistant or vice principal is amotivation (M = 3.044, σ = 1.112).

The order of motivation scores from the highest to lowest was assistant or vice principal, teachers with functional head, teachers with panel head, and teachers without administrative role, respectively.

Table 4.4.23: Mean of the motivation score and administrative role

Admin	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
None	mean	4.230	4.285	4.426	4.047	4.333	3.989	1.003
219	Std. dev	0.869	0.835	0.661	0.791	0.878	0.790	4.490
Panel	mean	4.324	4.364	4.511	4.098	4.369	4.044	1.244
75	Std. dev	1.013	0.896	0.817	0.887	0.915	0.876	5.483
Functional	mean	4.478	4.464	4.739	4.123	4.587	3.739	2.587
46	Std. dev	0.860	0.947	0.795	1.000	0.979	1.008	5.882
Vice Principal	mean	5.422	5.178	4.956	3.911	4.800	3.044	8.933
15	Std. dev	1.027	1.068	0.744	1.137	0.966	1.112	7.578
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

Owing to the sample size of assistant or vice principal is 15 (less than or equal to 30), it may ignore the differences between assistant or vice principal and teachers without administrative role, teachers with panel head, or teachers with functional head.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers without administrative role and teachers with panel head.

Table 4.4.24 shown the identified regulation was significantly difference between teachers without administrative role (4.426 ± 0.661) and teachers with functional head (4.739 ± 0.795), t(263) = -2.813, p = 0.005. The W-SDI was significantly difference between teachers without administrative role (1.003 ± 4.490) and teachers with functional head (2.587 ± 5.882), t(263) = -2.053, p = 0.041. The intrinsic motivation, integrated regulation, introjected regulation, external regulation, and amotivation were not significantly different between teachers without administrative role and teachers with functional head.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers with panel head and teachers with functional head.

Table 4.4.24: Independent samples t-test of motivation score and administrative role

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	0.030	0.863	-1.766	263	0.079
	Equal variances not assumed			-1.778	65.754	0.080
Integrated regulation	Equal variances assumed	1.230	0.268	-1.291	263	0.198
	Equal variances not assumed			-1.190	60.591	0.239
Identified regulation	Equal variances assumed	0.763	0.383	-2.813	263	0.005
	Equal variances not assumed			-2.495	58.783	0.015
Introjected regulation	Equal variances assumed	1.259	0.263	-0.564	263	0.573
	Equal variances not assumed			-0.485	57.399	0.630
External regulation	Equal variances assumed	0.030	0.862	-1.745	263	0.082
	Equal variances not assumed			-1.625	61.115	0.109
Amotivation	Equal variances assumed	3.750	0.054	1.855	263	0.065
	Equal variances not assumed			1.584	57.157	0.119
W-SDI	Equal variances assumed	4.302	0.039	-2.053	263	0.041
	Equal variances not assumed			-1.724	56.514	0.090

Source: Data from questionnaire

Table 4.4.25 shown the three highest scores of motivation subscales for teachers working in band 1 schools were identified regulation (M = 4.524, σ = 0.773), intrinsic motivation (M = 4.357, σ = 0.980), and external regulation (M = 4.333, σ = 0.896). The least motivated for teachers working in band 1 schools is amotivation (M = 3.929, σ = 0.877).

The three highest scores of motivation subscales for teachers working in band 1 to 2 schools were identified regulation (M = 4.475, σ = 0.624), external regulation (M = 4.333, σ = 0.806), and integrated regulation (M = 4.216, σ = 0.714). The least motivated for teachers working in band 1 to 2 schools is introjected regulation (M = 4.039, σ = 0.842).

The three highest scores of motivation subscales for teachers working in band 2 schools identified regulation (M = 4.342, σ = 0.687), external regulation (M = 4.329, σ = 0.894), and integrated regulation (M = 4.311, σ = 0.855). The least motivated for teachers working in band 2 schools is introjected regulation (M = 4.023, σ = 0.745).

The three highest scores of motivation subscales for teachers working in band 2 to 3 schools were identified regulation (M = 4.466, σ = 0.673), external regulation (M = 4.402, σ = 0.864), and integrated regulation (M = 4.324, σ = 0.877). The least motivated for teachers working in band 2 to 3 schools is amotivation (M = 3.868, σ = 0.963).

Table 4.4.25: Mean of the motivation score and banding

Banding	Statistics	IM	INTEG	IDEN	INTRO	EXT	AMO	W-SDI
Band 1	mean	4.357	4.252	4.524	3.971	4.333	3.929	1.676
70	Std. dev	0.980	0.884	0.773	0.959	0.896	0.877	5.715
Band 1-2	mean	4.216	4.216	4.475	4.039	4.333	4.064	0.657
68	Std. dev	0.774	0.714	0.624	0.842	0.806	0.650	3.563
Band 2	mean	4.185	4.311	4.342	4.023	4.329	4.090	0.568
74	Std. dev	0.782	0.855	0.687	0.745	0.894	0.834	5.072
Band 2-3	mean	4.279	4.324	4.466	4.041	4.402	3.868	1.502
73	Std. dev	0.943	0.877	0.673	0.831	0.864	0.963	5.559
Band 3	mean	4.633	4.710	4.738	4.238	4.571	3.690	3.605
70	Std. dev	1.112	1.020	0.830	0.885	1.057	0.969	5.760
Total	mean	4.332	4.362	4.507	4.062	4.393	3.929	1.594
355	Std. dev	0.935	0.889	0.728	0.854	0.907	0.875	5.293

Source: Data from questionnaire

The three highest scores of motivation subscales for teachers working in band 3 schools were identified regulation (M = 4.738, σ = 0.830), integrated regulation (M = 4.710, σ = 1.020), and intrinsic motivation (M = 4.633, σ = 1.112). The least motivated for teachers working in band 3 schools is amotivation (M = 3.690, σ = 0.969).

The order of motivation scores from the highest to lowest was teachers working in band 3 schools, teachers working in band 1 schools, teachers working in band 2 to 3 schools, teachers working in band 1 to 2 schools, and teachers working in band 2 schools, respectively.

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers working in band 1 schools and teachers working in band 1 to 2 schools, teachers working in band 2 schools or teachers working in band 2 to 3 schools.

Table 4.4.26 shown the integrated regulation was significantly difference between teachers working in band 1 schools (4.252 ± 0.884) and teachers working in band 3 schools (4.710 ± 1.020), t(138) = -2.834, p = 0.005. The W-SDI was significantly difference between teachers working in band 1 schools (1.676 ± 5.715) and teachers working in band 3 schools (3.605 ± 5.760), t(138) = -1.989, p = 0.049. The intrinsic motivation, identified regulation, introjected regulation, external regulation, and amotivation were not significantly different between teachers working in band 1 schools and teachers working in band 3 schools.

Similarly, the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers working in band 1 to 2 schools and teachers working in band 2 schools, or teachers working in band 2 to 3 schools.

The intrinsic motivation was significantly difference between teachers working in band 1 to 2 schools (4.216 ± 0.774) and teachers working in band 3 schools (4.633 ± 1.112), t(136) = -2.533, p = 0.012. The integrated regulation was significantly difference between teachers

working in band 1 to 2 schools (4.216 ± 0.714) and teachers working in band 3 schools (4.710 ± 1.020), t(136) = -3.286, p = 0.001. The identified regulation was significantly difference between teachers working in band 1 to 2 schools (4.475 ± 0.624) and teachers working in band 3 schools (4.738 ± 0.830), t(136) = -2.096, p = 0.038. The amotivation was significantly difference between teachers working in band 1 to 2 schools (4.064 ± 0.650) and teachers working in band 3 schools (3.690 ± 0.969), t(136) = 2.651, p = 0.009. The W-SDI was significantly difference between teachers working in band 1 to 2 schools (0.657 ± 3.563) and teachers working in band 3 schools (3.605 ± 5.760), t(136) = -3.063, p = 0.000. The introjected regulation and external regulation were not significantly different between teachers working in band 1 to 2 schools and teachers working in band 3 schools.

Table 4.4.26: Independent samples t-test of motivation score and banding

		Levene's Test		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Intrinsic motivation	Equal variances assumed	4.025	0.047	-1.559	138	0.121
	Equal variances not assumed			-1.559	135.851	0.121
Integrated regulation	Equal variances assumed	2.152	0.145	-2.834	138	0.005
	Equal variances not assumed			-2.834	135.259	0.005
Identified regulation	Equal variances assumed	1.342	0.249	-1.581	138	0.116
	Equal variances not assumed			-1.581	137.310	0.116
Introjected regulation	Equal variances assumed	0.061	0.806	-1.709	138	0.090
	Equal variances not assumed			-1.709	137.110	0.090
External regulation	Equal variances assumed	3.388	0.068	-1.438	138	0.153
	Equal variances not assumed			-1.438	134.358	0.153
Amotivation	Equal variances assumed	2.200	0.140	1.524	138	0.130
	Equal variances not assumed			1.524	136.664	0.130
W-SDI	Equal variances assumed	1.721	0.192	-1.989	138	0.049
	Equal variances not assumed			-1.989	137.991	0.049

Source: Data from questionnaire

The intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between teachers working in band 2 schools and teachers working in band 2 to 3 schools.

The intrinsic motivation was significantly difference between teachers working in band 2 schools (4.185 ± 0.782) and teachers working in band 3 schools (4.633 ± 1.112), t(142) = -2.812, p = 0.006. The integrated regulation was significantly difference between teachers

working in band 2 schools (4.311 ± 0.855) and teachers working in band 3 schools (4.710 ± 1.020), t(142) = -2.547, p = 0.012. The identified regulation was significantly difference between teachers working in band 2 schools (4.342 ± 0.687) and teachers working in band 3 schools (4.738 ± 0.830), t(142) = -3.124, p = 0.002. The amotivation was significantly difference between teachers working in band 2 schools (4.090 ± 0.834) and teachers working in band 3 schools (3.690 ± 0.969), t(142) = 2.658, p = 0.009. The W-SDI was significantly difference between teachers working in band 2 schools (0.568 ± 5.072) and teachers working in band 3 schools (3.605 ± 5.760), t(142) = -3.362, p = 0.001. The introjected regulation and external regulation were not significantly different between teachers working in band 2 schools and teachers working in band 3 schools.

The intrinsic motivation was significantly difference between teachers working in band 2 to 3 schools (4.279 ± 0.943) and teachers working in band 3 schools (4.633 ± 1.112), t(141) = -2.061, p = 0.041. The integrated regulation was significantly difference between teachers working in band 2 to 3 schools (4.324 ± 0.877) and teachers working in band 3 schools (4.710 ± 1.020), t(141) = -2.426, p = 0.017. The identified regulation was significantly difference between teachers working in band 2 to 3 schools (4.466 ± 0.673) and teachers working in band 3 schools (4.738 ± 0.830), t(141) = -2.159, p = 0.033. The W-SDI was significantly difference between teachers working in band 2 to 3 schools (1.502 ± 5.559) and teachers working in band 3 schools (3.605 ± 5.760), t(141) = -2.221, p = 0.028. The introjected regulation, external regulation, and amotivation were not significantly different between teachers working in band 2 to 3 schools and teachers working in band 3 schools.

Figure 4.4.3 shown the scatter plot with fit line of W-SDI by job satisfaction scores. Scatter plot can be used to determine whether a relationship is linear, detect outliers, and graphically present a relationship between two continuous variables. There is a positive relationship (0.311)

between the work motivation (W-SDI) and job satisfaction of the employees. The higher the

level of job satisfaction, the greater the motivation of teachers at work.
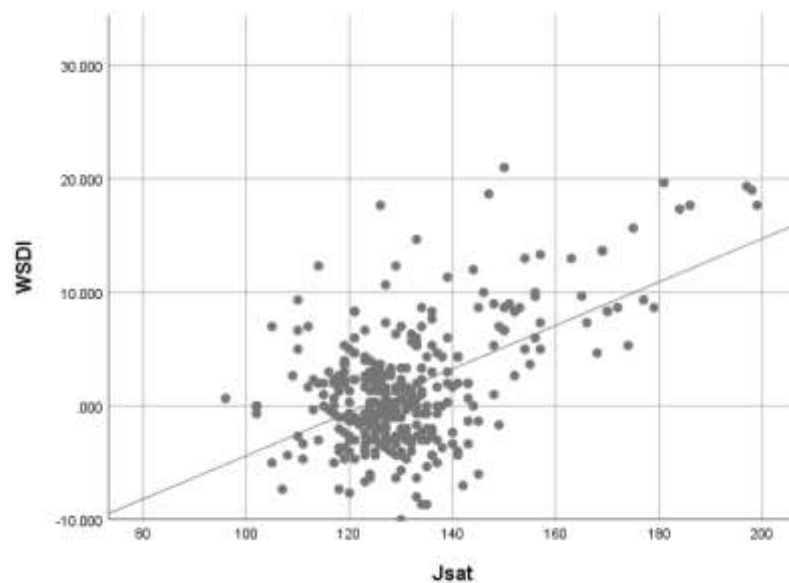

Figure 4.4.3: Scatter plot with fit line of W-SDI by job satisfaction scores

The scatter plot can divide data into groups based on how closely sets of points clusters

together. Table 4.4.4 shown that Senior Graduate Master or Mistress have strong correlation

(0.641) between motivation and job satisfaction. While Graduate Master or Mistress have weak

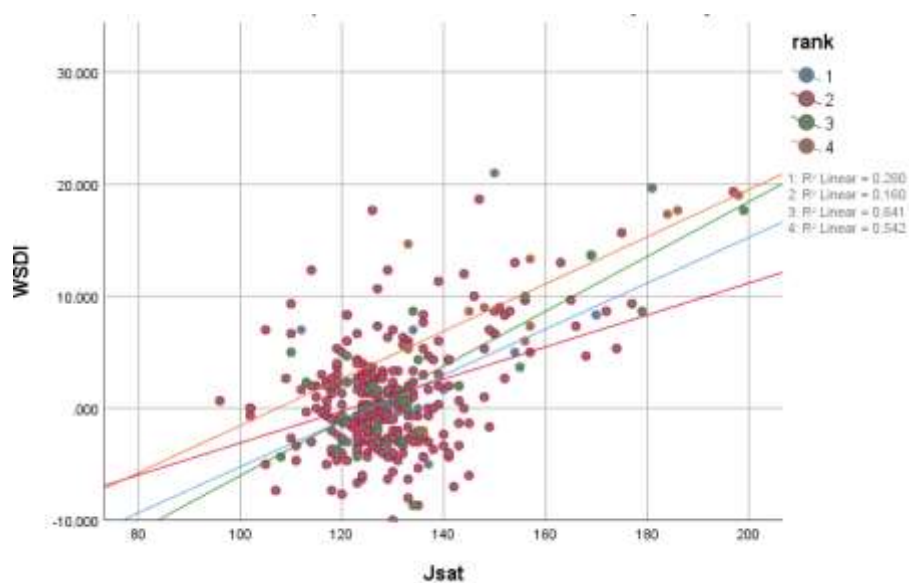correlation (0.160) between motivation and job satisfaction.

Figure 4.4.4: Scatter plot with fit line of W-SDI by job satisfaction scores by rank

Table 4.4.5 shown that Assistant and Vice Principals have strong correlation (0.656) between motivation and job satisfaction. They are entrusted with managing human and monetary resources as well as determining future needs. They have stronger sense of meaning at work and enjoy their authority in schools. While teachers without administrative role have weak correlation (0.153) between motivation and job satisfaction. They need opportunities to develop their professional identity and growth.
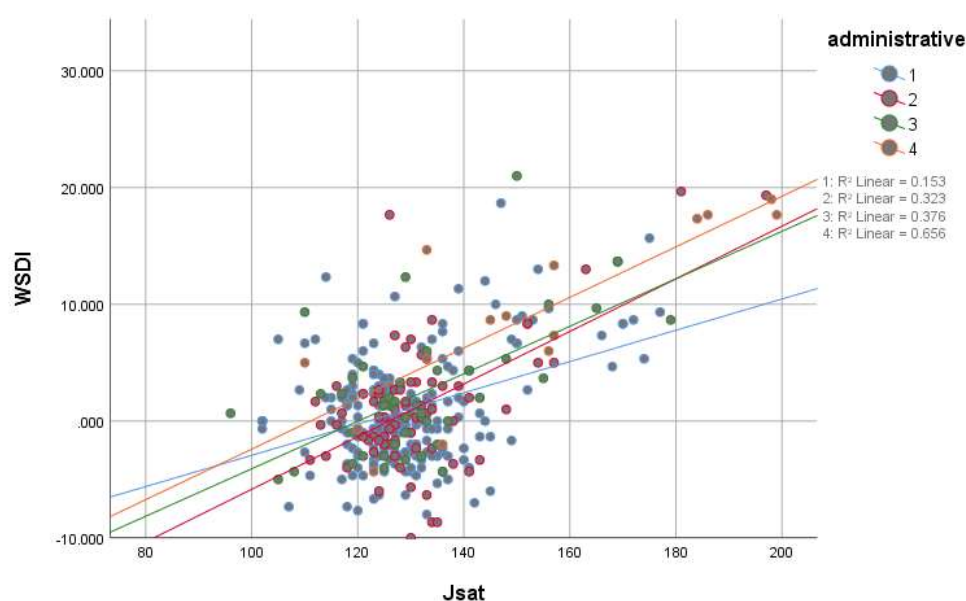

Figure 4.4.5: Scatter plot with fit line of W-SDI by job satisfaction scores by administrative

4.5 Research Questions and Hypothesis

This research study is about the job satisfaction and motivation of secondary school teachers in Hong Kong and the research questions of this study was related to the topic of this research about the secondary school teachers. There were five different research questions about the job satisfaction and this research was mostly done to evaluate the job satisfaction and motivation level of the secondary school teachers in Hong Kong. The basic research question was related to the evaluation of current level of the motivation of the secondary school teachers in Hong Kong. It was discussed in the research questions about the multiple factors who were

contributing to the changes of work motivation of the secondary school teachers. It was also discussed about the overall motivation level among the secondary school teachers. The discussion about the correlation between the work motivation and the motivation among the secondary school teachers in Hong Kong was made for the purpose to evaluate the motivation of the secondary school teachers. At the end, it was also discussed in detail about different demographic variables like age, gender, rank of the teachers, their service length in the schools and subjects taught to the students in the context of the motivation level and related it with the motivation level among the secondary school teachers in Hong Kong. There was multiple research hypothesis in the context of the work motivation while keeping in mind the secondary school teachers in Hong Kong. All the research hypotheses were related with the research questions and to conduct research about the job satisfaction and motivation of secondary school teachers in Hong Kong, the researchers of this study collected data through research questionnaire from 355 respondents. All the respondents of this study responded without pay which means that they were responding with their independent responses and the responses from all the participants were independently collected through online research questionnaire.

It is discussed in this research study about the Cronbach's alpha of six subscales of motivation which is 0.361 and this figure indicated the unacceptable reliability of the consistency. While keeping in mind the Cronbach's alpha of six subscales of motivation including the intrinsic motivation, integrated regulation, identified regulation, introjected regulation external regulation and amotivation, there were three different subscales of motivation including identified regulation, external regulation as well as integrated regulation were calculated with the highest scores of the secondary school teachers in Hong Kong. From the collected data about 355 respondents, it was calculated mean, median and standard deviation of the motivation scores of which were 1.594, 0.667 and 5.293 respectively. After it was making calculation for the purpose to check the skewness of the collected data, it was positively skewed with 1.077 and normally distributed. Further, to calculate the work motivation, there was a

specific formula used in this research about the job satisfaction and motivation level of the secondary school teachers in Hong Kong. The formula highlighted in this research can be used to calculate the motivation score against each participant while using the response of that particular respondent given in the questionnaire. The main objective of using the formula to calculate the motivation score of each individual is to measure the self-determination continuum. After determining the self-determination scores of all the motivational subscales, positive score about the self-determined profile is calculated by summing three self-determined subscales including the identified regulation, intrinsic motivation and integrated regulation. Further negative score is calculated by summing three non-self-determined subscales including the introjected regulation, amotivation and external regulation. The range of the score calculated by summing up is from -36 to +36. The lower score indicates the minimum level of the motivation whereas the higher score of the self-determination indicates the higher work motivation. After calculating the self-determination score of each respondent in this study about the job satisfaction and the motivation of the secondary school teachers in Hong Kong, these scores were summarized in the form of frequency distribution which were classified into four different classes ranging from -36 to +36. There were 42.5% respondents who were had negative scores indicating the lack of motivation whereas other 57.5% respondents were having positive self-determination scores indicating that they were motivated enough to place positive scores.

The motivation score was calculated on the basis of gender and after calculating the mean and standard deviation of both genders, it was observed that the motivation level of the male respondents was slightly higher than the motivation level of the female respondents. It was observed from the research study and collected data through the research questionnaire that the motivation level was showing a trend from up to down when different respondents were observed including married teachers, single teachers, widow or divorced teachers respectively. The motivation level of the married teachers was observed to be higher whereas unmarried

teachers were placed themselves in the average ranking in the motivation score and the widow or divorced teachers were having the lowest scores in motivation when the data collected through questionnaire was analyzed. The widow or divorced teachers in the sample was minor and their number was only 16 which is less than 30 respondents which means that the results of these 16 respondents cannot be compared with other respondents and the difference between the results of widow or divorced people with the results of single and married respondents can be ignored. When the motivation score was discussed from the respondents' age point of view, it was considered to be highest towards the lower side from higher ages to lower side. The respondents having the age elder than or equal to 51 years were considered to have maximum motivation score and then age factor and the motivation scores were moving downward in parallel to each other. While comparing the motivation scores of all the respondents in terms of their experiences in the secondary schools in Hong Kong, the order of the motivation score was highest to lowest from the respondents having experiences more than or equal to 26 years, less than 5 years, 16 to 25 years and then 6 to 15 years respectively. There was no proper order in terms of teachers' experience while calculating the motivation score. Another factor in motivation score was the teachers' grades. The teachers having the bigger grades were more satisfied from those who have the lower grades in schools while comparing with others. Similarly, the income level of the teachers was reflecting in their motivation score as the motivation score and the income level were directly associated with each other. In case of additional income, the motivation score was higher whereas the lower income was directly linked with the lower motivation score.

The work motivation among the secondary school teachers were calculated and observed in this study and found that the teachers in the secondary schools were having the more or less motivation scores on the basis of multiple characteristics. There were different factors which were contributing to the motivation score including the experiences of the teachers in the secondary schools in Hong Kong, their ages, their income levels, their marital status and even

the number of children of each respondent were directly or indirectly affecting the motivation score of everyone. Motivation score was playing the vital role in this study for evaluating the motivation level and job satisfaction level of the teachers belonging to the secondary schools in Hong Kong. The motivation score is the most prominent elements in this research study and the researchers used this tool to conduct the research about the job satisfaction and motivation level of the teachers belonging to the secondary schools in Hong Kong in more effective and reliable way. The researchers used a specific formula to calculate the motivation score which is one of the most prominent elements to conduct and withdraw reasonable results from research which was considered to be qualitative while keeping in mind the motivation and job satisfaction level as there is no proper way to measure the job satisfaction and motivation level of the people who are working in an organization. So, to calculate the motivation level of the teachers, the researchers used a formula to calculate a motivation score against each respondent as it helped a lot to conclude the research in more and authentic way. The major objective of this research was to calculate the overall motivation level of the teachers who were working in the secondary schools in Hong Kong. There were multiple tools and techniques that were used to calculate the desired results about the job satisfaction and motivation level of the teachers working in the secondary schools. It was also observed that the teachers teaching in the secondary schools were quite satisfied while comparing with those teachers who were providing their services in those schools where lower classes were available, and teachers must made huge efforts to guide the students about their routine tasks.

Correlation is a statistical term which is used to explore the relationship between two variables. In this research, it is discussed about the correlation between the work motivation and the motivation amongst the secondary school teachers along with their satisfaction level in Hong Kong. From the research study, the researchers have found that there is a significant relationship between the job satisfaction of the secondary school teachers and their motivation level. If the secondary school teachers are satisfied with their jobs in the schools, their

satisfaction level can be hire and if the satisfaction level is hire then it must lead towards the higher motivation of the teachers in the secondary schools. It was observed from this study that when the motivation score of the teachers were higher, their job satisfaction level was also maximum but those respondents whose scores were lower in the motivation, their job satisfaction level was not convincing, and they were spending confused lives while teaching there in the secondary schools in Hong Kong. It was observed that there was a strong correlation between the work motivation and the motivation amongst the secondary school teachers in Hong Kong. This research study explains that the secondary school teachers are looking more satisfied if their job satisfaction level is higher and they are looking more confused, and they are lacking in the motivation if their level of job satisfaction is not reasonable. While keeping in mind these factors, it is cleared that the job satisfaction and motivation level are directly associated with each other and in case of increase in the satisfaction level, the motivation level automatically improves. Likewise, in case of decrease in the job satisfaction, the motivation of the employees working in an organization also disturbs accordingly. The same rule has been cleared from this study that the motivation level of the teachers was directly associated with the level of their job satisfaction, and they were directly proportionated with each other.

There were different factors especially demographic factors which were contributing to the job satisfaction level and in the motivation level at the same time. Demographic variables are contributing to this research in a positive way and there were different results withdrawn based on different demographic variables. For example, when the rank of the teachers was higher, they were quite satisfied and when their ranks were lower, they were less satisfied with their jobs at the secondary schools. Similarly, male teachers were more satisfied while comparing them with the female teachers. It was also discussed in this study about the job satisfaction and motivation of the secondary school teachers in Hong Kong that different length of services was providing multiple results and each year bracket in terms of experience was providing different results. From this discussion and outcomes about the demographic

variables, it is cleared that the demographic variables have the huge impact on the job satisfaction and the motivation level of the teachers working in the secondary schools in Hong Kong.

It is cleared that the highlighted research questions were mainly discussed during the entire research and reasonable outcomes were also observed while collecting the relevant information from the respondents of this study about the secondary schools at the Hong Kong. The motivation score was calculated against each respondent of this study and that score of each participant of this study was analyzed to evaluate the motivation and job satisfaction level of the teachers working in the secondary schools in Hong Kong. Different factors are highlighted in this study who are affecting the level of job satisfaction along with the motivation level of different teachers working at the secondary schools. The research questions and the hypothesis associated with this study have been analyzed and the outcomes have been extracted to discuss the research study to withdraw the desired results in more productive way.

4.6 Evaluation of Findings

There are numerous findings of this research about the job satisfaction and motivation amongst the secondary school teachers in Hong Kong. The main objective of this study was to find the job satisfaction and motivation of those teachers were performing their duties and responsibilities in the secondary schools in Hong Kong. In order to meet the main objective of this study, there was a questionnaire designed by researchers of this study and this online questionnaire was shared with different secondary school teachers in Hong Kong. There were 355 respondents of this study who were participated in this study and all the respondents were secondary school teachers who were performing their duties in their schools in Hong Kong. The participants of this research were volunteered, and they all were responded without charging anything from the researchers. If the researchers pay something to the respondents, they can respond biased answers and if the respondents respond independently without any

benefit, they can give reasonable feedback about the study which can also lead the researchers to guide others to perform multiple research studies about the same topic in coming future. The questionnaire was shared with all the respondents of this study through email, messages and Google link as multiple respondents responded in the questionnaire through the highlighted sources. The respondents were also having the facility the leave any question if they were uncomfortable while responding any particular question. The respondents of this study were included the secondary school teachers, training institutions, parents, policy makers and particularly those individuals who were looking for a bright future in the secondary schools as teacher. While focusing on the collected information about the secondary school teachers in Hong Kong, all the results were extracted from the research study were categorized into three different categories. Before explaining three types of outcomes, it was discussed in detail about the trustworthiness of the data and after that the first portion of the research questionnaire were related to the demographic variables and the results extracted from the questionnaire were analyzed accordingly. In the second part of the research questionnaire, it was discussed in detail about the level of job satisfaction of the secondary school teachers along with its nine different subscales in Hong Kong. The last part of the research questionnaire was about the motivation of the teachers at the workplace. There were six subscales which were discussed in detail while conducting analysis to evaluate the motivation of the secondary school teachers in Hong Kong.

4.6.1 Credibility and Reliability of the Data

The credibility as well as the reliability of the data is considered to be the most prominent components in every step of the research about any particular topic. Validity and reliability are considered to be those particular tools that are normally used to measure the data accuracy in terms of quality and data integrity which helps the researchers to make accurate decisions about the research study. In order to improve the trustworthiness of the data, the validity of the data was ensured including internal validity and external validity. Internal validity was related to the

measurement tools, that is research questionnaire. To ensure the internal validity of the research questionnaire, the researchers validated that there was a reasonable relationship among the independent and dependent variables. There are numerous internal tools including the research subjects, research methods, research tools and techniques, research procedures and multiple statistical tools and techniques that are controllable and manageable by the researchers and they normally finalize these tools by themselves while keeping in mind the research study. The external validity refers to the multiple factors which are normally uncontrollable by the researchers including the population related to the participants of the research study. Researchers normally select a sample from the population while using multiple statistical tools and for this research, the researchers selected a sample of 355 respondents from the secondary school teachers in Hong Kong as this research study was also about the same population related to the secondary school teachers in Hong Kong. The next point about the trustworthiness of the data is the reliability as the reliable data provides the accurate results which may lead to withdraw the best results and outcomes which can be suitable to conduct new research in different areas around the globe. The researchers of this study shared the questionnaire with only those respondents who were the secondary school teachers and those were directly or indirectly involved with them. It helped to improve the reliability of the data about the secondary school teachers in Hong Kong. Reliability analysis is normally used to measure that either the selected sample for this study is providing the reliable data about the population or not. When the respondents of this study were belonged to the secondary schools then it means that the collected information about the selected sample of 355 participants was reliable and the results of the research was sufficient to explain about the job satisfaction and motivation amongst the secondary school teachers in Hong Kong.

The main objective of this study was clearly explained to all the respondents of this study while collecting information from them about the research study. When the objectivity was cleared, the respondents were feeling more comfortable while responding through the

questionnaire and they provided the reliable and authentic information which helped a lot in this research to withdraw the desired results and outcomes. The reproducibility of the data is considered to be one of the most prominent factors while collecting the information from the respondents. The research conducted about any particular study provides the specific results. If the same results are normally extracted by different researchers from multiple studies on the relevant topics, the reproducibility of the data can be practiced. In this research, the researchers withdrawn different results about the job satisfaction and motivation of the secondary school teachers in Hong Kong. Now if these results are matching with the results of other studies about different teachers teaching at different level, it can be said that the reproducibility of the data is excellent, and the results withdrawn from the research are reliable and authentic. The collected data through the research questionnaire was considered to be excellent and it was explained in the simplest form so that the layman could also understand about the research results as the withdrawn results and outcomes are normally helpful to conduct different research and outcomes of this research can be used as a secondary source of information for multiple research studies. It is better for all the researchers to conduct the research in an appropriate manner so that the research results can be quoted in different research and these outcomes can be helpful for other researchers to visualize their research about the multiple research studies.

4.6.2 Demographic Features of the Participants

There were 355 participants of this research study who contributed while responding through questionnaire and all these were secondary school teachers from Hong Kong. In order to choose these participants, simple random sampling technique was selected, and all the participants were selected while using the same statistical technique. It was required around 10 minutes to fill the online questionnaire as the research questionnaire was mostly depending upon the closed ended questions. The questionnaire was divided into three different parts including the 36 questions were placed for the purpose to measure the job satisfaction level of

the secondary school teachers, 18 questions were placed in the questionnaire to evaluate the work extrinsic and intrinsic motivation and the third portion of the research questionnaire was comprised on 11 demographic questions.

From the demographic variables, there were certain outcomes extracted. The male ratio of the participants was 58.3%. Further, the motivation level of the male participants was higher than the female participants as it was observed from the motivation score of the male participants of this study. While focusing on another demographic variable, that is the marital status of the participants, there was 31.5% participants of this study who were single whereas 64% participants of this study was married. The remaining 4.5% ration of the sample was the widowed or divorced teachers who were providing their services in the secondary schools in Hong Kong. From the research study, it was observed that the married participants of this research were quite satisfied, and their motivation scores were higher from the other participants including unmarried and divorced or widowed participants of this study about the job satisfaction and motivation level amongst the secondary school teachers in Hong Kong. when it was discussed from the age point of view of all the participants of this research study, it was found that the teachers having age less than 30 years were lower in numbers as only 16% participants were having their ages less than 30 years. There were 37.5% participants of this study whose ages were between 31 to 40 years. Almost 25% participants of this study were having their ages between 41 to 50 years and the participants above 50 years of ages were 78 participants, and their ratio was 22% against the selected sample to conduct this research about the secondary school teachers in Hong Kong. The next demographic variable of this research study was the experience of secondary school teachers in number of years. There were 14.4% participants of this study who were having their work experiences less than 5 years. Almost 39% participants were having their experiences between 6 to 15 years in the secondary schools in Hong Kong. The teachers having their services with more than 16 years and less than 25 years were 25.6% of the total sample. There was also a major portion of those teachers who

were having their experiences more than 25 years and they were in reasonable numbers as 21.1% participants were presenting their experiences with more than 25 years in the secondary schools in Hong Kong. There were different ranks defined in the secondary schools for the teachers and different teachers highlighted in the sample were having different ranks while providing their services as teachers in the secondary schools. There were four ranks identified among the participants of this study including the contract, GM, SGM and PGM along with their ratio in the sample as 9.6%, 77.7%, 9.6% and 3.1% respectively. The major portion of the GM were highlighted in the selected sample and their motivation scores were also calculated while keeping in mind their ranks in the secondary schools in Hong Kong. There was also mentioned about the income level of each participant of this study and this variable was also under the demographic variables. There were 15.2% participants of this study whose monthly income was less than or equal to $ 40,000 and 32.7% participants were having their monthly income from $ 40,001 to $ 70,000. The major portion of the selected sample for this study was comprised about those participants whose monthly income were lying from $ 70,001 to $ 100,000. There were also 14.9% participants of this sample whose monthly family income were recorded as more than or equal to $ 100,000. As the reasonable potion of the sample was highlighted as unmarried so the ratio of overall participants who didn't have any child were quite high and there were 42.5% participants who didn't have their child. Further, 26.8% participants of this study were having only one child whereas 23.9% participants reported that they had 2 children. There was also a ratio of 6.8% participants who have 3 or more than 3 children.

The participants of this study were also segregated on the basis of further demographic variables including the working hour per week, highest qualification of the participants, administrative role as well as banding of students. From the data collected from the participants of this study, it was observed that the teachers who were spending number of hours ranging from 41 hours to 55 hours were maximum in numbers and its ratio was 79.2% from the selected

sample. From this result, it can easily be analyzed that the secondary school teachers are spending 41 to 55 hours in average in their schools on weekly basis. While analyzing from the highest education's point of view, the teachers having the degrees of PCEd or PGDE were almost same as the teachers having the master's degrees as both type of degrees were presenting almost 45% each and there were more than 90% teachers in the selected sample who were having PCEd/PDGE or master's degrees. Most of the teachers in the sample were not having administrative role as they were totally performing their major role, that is teaching to the students. There were 61.7% teachers who didn't have any duty other than teaching and they were free from the administrative roles. There were five different Bands were discussed in the research questionnaire and luckily all the bands were having the same ratio, that is almost 20% of the participants were dealing with different bands against each band highlighted in the research questionnaire.

4.6.3 Job Satisfaction of Secondary School Teachers

The Job Satisfaction Survey (JSS) developed by the Spector (1985) was used in this research study about the job satisfaction and motivation level of the secondary school teachers in Hong Kong. The major portion of the research questionnaire was comprising on different questions related to the job satisfaction as there were 36 questions under this portion of the questionnaire. Likert-scale was used to explain the 36 questions related to the job satisfaction of the secondary school teachers and there were nine subscales that were used to evaluate the job satisfaction of the teachers in an appropriate way. These nine subscales were pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work and communication. There were multiple questions discussed under these subscales. In order to measure the job satisfaction of all the participants of this research study, it was calculated different statistical measures including mean, standard deviation, skewness, kurtosis, and alpha against all the subscales discussed under the job satisfaction of the secondary school

teachers in Hong Kong. Further, to evaluate the job satisfaction of secondary school teachers, the correlations among all the subscales were calculated on the basis of selected information through research questionnaire formulated by the researchers of this study. In order to withdraw the accurate results of the job satisfaction of the secondary school teachers, the demographic variables and job satisfaction subscales were analyzed for the purpose to calculate the job satisfaction of all the participants while keeping in mind the subscales discussed in the research questionnaire. The job satisfaction was analyzed on the basis of subscales and different demographic variables mentioned in the research questionnaire.

While focusing on the demographic variables in job satisfaction, it was analyzed that the male participants were more satisfied while comparing with the opposite gender. It was also analyzed and observed that the job satisfaction of the participants was higher to lower in the single, married and widowed/divorced participants of this study respectively. The job satisfaction and the age factors of the participants were analyzed, and it was observed that different age brackets were having different level of their job satisfaction and there was not any proper flow between the age and job satisfaction level. The researchers used multiple statistical tools and techniques in the current research to evaluate the job satisfaction and motivation level of the secondary school teachers in Hong Kong. Mean and Standard Deviation of all the demographic variables were calculated while focusing on all the subscales of the level of job satisfaction. These subscales matter a lot to improve the job satisfaction of the secondary school teachers in Hong Kong. For instance, it is discussed in this research study that the family income of the participants was directly associated with the job satisfaction of the secondary school teachers in Hong Kong. Similarly, number of children are also correlated with the job satisfaction of the teachers in the secondary schools. Working hours also play vital role in the job satisfaction as if the teachers were asked to perform their duties other than average working hours on weekly basis, their job satisfaction level was on the lower side. The administrative role also contributed to affecting the job satisfaction of the teachers who were working at the

secondary schools in Hong Kong. The teachers were supposed to perform only teaching responsibilities and if they were asked to perform additional administrative role without any financial benefits along with their basic duties and responsibilities, their level of job satisfaction was disturbed accordingly.

4.6.4 Motivation of the Secondary School Teachers

To measure the motivation of the teachers who are working at the secondary schools, the Cronbach's alpha along with six subscales of motivation were used. The six subscales of the motivation used in this research study are intrinsic motivation, integrated regulation, identified regulation, introjected regulation, amotivation and motivation. After collecting the data through the research questionnaire about the secondary school teachers in Hong Kong, the researchers of this research utilized the specific data related to the motivation and its subscales which were clearly highlighted in the research questionnaire and mean, standard deviation, skewness and kurtosis of motivation was calculated of all the subscales highlighted in this research study. These subscales were further categorized into two different categories in which one was self-determined subscales and non-self-determined subscales. Self-determined subscales were comprising on three subscales including intrinsic motivation, integrated regulation and identified regulation whereas the non-self-determined subscales were comprising on introjected regulation, external regulation and amotivation. Further, the motivation score calculated by using a specific formula was ranged from -36 to +36. The respondents highlighted in this research were further categorized into four different groups and a frequency distribution table was formulated to categorize the respondents into different groups. After it was formulating the frequency distribution of the respondents, 98.6% respondents were falling under two main groups whose range was -18 to +18. From the frequency distribution, it was observed that there was not even a single participant of this study who was lowly motivated. Most of the participants were less motivated which was showing 42.5% of the total sample selected for this

study. Major portion of the sample selected for this study was falling under the motivated participants and the ratio of these participants was 56.1%. Lastly, only 1.4% participants of this study were highly motivated. All these results were extracted from the data collected through the research questionnaire related to this research study about the job satisfaction and motivation amongst the secondary school teachers in Hong Kong.

4.7 Summary of the Findings

This research is about the job satisfaction and motivation of the secondary school teachers in Hong Kong, and it was discussed in detail about the mentioned factors in the research title. This research was conducted on the basis of 355 participants who were responded to the researchers through online questionnaire. The online questionnaire was designed by the researchers and key input was taken from the seniors and experts before disseminating it to all the participants of this study. The research questionnaire was considered to be one of the most prominent research tools to conduct the research about the research study related to the secondary school teachers. While formulating the questionnaire, the researchers formulated a questionnaire while focusing on three different portions of the questionnaire. The demographic variables are considered to be the significant part of every questionnaire and the researchers of this study designed 11 different questions on the basis of different variables to design a portion of the research questionnaire related to the research study. In the second portion of the research questionnaire, there were added 36 different questions while keeping in mind the level of job satisfaction along with 9 different subscales which who contributed a lot in this research study. In the last part of the questionnaire, it was discussed in detail about the motivation related to the secondary school teachers and 18 different questions were added in the research questionnaire in the portion related to the motivation of the secondary school teachers in Hong Kong. The following section summarizes the main research findings by quantitative data of this study.

Participants are most satisfied with their pay (M = 15.434, σ = 0.595). They are most unsatisfied with the operating procedures (M = 13.403, σ = 0.628) in the school. It is cleared that the participants were not running behind the financial benefits only as they were expecting the mental satisfaction while improving the operating procedures in the secondary schools in Hong Kong.

The Cronbach's alpha of nine Job Satisfaction Survey subscales is range from 0.781 to 0.845 which indicated good reliability or consistency. Internal consistency reliability coefficient α of job satisfaction is 0.867. The good reliability and consistency mean that the collected information through research questionnaire was reliable and the research tool, that is the research questionnaire was the better option to collect information from the participants of this study about the job satisfaction and motivation amongst the secondary school teachers in Hong Kong.

There were no significant differences between the job satisfaction subscales and gender, marital status, or number of children. The job satisfaction among these three demographic variables were same and all the participants were on the same page in terms of job satisfaction while keeping in mind the highlighted variables.

Promotion, contingent rewards, coworkers, and job satisfaction were significantly difference between less than or equal to 30 years old teachers (14.579 ± 2.017) and 31 to 40 years old teachers (13.774 ± 2.411). The mentioned figures explained that there is a huge variation among the lower and upper values of the given data, these values indicated that the differences in these factors including promotion, contingent rewards, coworkers and job satisfaction are not negligible.

Promotion, contingent rewards, coworkers, communication, and job satisfaction were significantly difference between less than or equal to 5 years of working (15.647 ± 2.481) and 16 to 25 years of working (14.714 ± 2.630). Same variation observed in this category of those participants who have less than or equal to 5 years of working experiences and these differences

were not negligible and on the basis of these variations, the researchers discussed different points related to this research study about the job satisfaction and motivation of the secondary school teachers in Hong Kong.

Promotion was significantly difference between contract teachers (14.735 ± 1.896) and graduate teachers (13.841 ± 2.420), while fringe benefits was significantly difference between contract teachers (14.353 ± 2.116) and senior graduate teachers (15.765 ± 3.331). All these factors are contributing to affect the job satisfaction and motivation of the school teachers in the secondary schools in Hong Kong. Maximum variation means that these highlighted factors can contribute with the maximum impact on the job satisfaction and motivation level of the secondary school teachers.

Promotion was significantly difference between teachers' monthly household income less than or equal to $40,000 (14.667 ± 2.995) and monthly household income between $40,001 and $70,000 (13.724 ± 2.430), while communication was significantly difference between teachers' monthly household income less than or equal to $40,000 (14.389 ± 2.498) and monthly household income more than or equal to $100,000 (15.792 ± 3.499). Besides, coworkers, communication, and job satisfaction were significantly difference between teachers' monthly household income between $40,001 and $70,000 (14.414 ± 2.561) and monthly household income more than or equal to $100,000 (15.585 ± 2.598).

The teachers who are receiving better financial income as compared to other ones are considered to be more satisfied because it is considered to be a general rule that most of the people are quite satisfied just because of their higher monthly income as compared to other people who are not receiving the same financial benefits while performing the same duties and responsibilities. It is a human psyche that the person who is receiving more financial benefits is considered to be more satisfied because one of the best motivations for an employee is considered to be a financial benefit for him. When financial benefits of an employee are maximized, his level of satisfaction automatically improves, and the motivation level increases

in the same way as well. While keeping in mind this philosophy and after getting results from this research on the basis of data collected through the research questionnaire, it is much cleared that the satisfaction level and communication of those secondary school teachers who were earning less than $ 40,000 and those who were earning more than $ 100,000 were differ. The teachers with higher income were more confident in communication and in job satisfaction while comparing with those who were having the less income.

Pay, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, communication, and job satisfaction were significantly difference between teachers' working 41 to 55 hours per week (15.167 ± 2.203) and working 56 hours or more per week (16.411 ± 2.872). These factors highlighting under the level of job satisfaction of the secondary school teachers and the teachers who were working between 41 to 55 hours in a week and those who were working more than 56 hours in a week have the maximum variation amongst the results associated with these factors.

Pay, operating procedures, coworkers, nature of work, communication, and job satisfaction were significantly difference between teachers with bachelor's degree (16.438 ± 2.699) and teachers with PCEd or PGDE (15.142 ± 1.952). Further, teachers having the qualification of PCEd or PGDE and those who have the master qualification were covering almost same number of participants in this research study and most importantly these two degree holders were more than 90% in this research sample which reflects that most of the secondary school teachers are having the master degree of PCEd or PGDE and they are performing their duties and responsibilities on the basis of these degree as these degrees are considered to be the compulsory part to continue their jobs in the secondary schools in Hong Kong.

Fringe benefits, coworkers, and nature of work were significantly difference between teachers without administrative role (14.315 ± 2.308) and teachers with functional head (15.000 ± 2.733). There was a huge difference in the job satisfaction and motivation of those teachers

who were having any administrative role and those didn't have any administrative role in the secondary schools in Hong Kong. When someone has any additional responsibility at the workplace along with the basic duty and responsibility, the fringe benefits differ with those who perform only the assigned duty and neglect the additional administrative role in the school. So, the job satisfaction and motivation among those who have any additional role and those who do not have additional charge along with the basic duties and responsibilities were observed as different.

Coworkers was significantly difference between teachers working in band 1 schools (14.315 ± 2.308) and teachers working in band 1 to 2 schools (15.000 ± 2.733), while promotion and coworkers were significantly difference between teachers working in band 1 schools (14.529 ± 2.569) and teachers working in band 2 schools (13.581 ± 2.300). Job satisfaction subscales were not significantly different between teachers working in band 1 schools and teachers working in band 2 to 3 schools. The supervision, fringe benefits, communication, and job satisfaction were significantly difference between teachers working in band 1 schools (14.200 ± 3.188) and teachers working in band 3 schools (16.157 ± 3.442).

Majority of the participants (56.1 %) was categorized as motivated secondary school teachers, while categorized as less motivated was 42.5% of the participants. The motivation scores for male were slightly higher than that of female. There was a small number of those participants in this study who were highly motivated. The motivation level of the participants was observed among the participants of this study while focusing on six different subscales of the motivation. The most part of the participants were falling under the average rating in terms of motivation as the extreme motivation in positive sense as well as in negative sense was missing in this research as not even a single participant of this study was highly demotivated whereas only 5 participants were highly motivated of the secondary school teachers in Hong Kong.

There were no significant differences between single teachers and married teachers for the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation, and W-SDI. It is observed from all the subscales of the motivation that single and married teachers have the same scale of motivation regardless of their marital status. Sometime, the marital status of the respondents creates huge difference in the research results but in this case the participants didn't reflect any particular difference in terms of motivation while keeping in mind married and unmarried teachers at the secondary schools in Hong Kong.

Integrated regulation and W-SDI were significantly difference between less than or equal to 30 years old teachers (4.556 ± 0.900) and 31 to 40 years old teachers (4.281 ± 0.851). There were no significant differences between less than or equal to 5 years of working and 6 to 15 years of working, 31 to 40 years old teachers and 41 to 50 years old teachers, or 41 to 50 years old teachers and elder than or equal to 51 years old teachers. The amotivation and W-SDI were significantly difference between 31 to 40 years old teachers (4.018 ± 0.800) and elder than or equal to 51 years old teachers (3.769 ± 0.940). Integrated regulation and W-SDI were significantly difference between less than or equal to 5 years of working (4.588 ± 0.918) and 6 to 15 years of working (4.261 ± 0.839).

Integrated regulation and W-SDI were significantly difference between less than or equal to 5 years of working (4.588 ± 0.918) and 6 to 15 years of working (4.261 ± 0.839), while amotivation and W-SDI were significantly difference between 6 to 15 years of working (4.036 ± 0.808) and more than or equal to 26 years of working (3.720 ± 0.983). There was not significantly different between 6 to 15 years of working and more than or equal to 26 years of working or 16 to 25 years of working and more than or equal to 26 years of working.

Identified regulation was significantly difference between contract teachers (4.402 ± 0.795) and senior graduate teachers (4.765 ± 0.689), while identified regulation and W-SDI were significantly difference between graduate teachers (4.483 ± 0.727) and senior graduate teachers (4.765 ± 0.689).

Introjected regulation was significantly difference between teachers' monthly household income less than or equal to $40,000 (3.821 ± 0.811) and monthly household income between $40,001 and $70,000 (4.112 ± 0.788), while amotivation and W-SDI were significantly difference between teachers' monthly household income between $40,001 and $70,000 (4.092 ± 0.775) and monthly household income between $70,001 and $100,000 (3.859 ± 0.892).

Intrinsic motivation, integrated regulation, and identified regulation were significantly difference between teachers' working 41 to 55 hours per week (4.159 ± 0.827) and working 56 hours or more per week (5.030 ± 1.035), while external regulation, amotivation, and W-SDI were significantly difference between teachers' working 41 to 55 hours per week (4.287 ± 0.812) and working 56 hours or more per week (4.774 ± 1.134). Besides, intrinsic motivation, integrated regulation, identified regulation, external regulation, amotivation, and W-SDI were significantly difference between teachers' working 41 to 55 hours per week (4.159 ± 0.827) and working 56 hours or more per week (5.030 ± 1.035).

Intrinsic motivation, integrated regulation, external regulation, and W-SDI were significantly difference between teachers with bachelor's degree (4.521 ± 1.040) and teachers with PCEd or PGDE (4.140 ± 0.867), while integrated regulation was significantly difference between teachers with bachelor's degree (4.823 ± 0.976) and teachers with master's degree (4.365 ± 0.893). Besides, intrinsic motivation, integrated regulation, external regulation, and W-SDI were significantly difference between teachers with PCEd or PGDE (4.140 ± 0.867) and teachers with master's degree (4.477 ± 0.940).

Identified regulation and W-SDI were significantly difference between teachers without administrative role (4.426 ± 0.661) and teachers with functional head (4.739 ± 0.795). So as per this indicator, the additional responsibility of the secondary school teachers can disturb their job satisfaction and motivation level of the teachers can be disturbed in any administrative role would be assigned to the secondary school teachers in Hong Kong.

Integrated regulation was significantly difference between teachers working in band 1 schools (4.252 ± 0.884) and teachers working in band 3 schools (4.710 ± 1.020). Intrinsic motivation, integrated regulation, identified regulation, amotivation, and W-SDI were significantly difference between teachers working in band 1 to 2 schools (4.216 ± 0.774) and teachers working in band 3 schools (4.633 ± 1.112) and teachers working in band 2 schools (4.185 ± 0.782) and teachers working in band 3 schools (4.633 ± 1.112). Besides, intrinsic motivation, integrated regulation, identified regulation, and W-SDI were significantly difference between teachers working in band 2 to 3 schools (4.279 ± 0.943) and teachers working in band 3 schools (4.633 ± 1.112).

All the above results about the research study related to the job satisfaction and motivation amongst the secondary school teachers in Hong Kong are explored while keeping in mind different factors who affected the research study with maximum impact on the job satisfaction and motivation of the secondary school teachers. This research completely relied on the research questionnaire and the multiple questions highlighted in the research questionnaire. The plus point of this research was that the researchers of this study categorized the research questionnaire in different parts and each part was further categorized into subscales. The entire research was about the level of job satisfaction among the secondary school teachers while focusing on nine different subscales along with the motivation level of the teachers while focusing on the six subscales associated with the motivation of the secondary school teachers in Hong Kong.

The intrinsic motivation, integrated regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly different between contract teachers and senior graduate teachers.

Chapter 5: Implications, Recommendations, and Conclusion

5.1 Introduction

This research study is about the job satisfaction and the motivation among the teachers from the secondary schools in Hong Kong. In this chapter, it is discussed about the research study in detail and on the basis of different statistical tools and techniques, multiple research analysis was conducted while using the collected data through research questionnaire. The reliability of the data was also measured and then while focusing on the subscales related to the job satisfaction and motivation, multiple analysis was performed. By keeping in mind, the analysis, results and discussion about the research study, there are multiple things discussed in this chapter related to the research about the job satisfaction and inspiration along with the motivation of the teachers from the secondary schools in Hong Kong. In this chapter, it is discussed in detail about the problem statement, purpose, method, limitations, and ethical dimensions related to the research study. There are different implications faced by the researchers of this study and all these implications are also part of this chapter. The recommendations are discussed in detail about this research while focusing on the application as well as keeping in mind the future research. At the end of this chapter, it is discussed in detail about the conclusion and in the conclusion, detailed outcomes and results are discussed in this research study.

5.2 Brief Review of the Problem Statement, Purpose, Method, Limitations, and Ethical Dimensions

In Hong Kong, it is observed that the level of work motivation for the teachers especially from the secondary schools is considered to be limited and due to the huge stress and pressure on the secondary school teachers, most of the teachers have a plan to change their profession so that they can spend a reasonable life while spending the relaxed life in any other profession.

While keeping in mind the current situation of the secondary school teachers, it was considered to be compulsory for the researchers to conduct research about the teachers from the secondary schools in Hong Kong so that the issues faced by the teachers could be identified and on the basis of identified issues, some solutions and recommendations could be shared with the management of the secondary schools in Hong Kong. The government needs to take serious actions to keep the teachers motivated for the purpose to get the desired results from the students in terms of their academic performance as the job satisfaction of the teachers from the secondary schools in Hong Kong and the students' academic performance is correlated with each other and there is significant relationship between the teachers' job satisfaction and the students' academic performance.

The main purpose of this study was to identify those factors who were contributing in the declining motivation of the teachers from the secondary schools in Hong Kong. This study could help to identify the limitations of the existing studies and research about the secondary school teachers' job motivation. It is very clear that the teachers with the highest motivation can deliver a quality education to the students and the students can respond in the same way to provide the benefits to the self-esteemed and willingness of the learning of students studying in the secondary schools in Hong Kong.

In order to conduct this research about the job satisfaction and motivation of the secondary school teachers, the researchers of this study used the research questionnaire to conduct this research study. The questionnaire was designed by the researchers and there were three different parts of the research questionnaire. The first part of the questionnaire was about the level of job satisfaction of the teachers from the secondary schools and there were nine subscales were also introduced in 36 research questions in the first portion of the research questionnaire for this research study about the secondary school teachers. The second part of the questionnaire was about the motivation level of the teachers from the secondary schools, and it was comprising on 18 questions. The last part of the research questionnaire was the compulsory part of the

questionnaire in which 11 different demographic variables were discussed and questions were designed accordingly.

There were numerous research limitations associated with this research. One of the most important research limitations was the time factor as the researchers didn't have the enough time to go towards each and every respondent and ask them to fill the questionnaire. In order to meet this deficiency, the researchers of this study shared the research questionnaire through online facilities and requested to all the relevant participants to fill the questionnaire about the research study of job satisfaction and inspiration along with the motivation of the teachers from the secondary schools in Hong Kong. Secondly, the financial resources were not enough to perform this research in more extended way. To meet this limitation, the researchers of this study preferred to use the sample of 355 participants so that data collection could be easy, and it could be managed in the available resources. Another limitation of this study was the restriction of the participants as it was not the generic research about all the population. This research was specific for only the teachers from the secondary schools and no other participant could participate in this study.

While keeping in mind the ethical dilemma (Anderson & Anderson, 2018), the researchers of this study could only request to the participants to respond on the questionnaire as they could not force them to fill the questionnaire. If the researchers force the participants of this study to fill the questionnaire, they can fill the questionnaire with improper information which can lead towards the failure of this research study about the job satisfaction and motivation among the teachers from the secondary schools in Hong Kong. To improve the data accuracy, it was required to make only request to the participants to fill the questionnaire only if they were interested to fill by their own will. If they were not willing to fill the questionnaire, they could ignore or leave the questionnaire blank, but they were restricted to fill the questionnaire with the inaccurate information which could lead the researchers towards the improper results and outcomes about the research study related to the secondary school teachers.

5.3   Research Implications

This research is about the job satisfaction and inspiration along with the motivation of the teachers from the secondary schools in Hong Kong. While conducting the research activities about this research, there were numerous implications which were observed by the researchers to get the desired results and outcomes in more productive way. These implications can help the researchers to perform the research activities in more productive way. When a researcher wants to conduct research on any specific topic, he should analyze the research implications faced by other researchers while conducting research in the same field. Following are some implications of this research which can be helpful to conduct this research in more productive ways.

This study was about the job satisfaction and motivation of the secondary school teachers. In this study, a major limitation highlighted by the researchers was the time factor to perform the research in more productive way. The researchers couldn't collect the data through research questionnaire while physically meeting with the participants of this research. If the researchers of this study met with the participants for the purpose to collect the research information from them, they could provide more reliable and authentic information while giving the researchers with more time. Further, researchers could also feel their expression while responding in the questionnaire because direct dealing is always helpful to identify those elements that cannot be highlighted in the online data collection through the research questionnaire. The researchers always prefer to meet the participants of any research because they want to observe the facial expressions of the respondents while responding to the researchers and while filling the research questionnaire. One of the most productive outcomes in the physical interaction is that the researchers can ask any additional question from the participants, and they can provide additional information which is not highlighted in the research questionnaire, and it can be helpful to draw the conclusion of the research in more productive way. So, while conducting the research activities, the researchers must focus on to avail the maximum time factor as it can

help them to withdraw the conclusion and outcomes in more reliable way and they can perform their duties and responsibilities in more authentic way while ignoring the time factor related to the research study. Further, the researchers can minimize the margin of error while collecting the information through physical interaction with the participants. When researchers ask the participants to fill the questionnaire immediately or within allowed time period and they don't have proper time to fill it, they can deliver improper information to the researchers while filling the questionnaire in a hurry. The respondents always ask for the time factor to respond in a more productive and reliable way otherwise there are huge chances of incorrect information which may lead the researchers towards misleading results and outcomes. All these things belong to the time factor while conducting the research and researchers must focus on the time factor to avail the maximum time for better results and outcomes and on the basis of the research outcomes, other researchers can also conduct some research studies.

The teachers from the secondary schools and even all the teachers in Hong Kong are facing numerous challenges while performing their duties and responsibilities. The main objective of this study was to provide them relief and relax them while sharing different conclusions and recommendations on the basis of collected information and outcomes related to the research study. While collecting online information about the school's teachers at different level in Hong Kong, it is observed that they are spending their lives in more pressure as compared to other professions and they are not getting the financial rewards against their efforts. This study was conducted so that their issues and challenges could be highlighted through the research about the teachers from the secondary schools and some way forwards could be offered to relax their lives. There is a huge pressure on them in terms of working and they are not rewarding against their efforts. There is a dire need to revisit the policies and procedures by the schools' management as they can relax their teachers to get the desired results. The students' performance in study is directly related with the job satisfaction and motivation of teachers. If the teachers in a school are not motivated and they are not satisfied with their jobs, they cannot

guide and teach the students with perfection. When the students are not taught by the teachers with full devotion and dedication, the required results cannot be achieved. This is considered to be one of major reasons of bad results of most of the schools as their teachers are spending stressful lives and they are not getting their financial benefits as per their efforts and struggles which they are making to deliver the quality results though the students. To achieve or withdraw the desired results through students, it is compulsory for the management of the schools to revisit their policies and relax the teachers in terms of burden as they are also human beings, and they also want to serve the nation, but undue pressure always restricts them to perform in more productive way.

The researchers of this study designed a questionnaire to get the maximum results and outcomes about the teachers from the secondary schools in Hong Kong. The researchers also tried to cover maximum variables and information in a single questionnaire. There were three portions of the questionnaire comprising on 65 questions. From the participants' point of view, it was time taking activity to fill this questionnaire as it required lot of attention to withdraw accurate and reliable outcomes. The researchers of this study tried to put all the relevant information in the questionnaire without knowing the length of the questionnaire as due to lengthy questionnaire, some participants couldn't fill the questionnaire properly and they left with some questions while saying that they couldn't manage in a shorter period of time. If the researchers of this study focused on the length of the questionnaire, they could manage the questionnaire in lower number while designing a concise questionnaire which could cover the maximum information in minimum number of questions in the questionnaire. In this way, the confidence of the participants can be improved, and they can respond with positive gesture while filling the questionnaire with the accurate information because it helps the researchers to provide the reasonable outcomes which lead towards achieving the objectives of the research in more effective and efficient way.

The main objective of any research study is to withdraw those results and outcomes that

can be supportive in other researchers and different research can use the outcomes and results to interpret their research results. This study is about the job satisfaction and inspiration along with the motivation of the teachers from the secondary schools in Hong Kong and the main objective of this research was to withdraw the outcomes that could be helpful to improve the status of overall the teachers from the secondary schools and their issues and problems could be minimized while using this research study and its outcomes. In Hong Kong, teachers are living stressful lives and they are facing numerous issues and problems related to their workplace. The management of the schools is not interested to relax them as they are always looking for the maximum workout through the teachers in different schools especially secondary school teachers. This study reveals different points related to the working of the teachers and highlights that the teachers are not performing effectively, and they are not receiving the expected outcomes from the students as per their expectations. It's a human psyche that when a person is not satisfied and confused about his job descriptions or when more stress is being handled by a person at the workplace, he cannot give his best results at the workplace. If management wants to get the maximum output from a particular person related to his duties and responsibilities, then it is considered to be significant for management to analyze the capacity of a particular person first and then assign him multiple duties and responsibilities as per his capacity. In this way, maximum output can be achieved. If a person is overburdened and his senior expects that he will give his best results in that particular situation, it would not be possible for that person to respond as per the expectation of his supervisor. Same is the case with the teachers from the secondary schools in Hong Kong that they are not properly treated, and they are spending stressful lives in this condition, it is not possible for schools' management to withdraw the expected results and outcomes in more conveniently. This study is revealing that the teachers from the secondary schools are required to remain themselves motivated for the purpose to get the maximum output while guiding the students about their education. The motivation level of the teachers can only be retained when

their issues at the workplace would be resolved. In the coming future, education assessments will be considered as a facilitator for students to achieve their educational targets in more convenient way. These assessments would help the students to make them clear about their future pathways and they would be succeeded in their lives accordingly. Teachers can guide the students while analyzing them on regular basis and guide them about how to achieve their educational targets and commitments and this is only possible when teachers would be satisfied, and their job satisfaction would be higher.

This research study is considered to be one of the most prominent research studies to evaluate the job satisfaction and motivation among the secondary school teachers. The researchers of this study tried their level best to come up with the accurate results. To achieve the accuracy of the research outcomes at a reasonable level, they tried to develop questionnaire while receiving feedback from the experts and their expert opinions were part of the questionnaire utilized in this research. The main objective of this research was to evaluate the performance of the teachers from the secondary schools while focusing on their job satisfaction and motivation level and the researchers tried their best to come up with the best outcomes. The researchers achieved their objectives while conducting the multiple analysis on the collected data as there were multiple factors involved in this study. This study was comprising on the level of job satisfaction along with nine subscales highlighted in this research as all the subscales were properly analyzed for the purpose to withdraw the better outcomes on the basis of available information. The motivation level of the teachers from the secondary schools was also analyzed while focusing on six subscales of the motivation. This research outcomes are considered to be productive, and these outcomes can be incorporated while conducting any other research related to the school's teachers. The school's teachers are the previous assets of any country as they develop the new generation with their skills. If the teachers of any nation will be satisfied and motivated, they would prepare new generations with more commitment and the new generations' future will be bright if they would be taught by the honest and

committed teachers (Sherpa, 2018). There are numerous outcomes linked with this study and can be utilized by different researchers. The outcomes of this research study create easiness for other researchers who want to conduct research studies about the teachers from the secondary schools around the globe and specifically more convenient and helpful for those researchers who want to conduct research about the teachers teaching (Sato & Loewen, 2019) in different classes in Hong Kong. The mentioned implications about this study can be helpful for other researchers and while using these implications and suggestions, the researchers can improve the quality of their research in coming future. Further, the researchers must keep in mind different strategies for the purpose to conduct different research studies so that the limitations highlighted in this research studies can be avoided. The researchers always focus on to achieve their targets regarding the research studies regardless of the hurdles and limitations related to the particular research. To conduct the research in more convenient way, the researchers must need to study different research studies and they need to focus on the implications highlighted by other researchers. In this way, the researchers can avoid multiple issues and constraints that can be faced by them during the research studies on the same topics around the globe.

5.4 Conclusions

This research is about the job satisfaction level along with the motivation among the teachers from the secondary schools in Hong Kong. The previous chapter has completely explained about the multiple analysis related to this research and on the basis of different analyses about the job satisfaction level along with the motivation about the teachers, it is concluded that there are numerous factors that are contributing to the level of work motivation for the teachers from the secondary schools and due to these factors, most of the teachers have the intention to change their profession. It is also concluded that there is a significant relationship between the level of job satisfaction of the teachers and their intention to teach the students in more comfortable environment. The satisfied teachers can deliver the quality

education to the students in the secondary schools in Hong Kong. Further, the motivation of the teachers is also considered to be limited and there is no work done for the purpose to motivate the teachers to perform their duties and responsibilities in authentic way and due to the workload of the teachers, most of the teachers are not interested to continue the same profession and they are searching for another profession that can be helpful for them to spend healthy lives. When teachers are supported by principals, colleagues, and parents, they will retain in the teaching profession (Eginli, 2021).

While conducting this research study about the job satisfaction level along with the motivation among the teachers from the secondary schools in Hong Kong, it is also observed that the level of job satisfaction is relying on different nine subscales which are falling under the level of job motivation. These subscales under the job satisfaction were pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work and communication. All these subscales are considered to have significance for the purpose to assume the level of job satisfaction of teachers in the secondary schools. While conducting this research about the secondary school teachers, it is also observed about the motivation level of the teachers which were relying on six different subscales including intrinsic motivation, integrated regulation, identified regulation introjected regulation, external regulation and amotivation. All these subscales under the motivation were further categorized into two different groups named as self-determined subscales and non-self-determined subscales. In the determined subscales, there were three subscales including intrinsic motivation, integrated regulation, and identified regulation and other three subscales including introjected regulation, external regulation, and amotivation were falling under the non-self-determined subscales. These self-determined and non-self-determined subscales were used to calculate the motivation score and the range of motivation score was -36 to +36. The self-determined subscales were calculating positive scores whereas non-self-determined subscales were reflecting negative motivation scores. The researchers of this study calculated the motivation

score of each individual who participated in this study were shown in Table 5.6. The motivation score of all the participants were further categorized into four different categories and the scores were distributed in the form of frequency distribution.

Table 5.6a: Frequency distribution of motivational scores

Motivational score (M)	Description	Frequency	Percentage
- 36 ≤ M < - 18	Lowly motivated	0	0 %
- 18 ≤ M < 0	less motivated	151	42.5 %
0 ≤ M < 18	motivated	199	56.1 %
18 ≤ M < 36	Highly motivated	5	1.4 %

Source: Data from questionnaire

Further, it was also analyzed that there was not even a single participant who was calculated with the extreme negative score as the extreme negative score was representing a range from -36 to -18. Further next range was -18 to 0 and 42.5% participants of this study was falling in this range who was representing that they were less motivated with the management and the services and benefits which they were receiving from the management of the secondary schools in Hong Kong. The majority of the respondents were falling under the third category which was ranging from 0 to +18 and representing those participants who were motivated with the services which they were receiving from the school management while teaching at the secondary schools. There were 199 participants in this range, and it was 56.1% ratio of these participants. The last category of the respondents who were falling under the category of highly motivated teachers ranging from +18 to +36 and there were only 5 participants who falling under this range and representing 1.4% of total sample selected for this study about the job satisfaction level along with the motivation among the teachers from the secondary schools in Hong Kong. From these observations about the motivation, it was also concluded that the participants of this study were not lowly motivated nor highly motivated. They were falling under two categories including less motivated and motivated.

This research was performed on the basis of a research questionnaire in which total 65

questions were highlighted by the researchers and categorized all the questions into three different categories. The first part of the research questionnaire was about the level of job satisfaction which was further divided into nine different subscales. There were 36 questions under the level of job satisfaction in the research questionnaire. The second part of the research questionnaire was about the motivation along with six subscales in it and there were 18 questions highlighted related to this part. The last part of the research questionnaire was about the demographic variables and there were 11 variables highlighted under this section and each variable was showing with a unique question. So total 11 questions were mentioned in the demographic section. While focusing on the division of the research questionnaire, the research analysis, discussion and other detailed were also categorized into three different parts representing the level of job satisfaction, motivation and the demographic variables about the research study about the teachers from the secondary schools in Hong Kong.

This research was mainly about the level of job satisfaction and there were nine subscales which were also discussed and evaluated in detail in this research. The following table is about the nine subscales of the level of job satisfaction of the teachers from the secondary schools in Hong Kong.

The below calculation about the subscales related to the level of job satisfaction was made on the basis of different responses of all the participants of this research. The mean value of these subscales was calculated as 131.24 whereas the standard deviation of all the subscales associated with the level of job satisfaction was 15.446 and while comparing these figures with the average score, it was analyzed that the average score of the teachers from the secondary schools was 126 and the mean of all the subscales was 131.24 as highlighted in the above table. It was analyzed and concluded from these figures that the mean of subscales is considered to be higher than the average score of all the participants.

On the basis of below comparison in Table 5.4b, it is concluded that more than half of the participants were satisfied with their jobs while working at the secondary schools in Hong Kong.

Further, while analyzing the above table about the subscales related to the level of job satisfaction, it was observed that the average associated with the Pay was the highest and the standard deviation highlighted against the pay was minimum. These figures indicates that the teachers working at the secondary schools were more satisfied with their Pay and low standard deviation mean that there was not significant variation among the pay of different teachers working at the same place. The mean of the operating procedures was lower while comparing with all the other subscales and the standard deviation highlighting against the operating procedures were higher which indicates that the teachers were not satisfied with the operating procedures highlighted in the secondary schools in Hong Kong.

Table 5.4b: The mean, standard deviation, skewness, kurtosis, and alpha of JSS subscales

Subscale	Mean	Standard Deviation	Skewness	Kurtosis	Cronbach's a
Pay	15.434	2.380	0.459	1.166	0.809
Promotion	14.051	2.535	0.040	1.268	0.813
Supervision	14.834	3.126	0.040	1.268	0.781
Fringe benefits	14.563	2.637	0.602	0.707	0.803
Contingent rewards	14.538	2.764	0.402	1.059	0.792
Operating procedures	13.403	2.513	-0.664	1.620	0.845
Coworkers	14.820	2.592	0.596	0.530	0.799
Nature of work	14.854	2.251	0.163	-0.247	0.831
Communication	14.741	2.989	0.766	1.108	0.791
Job satisfaction	131.24	15.446	1.554	3.774	0.867

Source: Data from questionnaire

Skewness is a statistical tool that is specifically used to measure the degree and direction of asymmetry. A normal distribution always has zero skewness. If the mean value of the data is greater than the median of the same data, the distribution is positively skewed and in the same way if the mean value is less than the median value in the same data, the distribution is negatively skewed. The researchers of this study about the job satisfaction level along with the motivation among the teachers from the secondary schools in Hong Kong have calculated the skewness of all the subscales highlighted under the level of job satisfaction and after calculating it was observed that there was not even a single subscale which could have the normal distribution but the value of skewness against each subscale is highlighting that the collected

information through the research questionnaire were showing the results closed to the normal distribution. Kurtosis is also calculated against all the subscales. There were some calculations about the Cronbach's alpha of all the nine subscales highlighting under the Job Satisfaction Survey (JSS). The values of all the Cronbach's alphas were lying between 0.781 and 0.845 which were indicating that the data collected under this research was reliable and consistent. After calculating the Cronbach's alpha, it is observed that the internal consistency reliability coefficient α of job satisfaction is 0.867. The correlation coefficient was also calculated against all the subscales of Job Satisfaction Survey (JSS) and the results of correlation were reflecting that there was highly significant relationship among all the subscales as the correlations of JSS subscales were reflecting reasonable values against all the subscales.

After the level of job satisfaction, the major portion of the research study was moving around the motivation of all the teachers related to the secondary schools in Hong Kong. Motivation was further dealt in six different subscales including the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation and amotivation. The researchers of this study calculated the Cronbach's alpha of six subscales of motivation as 0.361 and the results indicated that it was totally unacceptable and unreliable because the standard value of Cronbach's alpha is 0.5 and if the calculated value will be lower than this value, the researchers would revise or discard the value. Further, it the value of the Cronbach's alpha is considered to be too high; it can be cancelled. The recommended value of Cronbach's alpha is defined as 0.90 as a maximum value.

Table 5.6c: Cronbach's alpha of six subscales of motivation

Subscales	Cronbach's alpha if item deleted
Intrinsic motivation	0.165
Integrated regulation	0.213
Identified regulation	0.281
Introjected regulation	0.334
External regulation	0.329
Amotivation	0.504
Motivation	0.557

Source: Data from questionnaire

Table 5.6c is representing the Cronbach's alphas of all the subscales related to the motivation in this study.

While calculating some statistical figures from the collected data from the participants of this study, the researchers highlighted those three different subscales of the motivation including the identified regulation (M = 4.51, σ = 0.728), external regulation (M = 4.39, σ = 0.907), and integrated regulation (M = 4.36, σ = 0.889) were rated as the three highest scores for secondary school teachers. The means and standard deviations of these three highlighted subscales as shown in Table 5.6d were also clearly represented along with the names of the subscales. A motivation (M = 3.93, σ = 0.875) was the least score for participants. It was also observed that both skewness and kurtosis were close to zero which indicate that the motivation were normally distributed.

The motivation element of the teachers from the secondary schools is lacking in the management plan and they did not make any proper plan to motivate the team members to perform their work in the secondary schools. In fact, transformational leadership has a positive and significant effect on the teachers' performance (Andriani, Kesumawati & Kristiawan, 2018). It also has influence of school culture to promote teachers' performance and self-confidence on teaching (Triwahyuni, Abdullah & Sunaryo, 2014). Moreover, principals should improve their style of selection in leadership because it has a vital impact on school's development and sustainability (Alzoraiki, Rahman & Mutalib, 2018).

Table 5.4d: The means, standard deviations, skewness, and kurtosis of motivation

Subscale	Mean	Standard Deviation	Skewness	Kurtosis
Intrinsic motivation	4.33	0.935	0.420	-0.015
Integrated regulation	4.36	0.889	0.523	0.482
Identified regulation	4.51	0.728	0.542	0.492
Introjected regulation	4.06	0.854	-0.002	0.633
External regulation	4.39	0.907	0.458	0.130
Amotivation	3.93	0.875	-0.573	0.364
Motivation	1.59	5.293	1.077	1.600

Source: Data from questionnaire

From the Table 5.4d, it was observed that integrated regulation displayed moderate correlations to intrinsic motivation and identified regulation (0.491 and 0.433). Besides, introjected regulation displayed week correlations to identified regulation and external regulation (0.285 and 0.288). External regulation displayed week negative correlation to amotivation (-0.188). Further, the motivation scores were used to calculate the relationship between the subscales of motivation and subscales related to the level of job satisfaction. There were different results observed from the subscales of motivation. It was observed while applying statistical tools on the collected information that the male teachers were considered to be more motivated as compared to the female teachers in the secondary schools in Hong Kong. The motivation scores were moving from the highest to the lowest while focusing on the married teaches, single teachers and then widowed or divorced teachers respectively. While focusing on the number of widowed or divorced teachers in the sample, both were considered under the same category. While focusing on the age factors, the motivation scores were moving from the highest numbers to the lowest among the teachers higher than 51 years of age, 41 to 50 years of ages, less than or equal to 30 years of age and then 31 to 40 years of secondary school teachers' ages respectively. While keeping in mind the work experience of the secondary school teachers, the order of the teachers was more than or equal to 26 years of working, less than or equal to 5 years of working, 16 to 25 years of working, and 6 to 15 years of working while focusing on the numbers from the highest to the lowest.

The grades of the school's teachers were arranged in a specific order including the principal graduate teachers, senior graduate teachers, graduate teachers, and contract teachers having the motivation scores from the highest to the lowest. From the collected information from the research questionnaire about the research study it was analyzed and calculated that the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not importantly varying among the teachers from the secondary schools having the monthly income of less than or equal to $ 40,000 and monthly

household income ranging from $ 70,001 to $ 100,000 or the monthly income with more than $ 100,000 while working at the secondary schools in Hong Kong.

While keeping in mind the number of children of the secondary school teachers, it was also finalized that all the subscales related to the motivation including the intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation and W-SDI were not significantly varying among those teachers who couldn't have their child and those who have only one child. While keeping in mind the qualification of the teachers from the secondary schools in Hong Kong, it was analyzed that the motivation level was moving from the highest to the lowest among the teachers having the bachelor's degree, master's degree, and PCEd or PGDE degrees respectively. The level of motivation was also moving from the highest to the lowest in different teachers on the basis of their designations. The teachers on different designations including assistant or vice principal, teachers with functional head, teachers with panel head, and teachers without administrative role were having their motivation level from the highest to the lowest respectively. The order of motivation scores from the highest to lowest was teachers working in band 3 schools, teachers working in band 1 schools, teachers working in band 2 to 3 schools, teachers working in band 1 to 2 schools, and teachers working in band 2 schools, respectively.

The demographic variables are considered to be the most prominent elements in the research questionnaire and these variables play vital role to conduct the research in more convenient way. While focusing on the demographic variables in this study about the job satisfaction level along with the motivation among the teachers from the secondary schools in Hong Kong, there were extracted multiple results highlighting in the following discussion.

The findings of the research related to the demographic variables are clearly defined in the previous chapter. There were 355 participants of this study, and the ratio of male participants were slightly higher than the ratio of female participants. Further, male participants were having higher level of job satisfaction and the motivation scores were also higher of male participants

of this study.

From the age factor, it was observed that the main ratio of the participants was belonged to those who were aging from 31 to 40 years while performing their duties and responsibilities at the secondary schools in Hong Kong.

The experience of the teachers was one of the most prominent elements and it was observed that the teachers ranging from 6 to 15 years were maximum in numbers in this study about the research related to the secondary school teachers.

There were different ranks of the teachers who were working at the secondary schools in Hong Kong, but major portion of the teachers were belonging to the specific designation, that is GM and there were around 78% participants were belonging to this rank whereas other 22% participants were categorized in all the categories other than GM.

The income level of the teachers was divided into four different ranges and after conducting this research about the secondary school teachers, it was concluded that the teachers belonging to two income brackets including $40,001 to $ 70,000 and $ 70,001 to $ 100,000 were 33% and 37% respectively which means that more than 80% participants of this study were falling in these two income brackets.

The demographic variable about the number of children was also mentioned in this study and surprisingly the ratio of those who didn't have even a single child was higher than from other ones. As per the research study, the ratio of those the teachers from the secondary schools who don't have their child was 42.5% which is a higher number while keeping in mind those who have one, two or more children.

From the qualifications' point of view, there were two degrees including PCEd / PGDE and master who have maximum ratio in this study as the combined ratio of these degrees were more than 90% who were falling under these categories. It means that most of the teachers have these degrees and if someone improve his qualification, he can move on the higher designation in the secondary schools in Hong Kong.

While keeping in mind the administrative role of the secondary school teachers, there were around 62% teachers who didn't have any administrative role and were performing only teaching responsibilities. Other 38% teachers were dealing with additional administrative roles including panel head, functional head as well as assistant or vice principal. The teachers who didn't have the additional responsibilities were looking more satisfied and their job satisfaction were higher as compared to those who were dealing with the additional responsibilities. Further, there was five different bands of students, and all the participants were equally dealing with all the bands as the ratio of each band was observed to be around 20% in this study about the job satisfaction level along with the motivation among the teachers from the secondary schools in Hong Kong.

At the end of this research study about the job satisfaction level along with the motivation among the teachers from the secondary schools in Hong Kong, it was generally concluded that there were some subscales related to the level of the job satisfaction along with the subscales associated with the motivation of the teachers from the secondary schools who were contributing to job satisfaction and motivation in the teachers from the secondary schools in Hong Kong. It is also concluded that the objective of this research was achieved, and research questions were also properly addressed by the researchers of this study to extract the desired results and outcomes about the teachers from the secondary schools in Hong Kong.

5.5 Recommendations for Applications

The current research study about the job satisfaction level along with the motivation among the teachers from the secondary schools reveals that the ration of male teachers is slightly higher than the female ratio in the teachers from the secondary schools in Hong Kong. Further, while focusing on different analysis and findings of this research, the researchers concluded that some elements are contributing more to improve the level of job satisfaction of the teachers from the secondary schools, and some are reflecting with negative approach to

minimize the level of job satisfaction among the teachers from the secondary schools in Hong Kong. The researcher of this study reveals that there is a dire need to focus on those elements who are not contributing insufficiently to improve the level of job satisfaction of the teachers from the secondary schools and some elements are even contributing negatively to the job satisfaction level along with the motivation of the teachers from the secondary schools in Hong Kong. While keeping in mind the current research study and different observations extracted from this research study about the job satisfaction level along with the motivation among the secondary school teachers, the researchers of this study have recommended some points that can be helpful to improve the job satisfaction and inspiration along with the motivation of the teachers as well as these points can also be helpful to minimize or eliminate those factors who are contributing negative role in the job satisfaction and inspiration along with the motivation of the teachers who are delivering their duties and responsibilities at the secondary schools in Hong Kong. Following are some points that can be helpful to improve the overall job satisfaction level along with the motivation of the teachers from the secondary schools as these points would lead these teachers to leave the intention to change their profession.

5.5.1 Encroachment and Promotion

The current research study is about the job satisfaction and motivation among the teachers from the secondary schools, but they are unfortunately not satisfied with their jobs, and they are not motivated for the purpose to perform their duties and responsibilities devotedly. The main reason behind this discouragement is that the teachers in the secondary school are not clear about their future as they are not dealing like the employees in other professions. As per the collected data through the research questionnaire, most of the teachers were expecting the encroachment and promotion as they were working in the secondary schools since a long time. It can be analyzed from the ratio of those teachers who were performing their duties in the schools. As per the highlighted sample in this research study, there were more than 85%

participants of this study who were working in the schools with more than 5 years and from the entire sample, more than 20% teachers were engaged with the teaching profession with more than 25 years which means that they have spent most part of their lives in the teaching profession. From the sample selected for this study, it is cleared that teacher have huge experiences in the same fields and if they are treated properly in terms of encroachment and promotions, they can perform their duties and responsibilities enthusiastically with more devotion and dedication.

5.5.2 Training Programs

The teachers from the secondary schools in Hong Kong are overburdened as per this research study and to improve their job satisfaction level along with the motivation, there is a dire need to divide the work burden among the teachers as per their capacity. Further, there are some teachers who are not eligible for the promotion and encroachment and the main reason behind this non-eligibility is their capacity to perform different duties and responsibilities. The management of the teachers from the secondary schools should take initiative to improve the capacity of the teachers to perform at the workplace in more productive way. Most of the teachers in the secondary schools are not properly trained to improve their skills to deliver the quality education to the new generation. Due to the non-availability of the trainings in different schools, the teachers remain demotivated because they are not able to compete with others who are properly trained to improve their skills. It is a strong recommendation on the basis of this research that the teachers working in the secondary schools must be trained and different training programs should be launched to improve their skills at the workplace. The teachers from the secondary schools should be delivered with on-job as well as in-service trainings that can help to make maximum contribution in the development of teachers' skills and they can perform while putting their best efforts to satisfy the students due to their improved skills through multiple training sessions. There is a dire need to make selection of the teachers who

242

are eligible for the training sessions otherwise for those who already have the relevant skills would waste their time while attending the training programs. It can be possible if a survey is being conducted while focusing on the training need assessment of all the teachers from the secondary schools in Hong Kong.

Training need assessment is considered to be one of the best tools to evaluate the need assessment of the teachers working in the secondary schools. This assessment can help the management to segregate the teachers on the basis of their requirement about different training sessions, conferences, workshops, and seminars. Training sessions and workshops should be conducted by the management of the secondary schools along with the participation of the government representatives as it would help the teachers to improve their skills and learning process while performing their routine duties and responsibilities. The teachers from the secondary schools should participate in these training sessions and the management of the secondary schools should allow the teachers to all the short term and long- term training sessions as per the needs and requirements of the teachers. This study suggest that the management of the secondary schools should include the training program in the strategic plans of the schools as an integral part of the future strategic planning so that the teachers can avail the opportunities to improve their skills and learning process in the long run as it would help the teachers to improve their level of job satisfaction along with the motivation level while working at the secondary schools in Hong Kong.

Moreover, the Education Bureau should explore various options, such as providing paid study leave or no pay leave to allow teachers to have enough time and space to get the most out of professional development activities. The government should give full support for continuing professional development of teachers and developing programmes that suit the imminent professional needs of teachers. Moreover, teachers may decide on their own professional development activities according to their actual workload and time to prioritize activities to meet individual and school developmental needs

5.5.3 Teacher's Workload

It was observed from the research study and from the data collected for this study that most of the teachers were overloaded as their class size was higher as compared to primary classes. Further, the number of students sitting in a class was also greater than the available capacity and while keeping in mind this factor related to the higher number of students and size of the class, it was observed that the teachers associated with these classes were overloaded and they were hardly managing their works. On the other hand, they were not getting the financial benefits against their additional responsibility and additional workload. While focusing on the number of students in a class and a class size, there is a dire need to reduce the class size as well as number of students from each class so that teachers can deal the students with perfection and without feeling any work burden as they cannot perform their duties and responsibilities under the work burden which is currently associated with them. It will affect teachers' health, satisfaction, and their productivity (Samaden et al., 2021).

There must be a policy to deal number of students in each class like the number is 30 then each class cannot increase from this particular number and the management of the schools cannot force any teacher to teach to those classes who were comprising with more than 30 students. This highlighted digit is considered to be a comfortable number while focusing on the responsibilities of a teacher to deal the students and to guide them about their studies under the specific time period. Further, mostly schools are outdated and due to this factor, the schools' environment is not considered to be friendly and due to old buildings of different schools there is no comfort zone in the school areas. In order to maintain the quality, there is a dire need to focus on standardization and each school's building should be constructed on the basis of standard instructions received from the education department.

Secondary school teachers work an average of 9.8 hours a day, with a maximum of 58 hours a week. In addition, many schools provide internship opportunities for students of the teachers' training institutions every year. The training of intern teachers is handed over to in-

service teachers, hence increasing the burden on teachers. Besides, external assessment and school self-assessment are seen by teachers as indicators of performance and the fate of schools. Schools go to great lengths to produce documents to show their achievements, which add to the workload and frustration of teachers.

5.5.4 Facilities and Resources

There are different observations and finding about the teachers from the secondary schools which highlight that the teachers teaching in the schools are not properly equipped with the adequate materials and facilities that can lead them to provide the quality education to the students from the secondary schools in Hong Kong. Due to the lack of resources, the teachers from the secondary schools are not in a position to prepare their lectures while using the latest teaching techniques and latest technology development about the teaching profession. It is strongly recommended to the management of the secondary schools that they should provide with all the relevant materials and resources that can be utilized by the teachers to improve their teaching effectiveness and to provide the quality education to the students who are enrolled in the secondary schools. The teachers should also provide with the portable computers in the school territory so that they can engage themselves in the learning process while spending their leisure time. In fact, the use of technology in the teaching and learning activities are necessary in education (Sudarsana et al., 2019).

5.5.5 Relationship between School and Home

It is also observed from this research study that there is no proper communication among the school's teachers, students, and their parents. Due to the lack of communication among these tiers, the students are badly suffering, and they are unable to gain the knowledge as per their capacity as they are spending maximum of their time in the leisure activities. It is suggested after conducting this research study about the job satisfaction level along with the

motivation among the teachers from the secondary schools that the management of the secondary schools should take different initiatives to improve the communication process among different tiers including school managers, parents, teachers, and students simultaneously.

The active participation of schools and parents in home-school activities can strengthen mutual ties and communication, establish close partnership and cooperation, and jointly promote the healthy growth of children in all aspects of academic, physical, and mental development. In fact, parental involvement at home alone is not enough. Therefore, parental involvement in schools can help improve the quality of schools. Parents can communicate more positively with schools, not only can they understand their children's learning situation, but also can improve their children's balanced development in academics and personal growth. Communication is two-sided, and both schools and parents should take the initiative and interact.

The establishment of the Parent-Teacher Associations will help strengthen the connection and cooperation between parents and schools, establish a communication channel between parents and schools, and promote parent education by organizing seminars and activities. The understanding of the growth of their children in all aspects of body and mind, understanding their needs, and fostering a good parent-child relationship. On the other hand, it allows parents to share with each other the experience of nurturing and teaching their children, and support and learn from each other.

5.5.6 Teachers' Status in the Society

This study also demonstrated that the status of the teachers from the secondary schools is not satisfactory as there is no proper respect in the society which is a great challenge for the management of the secondary schools. It is considered to be significant to arrange multiple seminars and campaigns in the society and need to invite the maximum people to create the awareness among the respect of the teachers in the society and their roles to improve the

society's current status while guiding the students in terms of positive aspects of the society. It is also considered to be the need of the hour for the media to incline the society people to give respect to the school's teachers as they are the well-wishers of the new generation. It is also considered to be helpful for the school management to arrange different seminars as it would help for the teachers from the secondary schools to improve their status in the society when parents of the students would participate in the seminars, and they would get awareness about the role of the teachers to change the society's fortune. Moreover, the government should provide more support and encouragement to attract and retain teachers (Allen, Rowan & Singh, 2019).

Moreover, the high expectations of society are also an important external factor affecting teachers' workload and causing stress. In Hong Kong, hard work and long hours seem to have become the essence of life, and teaching is no exception. When parents continue to look to education to improve their children's future, they become more involved in school affairs. Many parents are more able to assist the school to relieve teachers' work, such as helping in the school library and during lunch time; however, some make unreasonable demands, and when they disagree with the school, a small number of parents will even quickly win over the support of a third party. In some cases, teacher morale is affected by exaggerated reports in the media. All of these will reduce the motivation of teachers and affect the image of the school and the education profession as a whole.

Besides, the media often pretends to be a monitor which will instantly attract public attention for teachers' inappropriate behaviours. When matters or related news stories are sharp, teachers may feel stress. Therefore, it is necessary for the society to take a positive attitude and encourage schools to improve teachers' morale.

5.5.7 Cooperation between teachers, teacher associations, and the Education Bureau

There is a dire need to create different committees who can play vital role to develop the

relationship between different tiers including the teachers, teacher associations as well as the Education Bureau who is dealing with the educational matters. The formulated committees can help the schools' management to contact with the government officials for the purpose to share their routine matters and issues related to their schools. This is considered to be the best way to resolve the matters related to the teachers from the secondary schools and the current status of secondary schools can be changed while adopting this approach because government officials always have the authority to resolve the tiny matters of the schools which are considered to be the biggest challenges for the teachers from the secondary schools in Hong Kong.

Teachers focus on teaching and want to devote more time to it. Therefore, they pay relatively little attention to policy developments or related documents and rely on keeping up to date with Education Bureau, peers, or teacher associations. External factors such as declining birth rates and concerns about school mergers also affect teachers' perceptions of educational measures. In the process of communication from the Education Bureau to schools, and then from school management to front-line teachers, they are often distorted by external pressures and misunderstandings. Schools often regard some policy recommendations as rigid regulations, such as teachers' continuous professionalism. Teacher associations should act as a moderator to communicate between Education Bureau and frontline teachers to improve the implementation of new policies and reduce their stress.

The Education Bureau should take the initiative to consult the teacher associations on the implementation of major reform measures. In addition to focusing on student learning, the Education Bureau should provide advice on assessing teachers' coping abilities and the impact of relevant measures on teachers' work-life balance.

5.5.8 Teachers' Suggestions

While focusing on the research study about the teachers from the secondary schools and their job satisfaction level and motivation level, there is a dire need to take suggestions from

the teachers directly to reach on the conclusion that is considered to be incredible because teachers can directly share their issues and problems as it would be helpful for the researchers to reach on the conclusion. While directly interacting with some teachers, the researchers observed that the teachers are not getting promotions even most of them are eligible for the promotions and they are serving in their schools since many years. Further, teachers should be provided with the latest technological development facilities so that they can improve their knowledge while working at the secondary schools. In order to deal with the financial matters related to the secondary schools, there is a dire need to clearly share the incentive plans with the teachers from the secondary schools and management of the schools should focus on to provide the financial incentives to all those who are performing extra-ordinary duties and responsibilities while working at the secondary schools in Hong Kong.

When the new policies are introduced, the government should increase school funding at the same time and ensure that schools make good use of the funds. Accountability mechanisms in various new policies create additional work for schools. In fact, teachers are particularly disgusted by these accounting-like requirements and paperwork, believing that the teaching profession is not respected. The various accountability arrangements will show the administrative triviality of the government that is an example of mistrust in schools.

5.5.9 School Management

Facing a variety of jobs and requirements, empower schools to make school leaders (including school management committee members, principals, and middle managers), conducive to school development, and to improve teachers' work and learning environments.

Principals should according to the school's ability and development stage, exert professional management and autonomy, keeping the stress at a manageable level, with moderate support, will be enough to push the school further.

Principals should establish a school-based mechanism to regularly review non-teaching

work, to streamline existing procedures and redeploy work handled by other administrative or support staff. They need to redefine the roles and responsibilities of each teacher and make it clear to all staff. Appropriate training can also be provided to equip teachers or support staff with relevant knowledge and skills when required. Appropriate training can also be provided to equip teachers or support staff with relevant knowledge and skills when required. They may conduct independent reviews of their administrative work to identify remedies for improvement. If the results show that the teacher needs to be improved and additional resources are involved, they should provide the necessary support and guidance. Besides, they can make full use of technology to improve efficiency and reduce the administrative burden on teachers.

5.6 Direction for Future Research

This research study is about the job satisfaction and inspiration along with the motivation of the teachers from the secondary schools in Hong Kong and while keeping in mind the future research, there are numerous points that are required to be highlighted here in this research so that other researchers who want to conduct research study on the same topic or in the same area, they can perform different activities related to the research study in a smooth manner. In this research study only quantitative research approach was utilized for the purpose to conduct research and there were 65 closed ended questions were highlighted in the research questionnaire to collect the data from the participants of this study. Based on the recommendations extracted while conducting this current study, most of the researchers can now get help from this study to conduct the new research about the job satisfaction and inspiration along with the motivation of the teachers especially secondary school teachers. This research was conducted specifically for Hong Kong only, but the researchers shared the outcomes of this research study in such a perfection that can help to use the same results in any particular area around the globe using the same research topic. While keeping in mind the constraints related to this study, there were numerous limitations including the cultural

differences, time factors as well as the limited financial resources to conduct this research who created different problems while conducting this research study but in spite of all these factors, the researchers of this study performed this research and shared some suggestions that can be helpful to minimize the hurdles that can be faced during the research process. This current research study was about the educational sector in Hong Kong and the most prominent issues, that is the job satisfaction level along with the motivation of the teachers from the secondary schools were discussed in detail. The teachers from the secondary schools were not satisfied with their jobs at the schools and their motivation level was quite disturbed while working in the secondary schools in Hong Kong. The researchers of this study conducted the research to know about the multiple factors related to the job satisfaction level along with the motivation of the teachers at the workplace. After conducting the research about the highlighted issues, the research withdrawn some research outcomes and results. While conducting the research, the researchers of this study highlighted some factors that were considered to be the most prominent factors and the researchers highlighted them for the purpose to consider them in new research studies in coming future. The highlighted suggestions and recommendations are considered to be the more authentic and reliable for the research studies in coming future and these suggestions and recommendations can be applied on any research related to the education sector in the country. Following are some suggestions that can be helpful from the future research studies' point of view.

First of all, this research study is conducted on the basis of quantitative research approach and only closed ended questions were highlighted in this research study. In order to conduct the research in perfection and to improve the accuracy of the research results, it is considered to be significant for all the researchers to conduct the research on the basis of mixed approach in which qualitative information should be the part of collected information. While formulating the research questionnaire, mostly questions are closed-ended, and the participants of the research study are normally required to respond on those specific questions only. In addition to

those closed-ended questions, the researchers can also add some open-ended questions and can collect the information from the participants while highlighting the open-ended questions as it would help to collect some qualitative data which would be considered as the most suitable data that can help the researchers to withdraw the multiple results which would not be possible while adopting only the quantitative approach. For the quantitative approach, there are different statistical tools and techniques that can be used to analyze the data. For the qualitative data, there are multiple theories designed by different authors which can be used to analyze the qualitative data. In the mixed approach, both statistical tools and techniques along with theories related to different authors can be used simultaneously to withdraw the results related to the research.

Since it is observed that the ratio of the male participants is slightly higher than the ratio of female teachers. In order to ensure the gender balance, there is a dire need to formulate a policy regarding the gender balance as it can help the schools management to manage the gender balance while focusing on male and female staff at the same time. Further, gender balance in the teachers from the secondary schools can also be helpful for improving the motivation level to perform the duties and responsibilities at the secondary schools in Hong Kong.

This research study is conducted only in the specific region of China, that is in Hong Kong only. The participants of this research were belonged to Hong Kong only and they shared the policies and procedures which are practiced in the specified region. This research study is highlighting that the teachers from the secondary schools were spending stressful lives, but it never means that the teachers from the secondary schools other than Hong Kong were also spending the same lives. The results extracted from the research study about Hong Kong cannot be implemented around the globe or even in the entire country. The outcomes of the research study can be implemented only in the territories associated with the Hong Kong and the results outcomes other than China may not work as per expectation. Further, this research study was conducted based on online research questionnaire for a particular region. Online facilities are

normally used when the research areas expanded at the country level or at international level. When online research questionnaire was designed and shared with the teachers from the secondary schools in Hong Kong only, it could also be shared with the teachers spreading in the entire territory of China. In this way, the researchers could also get the research outcomes at country level. It is suggested on the basis of this research study that the same research study can also be conducted at the country level as the results would be more reliable at country level. It is recommended to the researchers to conduct research study at least at the country level if someone wants to conduct research about the same topic as that research study would be more reliable than this one.

If any researcher wants to conduct research on the same topic, then there is a strong recommendation that he should follow the same research methods, research philosophy and other policies and procedures to perform all research related activities. This research was conducted only in Hong Kong and there was a limitation that the participants of this study can be only the teachers from the secondary schools and no other participant was allowed to make participate in this research. In the new research, it is a recommendation that the research should conduct the same research while changing the geographic location of the research study. The researchers can conduct research in any other part of the country or even they can conduct the research at country level. After conducting the new research about the same topic, it is a suggestion for the researchers to make comparison of results extracted from this research study as well as research study belonging to any other part of the country. This act will help the researchers to check the reliability and accuracy of the research and data collected under the multiple research studies. In case of same results, the reliability of the data would be excellent otherwise there would be any other factor that could affect the results while using the same research procedures and research methods.

This current research study was conducted only on the basis of the teachers from the secondary schools and the job satisfaction level along with the motivation among the secondary

school teaches was observed. It is a suggestion that the researchers can also conduct the same research study while working in the same geographic areas but after changing the participants of this research study. Currently, the participants of this study were the teachers from the secondary schools but in future research studies, the participants of this research studies can be kindergarten, primary or intermediate school's teachers. This act will help to understand that either secondary school's teachers are dissatisfied with their jobs and the motivation level of the teachers from the secondary schools are disturbed due to overburden and class size or other teachers belonging to the primary, kindergarten or intermediate classes are also facing the same issues as the secondary school teachers. Further, this act can also be helpful to make strong recommendation about the formulation of a committee to deal with the government officials regarding the matters linked with the teachers at different schools especially secondary schools.

While conducting this current research study about the job satisfaction and motivation among the secondary school teachers, it is observed that there is no involvement of the religious factor in this research study. The religious factors can play a vital role to affect the results of any research study and these factors have the potential to disturb the research results anytime. It is strongly recommended to the new researchers to keep in mind all the religious factors while performing the research activities about the new research studies related to any topic. The precautionary measures regarding the religious factors must be keep in mind while conducting the research study about any particular topic. There is a dire need to conduct the research study on the same topic while ignoring the geographic restriction in China and the participants from the entire country would be chosen and the specific weightage will be given to the religious factors for the purpose to conduct the research and to see the impact of the religious factors on the research study and on its findings. In the same way, cultural aspects have the same weightage while conducting any research study. The researchers of different studies need to focus on the religious and cultural factors before conducting any research and the specific weightage should be given to these factors as these factors normally have the huge potential to

impact the research studies and their results.

In future, multiple research studies can be conducted while focusing on different data collection tools instead of focusing only on the research questionnaire. The research questionnaire is the single tool to collect the primary data from the direct respondents but there are numerous ways to collect the primary data from the participants of the research studies including the surveys, interviews, and discussions with the relevant participants about the research topic. The data can be collected by using multiple collection tools as the research questionnaire and surveys can be used simultaneously to collect the relevant information to perform the research study. Further, interviews and surveys can also be used at the same time for the purpose to collect information to conduct the research activities after collecting the data. The major benefit of collecting the data from multiple tools is that it leads towards the execution of mix approach because the qualitative and quantitative data would be collected while adopting the multiple collection tools which may help the researchers to perform different statistical and non-statistical analysis at the same time conduct the research activities.

It is also suggested to the research to focus on the governmental policies related to the educational matters before performing the research activities as it can also help the researchers to guide the participants of research in more appropriate way. The government policies are contributing to the job satisfaction and inspiration along with the motivation of the teachers from the secondary schools because they are directly aligned with the government policies in terms of financial and non-financial benefits. Further, the participants are also well aware about the government policies regarding the education sector. It is suggested to the researchers to put some weightage to the governmental policies while conducting the research studies about the educational sectors.

References

Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it? *Indian Journal of Medical Specialties, 4*(2), 330-333.

Adamma, O. N., Ekwutosim, O. P., & Unamba, E. C. (2018). Influence of extrinsic and intrinsic motivation on pupils' academic performance in Mathematics. *Supremum Journal of Mathematics Education, 2*(2), 52-59.

Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology, 67,* 422-436.

Adom, D., Hussein, E. K., & Agyem, J. A. (2018). Theoretical and conceptual framework: Mandatory ingredients of a quality research. *International Journal of Scientific Research, 7*(1), 438-441.

Afzal, H., Ali, I., Khan, M. A., & Hamid, K. (2010). A study of university students' motivation and its relationship with their academic performance. *International Journal of Business and Management, 5*(4), 80-88.

Agbozo, G. K., Owusu, I. S., Hoedoafia, M.A., Atakorah, Y. B. (2017). The effect of work environment on job satisfaction: Evidence from the banking sector in Ghana. *Journal of Human Resource Management, 5*(1), 12-18.

Ahmed, T. M. S., Oyagi, B., & Tirimba, O. I. (2015). Assessment of non-financial motivation on employee productivity: Case of Ministry of Finance Headquarters in Hargeisa Somaliland. *International Journal of Business Management and Economic Research, 6*(6), 400-416.

Aithal, P. S., & Kumar, P. M. S. (2016). Comparative analysis of Theory X, Theory Y, Theory Z, and Theory A for managing people and performance. *International Journal of Scientific Research and Modern Education, 1*(1), 803-812.

Akhtar, S. N., Iqbal, M., & Tatlah, A. (2017). Relationship between intrinsic motivation and students' academic achievement: A secondary level evidence. *Bulletin of Education and Research, 39*(2), 19-29.

Akpinar, A. T., Torun, E., Okur, M. E., & Akpinar, O. (2013). The effect of organizational communication and job satisfaction on organizational commitment in small businesses. *Interdisciplinary Journal of Research in Business, 3*(4), 27-32.

Akuoko, K. O., Dwumah, P., & Baba, W. M. (2012). Teacher motivation and quality education delivery: A study of public basic schools in Tamale Metropolis in Ghana. *International Journal of Social Science & Interdisciplinary Research, 1*(12), 29-46.

Alajlouni, J. A. (2015). Job satisfaction and performance in Jordanian banks. *International Journal of Humanities and Social Science, 5*(11), 110-119.

Alderfer, C. (1972). *Existence, relatedness and growth*. New York: Free Press.

Alghamdi, M. G., Topp, R., & Alyami, M. S. (2017). The effect of gender on transformational leadership and job satisfaction among Saudi nurses.

Alkassabi, O. Y., Al-Sobayel, H., Al-Eisa, E. S., Buragadda, S., Alghadir, A. H., & Iqbal, A. (2018). Job satisfaction among physiotherapists in Saudi Arabia: Does the leadership style matter? *BMC Health Services Research, 18,* 1-9.

Al Doghan, M. A., Bhatti, M. A., & Juhari, A. S. (2019). Do psychological diversity climate, HRM practices, and personality traits (Big Five) influence multicultural workforce job satisfaction and performance? Current scenario, literature gap, and future research directions. *SAGE Open, April-June 2019,* 1-14.

Al-Zawahreh, A., & Al-Madi, F. (2012). The utility of equity theory in enhancing organizational effectiveness. *European Journal of Economics, Finance and Administrative Sciences, 46,* 158-170.

Alfandi, A. M., & Alkahsawneh, M. S. (2014). The role of the incentives and reward system in enhancing employee's performance "A case of Jordanian Travel and Tourism Institutions". *International Journal of Academic Research in Business and Social Sciences, 4*(4), 326-341.

Ali, S. A. M., Said, N. A., Yunus, N. M., Kader, S. F. A., Latif, D. S. A., & Munap, R. (2013). Hackman and Oldham's Job Characteristics Model to job satisfaction. *Procedia - Social and Behavioral Sciences, 129,* 46-52.

Aliakbari, A. (2015). The impact of job satisfaction on teachers' mental health: A case study of the teachers of Iranian Mazandaran province. *World Scientific News, 12,* 1-11.

Allan, B. A., Autin, K. L., & Duffy, R. D. (2016). Self-determination and meaningful work: Exploring socioeconomic constraints. *Frontiers in Psychology, 7*(71), doi: 10.3389/fpsyg.2016.00071.

Allen, J., Rowan, L., & Singh, P. (2019). Status of the teaching profession – attracting and retaining teachers. *Asia-Pacific Journal of Teacher Education, 47*(2), 99-102.

Alromaihi, M. A., Alshomaly, Z. A., & George, S. (2017). Job satisfaction and employee performance: A theoretical review of the relationship between the two variables. *International Journal of Advanced Research in Management and Social Sciences, 6*(1), 1-20.

Alzoraiki, M., Rahman, O., & Mutalib, M. A. (2018). The effect of the dimensions of transformational leadership on the teachers' performance in the Yemeni Public Schools. *European Scientific Journal, 14*(25), 322-334.

Amah, E., & Daminabo-Weje, M. (2013). Corporate culture: A tool for control and effectiveness in organizations. *Research on Humanities and Social Sciences, 3*(15), 42-49.

Ameen, K., Batool, S. H., & Naveed, M. A. (2019). Difficulties novice LIS researchers face while formulating a research topic. *Information Development, 35*(4), 592-600.

Anastasiou, S., & Papakonstantinou, G (2014). Factors affecting job satisfaction, stress and work performance of secondary education teachers in Epirus, NW Greece. *International Journal of Management in Education, 8*(1), 37-53.

Anderson, M., & Anderson, S. L. (2018). GenEth: a general ethical dilemma analyzer. *Paladyn, Journal of Behavioral Robotics, 9,* 337-357.

Andriani, S., Kesumawati, N., & Kristiawan, M. (2018). The influence of the transformational leadership and work motivation on teachers' performance. *International Journal of Scientific & Technology Research, 7*(7), 19-29.

Ariana, M., Soleimani, M., & Oghazian, M. B. (2018). Job satisfaction and the factors affecting satisfaction in nurse educators: A systematic review. *Journal of Professional Nursing, 34,* 389-399.

Ariani, D. W. (2015). Relationship with supervisor and co-workers, psychological condition and employee engagement in the workplace. *Journal of Business and Management, 4*(3), 34-47.

Aruma, E. O., & Hanachor, M. E. (2017). Abraham Maslow's hierarchy of needs and assessment of needs in community development. *International Journal of Development and Economic Sustainability, 5*(7), 15-27.

Aslaniyan, M., & Moghaddam, M. S. (2013). A review and modeling on job satisfaction in Zahedan municipality district No.1. *Journal of Contemporary Research in Management, 8*(4), 23-47.

Asmus, S., Karl, F., Mohnen, A., & Reinhart, G. (2015). The impact of goal-setting on worker performance - empirical evidence from a real-effort production experiment. *Procedia, 26,* 127-132.

Astrauskaite, M., Vaitkevicius, R., & Perminas, A. (2011). Job satisfaction survey: A confirmatory factor analysis based on secondary school teachers' sample. *International Journal of Business and Management, 6*(5), 41-50.

Atalic, H., Can, A., & Canturk, N. (2016). Herzberg's Motivation-Hygiene Theory applied to high school teachers in Turkey. *European Journal of Multidisciplinary Studies, 1*(4), 90-97.

Audit Commission. (2018). *Education Bureau.* Hong Kong: Government Printer.

Awad, T. A., & Alhashemi, S. E. (2012). Assessing the effect of interpersonal communications on employees' commitment and satisfaction. *International Journal of Islamic and Middle Eastern Finance and Management, 5*(2), 134-156.

Azash, S. M. D., & Thirupalu, N. (2017). Scale for measuring job satisfaction – A review of literature. *International Journal of Economic and Business Review, 5*(3), 114-123.

Badubi, R. M. (2017). Theories of motivation and their application in organizations: A risk analysis. *International Journal of Innovation and Economic Development, 3*(3), 44-51.

Bajpai, V., & Rajpot, S. (2018). Impact of employees' motivation on job satisfaction and organizational commitment at Balco. *Global Journal of Engineering Science and Research Management, 5*(5), 45-58.

Baluyos, G. R., Rivera, H. L., & Baluyos, E. L. (2019), Teachers' job satisfaction and work performance. *Open Journal of Social Sciences, 7,* 206-221.

Banwo, A. O., Du, J., & Onokala, U. (2015). The impact of group cohesiveness on organizational performance: The Nigerian case. *International Journal of Business and Management, 10*(6), 146-154.

Barney, J. B. (2004). Introduction: William Ouchi's Theory Z: How American business can meet the Japanese challenge. *Academy of Management Executive, 18*(4), 106-107.

Basak, S. K., & Govender, D. W. (2015). Theoretical framework of the factors affecting university academics' job satisfaction. *International Business & Economics Research Journal, 14*(2), 317-326.

Batchelor, J. H., Abston, K. A., Lawlor, K. B., & Burch, G. F. (2014). The Job Characteristics Model: An extension to entrepreneurial motivation. *Small Business Institute Journal, 10*(1), 1-10.

Batura, N., Skordis-Worrall, J., Thapa, R., Basnyat, R., & Morrison, J. (2016). Is the Job Satisfaction Survey a good tool to measure job satisfaction amongst health workers in Nepal? Results of a validation analysis. *BMC Health Services Research, 16,* 1-13.

Beiu, A., & Davidescu, A. A. (2012). An empirical investigation of the expectancy theory among Romanian employees. *Journal of Social and Economic Statistics, 7*(1), 19-31.

Benrazavi, S. R., & Silong, A. D. (2013). Employees' job satisfaction and its influence on willingness to work in teams. *Journal of Management Policy and Practice, 14*(1), 127-140.

Benson, S. G., & Dundis, S. P. (2003). Understanding and motivating health care employees: integrating Maslow's hierarchy of needs, training and technology. *Journal of Nursing Management, 11,* 315–320.

Bhuyan, S. (2016). Job satisfaction of secondary level school teachers of Sivasagar District of Assam: An analysis. *Journal of Advances in Social Science - Humanities, 2*(5), 43-47.

Bieg, S., Backes, S., Mittag, W. (2011). The role of intrinsic motivation for teaching, teachers' care and autonomy support in students' self-determined motivation. *Journal for Educational Research Online, 3*(1), 122-140.

Bilal, S., & Bashir, N. A. (2016). Effects of the realistic job previews on employees job satisfaction and met expectations. International Journal of Business and Management, 11(4), 218-227.

Blanz, M. (2017). Employees' job satisfaction: A test of the Job Characteristics Model among social work practitioners. *Journal of Evidence-informed Social Work, 14*(1), 35-50.

Boonzaier, B., & Boonzaier, M. (1994). The job diagnostic survey: A functional tool for South African managers. *South African Journal of Business Management, 25*(3), 101-109.

Bota, O. A. (2013). Job satisfaction of teachers. *Social and Behavioral Sciences, 83,* 634 - 638.

Bouzenita, A. I., & Boulanouar, A. W. (2016). Maslow's hierarchy of needs: An Islamic critique. *Intellectual Discourse, 24*(1), 59-81.

Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology, 35,* 307-311.

Bretland, R. J., & Thorsteinsson, E. B. (2015). Reducing workplace burnout: the relative benefits of cardiovascular and resistance exercise. *Journal of Life and Environmental Sciences, 9,* 1-18.

British Psychological Society. (2014). *Code of human research ethics.* Leicester: British Psychological Society.

Brun, J. P., & Dugas, N. (2008). An analysis of employee recognition: Perspectives on human resources practices. *International Journal of Human Resource Management, 19*(4), 716-730.

Bui, H. T. M. (2017). Big Five personality traits and job satisfaction: Evidence from a national sample. *Journal of General Management, 42*(3), 21-30.

Caulton, J. R. (2012). The development and use of the theory of ERG: A literature review. *Emerging Leadership Journeys, 5*(1), 2-8.

Chai, S. C., Teoh, R. F., Razaob, N. A., & Kadar, M. (2017). Work motivation among occupational therapy graduates in Malaysia. *Hong Kong Journal of Occupational Therapy, 30,* 42-48.

Chang, H. (2017). Does leadership matter? Study of leadership style, job performance and job satisfaction. *Poslovna Ekonomija Business Economics, Godina XI*(2), 1-28.

Chang, W. C., & Wong, K. (2008). Socially oriented achievement goals of Chinese university students in Singapore: Structure and relationships with achievement motives, goals and affective outcomes. *International Journal of Psychology, 43*(5), 880–885.

Charith, B. (2015). Impact of fringe benefits on job satisfaction in mining and construction companies in India. *International Journal of Marketing and Human Resource Management, 6*(3), 46-67.

Chen, J. (2010). Chinese middle school teacher job satisfaction and its relationships with teacher moving. *Asia Pacific Education Review, 11*(3), 263-272.

Cheng, Y. C. (2009). Hong Kong educational reforms in the last decade: Reform syndrome and new developments. *International Journal of Educational Management*, *23*(1), 65-86.

Cheng, Y. H., & Lai, H. S. H. (2017). The effects of training and reward systems on employee willingness to stay – A case study of an International Tourist Hotel in Taipei. *International Journal of Research in Tourism and Hospitality, 3*(1), 21-33.

Census and Statistics Department (2018). *Hong Kong Annual Digest of Statistics.* Hong Kong: Government Printer.

Census and Statistics Department (2020). *Hong Kong Annual Digest of Statistics.* Hong Kong: Government Printer.

Chai, S. C., Teoh, R. F., Razaob, N. A., & Kadar, M. (2017). Work motivation among occupational therapy graduates in Malaysia. *Hong Kong Journal of Occupational Therapy, 30,* 42-48.

Cho, S. B., Su, J., Kuo, S. I., Bucholz, K. K., Chan, G., Edenberg, H. J., McCutcheon, V. V., Schuckit, M. A., Kramer, J. R., & Dick, D. M. (2019). Positive and negative reinforcement are differentially associated with alcohol consumption as a function of alcohol dependence. *Psychology of Addictive Behaviors, 33*(1), 58-68.

Choi, P. L., & Tang, Y. F. S. (2009). Teacher commitment trends: Cases of Hong Kong teachers from 1997 to 2007. *Teaching and Teacher Education, 25,* 767-777.

Choi, P. L., & Tang, Y. F. S. (2011). Satisfied and dissatisfied commitment: Teachers in three generations. *Australian Journal of Teacher Education, 36*(7), 73-103.

Chomeya, R. (2010). Quality of psychology test between Likert scale 5 and 6 points. *Journal of Social Sciences, 6*(3), 399-403.

Chughati, F. D., & Perveen, U. (2013). A study of teachers workload and job satisfaction in public and private schools at secondary level in Lahore City Pakistan. *Asian Journal of Social Sciences & Humanities, 2*(1), 202-214.

Coldwell, D. A. L., & Perumal, S. (2007). Perceptions of the measurability, importance and effects of work equity on job satisfaction and work motivation: An exploratory study of the utility of equity theory. *Alternation, 14*(1), 197-217.

Colella, A., Paetzold, R. L., Zardkoohi, A., & Wesson, M. J. (2007). Exposing pay secrecy. *Academy of Management Review, 32*(1), 55-71.

Cooper, I., Heinsen, C., & Diacin, M. (2018). Determinants of job satisfaction and dissatisfaction among practitioners employed in intercollegiate sport organizations. *Butler Journal of Undergraduate Research, 4*(1), 51-66.

Danish, R. Q., & Usman, A. (2010). Impact of reward and recognition on job satisfaction and motivation: An empirical study from Pakistan. *International Journal of Business and Management, 5*(2), 159-167.

Dartey-Baah, K., & Amoako, G. K. (2011). Application of Frederick Herzberg's Two-Factor theory in assessing and understanding employee motivation at work: A Ghanaian perspective. *European Journal of Business and Management, 3*(9), 1-9.

Darty-Baah, K., & Harlley, A. (2010). Job satisfaction and motivation: Understanding its impact on employee commitment and organizational performance. *Academic Leadership Journal, 8*(4), 1-18.

Das, B. L., & Baruah, M. (2013). Employee retention: A review of literature. *Journal of Business and Management, 14*(2), 8-16.

De Simone, S. (2015). Expectancy value theory: Motivating healthcare workers. *American International Journal of Contemporary Research, 5*(2), 19-23.

De Villiers, R. (2013). 7 Principles of highly effective managerial feedback: Theory and practice in managerial development interventions. *International Journal of Management Education, 11,* 66–74.

Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18,* 105-115.

Deci, E. L., & Ryan, R. M. (1987). The Support of Autonomy and the Control of Behavior. *Journal of Personality and Social Psychology, 53*(6), 1024-1037.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227-268.

Demirtau, Z. (2010). Teachers' job satisfaction levels. *Procedia Social and Behavioral Sciences, 9,* 1069-1073.

DeVoe, S. E., & Iyengar, S. S. (2004). Managers' theories of subordinates: A cross-cultural examination of manager perceptions of motivation and appraisal of performance. *Organizational Behavior and Human Decision Processes, 93,* 47-61.

Dialoke, I., & Nkechi, P. A. J. (2017). Effects of career growth on employees performance: A study of non-academic staff of Michael Okpara University of Agriculture Umudike Abia State, Nigeria. *Singaporean Journal of Business Economics, and Management Studies, 5*(7), 8-18.

Dickson, O. D. E. (2018). Effect of extrinsic motivation on secondary school students' academic achievement in social studies. *International Journal of Education, 6*(3), 1-7.

Dobre, O. I. (2013). Employee motivation and organizational performance. *Review of Applied Socio-Economic Research, 5*(1), 53-60.

Donald, M. F., Lucia, M. E., & Victor, N. M. (2016). The relationship between job satisfaction and organizational commitment among academic staff members in a selected higher education institution. The 2016 West East Institute International Academic Conference Proceedings (pp.38-47), Vienna, Austria.

Dowson, C., Bodycott, P., Walker, A., & Coniam, D. (2000). Education reform in Hong Kong: Issues of consistency, connectedness and culture. *Education Policy Analysis Archives, 8*(24), 1-15.

Drakopoulos, S. A., & Grimani, K. (2013). Injury-related absenteeism and job satisfaction: Insights from Greek and UK data. *International Journal of Human Resource Management, 24*(18), 3496–3511.

Dwumah, P., Gyasi-Boadu, N., & Ayamga, L. A. (2015). Pay and supervision as correlates of job satisfaction among junior workers in a Ghanaian University. *Journal of Social Sciences and Humanities, 1*(5), 540-544.

Education Bureau (2003). *Review of the Academic Structure of Senior Secondary Education.* Hong Kong: Government Printer.

Education Bureau. (2018). Secondary School Places Allocation System 2017/2019. Retrieved November 6, 2019 from https://www.edb.gov.hk/attachment/en/edu-system/primary-secondary/spa-systems/secondary-spa/general-info/FAQ_SSPA1719Sept_E.pdf.

Education Bureau. (2018a). *Special arrangements for internal examinations for students with special educational needs.* Hong Kong: Government Printer.

Eginli, I. (2021). In search of keeping good teachers: Mediators of teacher commitment to the profession. *Journal of Language and Linguistic Studies, 17*(Special Issue 2), 911-936.

Emhan, A. (2012). Relationship among managerial support, job satisfaction and organizational commitment: A comparative study of nonprofit, for-profit and public sectors in Turkey. *International Journal of Business, Humanities and Technology, 2*(5), 179-190.

Erten, I. H. (2014). Interaction between academic motivation and student teachers' academic achievement. *Social and Behavioral Sciences, 152,* 173-178.

Esfandiari, R., & Kamali, M. (2016). On the relationship between job satisfaction, teacher burnout, and teacher autonomy. *Iranian Journal of Applied Language Studies, 8*(2), 73-98.

Evans, S. (2002). The medium of instruction in Hong Kong: policy and practice in the new English and Chinese streams. *Research Papers in Education, 17*(1), 97-120.

Feng, B. (2014). A study of teacher job satisfaction and factors that influence it. *Chinese Education and Society, 40*(5), 47-64.

Flannelly, K. J., Flannelly, L. T., & Jankowski, K. R. B. (2018). Threats to the internal validity of experimental and quasi-experimental research in healthcare. *Journal of Health Care Chaplaincy,* DOI: 10.1080/08854726.2017.1421019.

Froiland, J. M., Oros, E., Smith, L., & Hirchert, T. (2012). Intrinsic motivation to learn: The nexus between psychological health and academic success. *Contemporary School Psychology, 16,* 91-100.

Fu, W. H., & Deshpande, S. P. (2014). The impact of caring climate, job satisfaction, and organizational commitment on job performance of employees in a China's insurance company. *Journal of Business Ethics, 124,* 339-349.

Furnham, A., Petrides, K. V., Jackson, C. J., & Cotter, T. (2002). Do personality factors predict job satisfaction? *Personality and Individual Differences, 33,* 1325-1342.

Gheitani, A., Imani, S., Amiri, N. S., & Foroudi, P. (2019). Mediating effect of intrinsic motivation on the relationship between Islamic work ethic, job satisfaction, and organizational commitment in banking sector. *International Journal of Islamic and Middle Eastern Finance and Management, 12*(1), 76-95.

Gholami, F. M., Talebiyan, D., Aghamiri, Z., & Mohammadian, M. (2012). Reliability and validity of "Job Satisfaction Survey" questionnaire in military health care workers. *Iranian Journal of Military Medicine, 13*(4), 241-246.

Giraldo-O'Meara, M., Marin-Garcia, J. A., & Martinez-Gomez, M. (2014). Validation of the JDS satisfaction scales applied to educational university environments. *Journal of Industrial Engineering and Management, 7*(1), 72-99.

Gkolia, A., Belias, D., & Koustelios, A., (2014). Teacher's job satisfaction and self-efficacy: A review. *European Scientific Journal,10*(22), 321-342.

Gordan, M., & Krishanan, I. A. (2012). A review of B. F. Skinner's 'Reinforcement Theory of Motivation'. *International Journal of Research in Education Methodology, 5*(3), 681-688.

Govindaraju, N. (2018). The role of traditional motivation theories on employee retention. *International Journal of Arts, Humanities and Management Studies, 4*(6), 95-110.

Goyal, P. K. (2015). Motivation: Concept, theories and practical implications. *International Research Journal of Commerce Arts and Science, 6*(8), 71-78.

Groves, R. M. (2011). Three eras of survey research. *Public Opinion Quarterly, 75*(5), 861-871.

Gunter, P. L., Coutinho, M. J., & Cade, T. (2002). Classroom factors linked with academic gains among students with emotional and behavioral problems. *Preventing School Failure, 46*(3), 126-132.

Gupta, K. K., Attri, J. P., Singh, A., Kaur, H., & Kaur, G. (2016). Basic concepts for sample size calculation: Critical step for any clinical trials! *Saudi Journal of Anaesthesia, 10*(3), 328-331.

Gupta, K., Kaur, S., Gupta , P., Jain , L., & Sharma, S. (2012). Impact of job satisfaction on employee performance, a challenge for HR managers in changing environment. *International Journal of Scientific Research and Reviews, 1*(3), 88-95.

Habib, N., Awan, S. H., & Sahibzada, S. A. (2017). Is Herzberg's Two Factor Theory valid in the context of performance management system? A study of private banks of Pakistan. *Journal of Managerial Sciences, 11*(3), 183-198.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60*(2), 159-170.

Hajdukova, A., Klementova, J., & Klementova, J. (2015). The job satisfaction as a regulator of the working behaviour. *Procedia - Social and Behavioral Sciences, 190,* 471-476.

Hall, S. A., Bowers, A. G., & Martin, C. L. L. (2010). An exploratory study of job satisfaction levels of athletic marketing directors at National Collegiate Athletic Association (NCAA) division I-a institutions. *International Journal of Sport Management Recreation & Tourism, 6,* 1-17.

Haque, M. H., Haque, M. A., & Islam, M. S. (2014). Motivational theories – A critical analysis. *ASA University Review, 8*(1), 61-68.

Harter, S. (1981). *A scale of intrinsic versus extrinsic orientation in the classroom.* Denver: University of Denver.

Hee, O. C., Shukor, M. F. A., Ping, L. L., Kowang, T. O., & Fei, G. C. (2019). Factors influencing teacher job satisfaction in Malaysia. *International Journal of Academic Research in Business and Social Sciences, 9*(1), 1166–1174.

Hegarty, N. (2010). Application of the Academic Motivation Scale to graduate school students. *Journal of Human Resource and Adult Learning, 6(*2), 48-55.

Herzberg, F. (1968). One more time: How do you motivate employees? *Harvard Business Review, January-February 1968,* 53-62.

Hofmans, J. (2012). Individual differences in equity models. *Psicológica, 33,* 473-482.

Ho, E. S. C. (2004). Self-regulated learning and academic achievement of Hong Kong secondary school students. *Education Journal*, *32*(2), 87-107.

Ho, E. S. C. (2006). High stakes testing and its impact on students and schools in Hong Kong: What we have learned from the PISA studies. *KEDI Journal of Educational Policy*, *3*(1), 69-87.

Hong, L. C., Hamid, N. I. N. A., & Salleh, N. M. (2013). A study on the factors affecting job satisfaction amongst employees of a factory in Seremban, Malaysia. *Business Management Dynamics, 3*(1), 26-40.

Hong Kong Unison. (2017). *Research on the accountability of kindergartens to the ethnic minority community.* Hong Kong: Hong Kong Unison.

Idaszak, J. R., & Drasgow, F. (1987). A revision of the job diagnostic survey: Elimination of a measurement artifact. *Journal of Applied Psychology, 72*(l), 69-74.

Ingersoll, R., (2003). Is there really a teacher shortage? CPRE Research Reports. Retrieved November 6, 2019 from http://repository.upenn.edu/cpre_researchreports/37.

Jalagat, R. (2016). Job performance, job satisfaction, and motivation: A critical review of their relationship, *International Journal of Advances in Management and Economics, 5*(6), 36-42.

Jansson, L., & Tallant, J. (2016). Quantitative parsimony: Probably for the better. *British Journal for the Philosophy of Science, 68*(3), DOI: 10.1093/bjps/axv064.

Jehanzeb, K., Rasheed, M. F., Rasheed, A., & Aamir, A. (2012). Impact of rewards and motivation on job satisfaction in banking sector of Saudi Arabia. *International Journal of Business and Social Science, 3*(21), 272-278.

Jerome, N. (2013). Application of the Maslow's hierarchy of need theory; impacts and implications on organizational culture, human resource and employee's performance. *International Journal of Business and Management Invention, 2*(3), 39-45.

Johari, F. S., Ruslani, M. R., Samudin, N. M. R., Zolkapli, N. M., & Basirun, S. N. (2018). Understanding teachers' job satisfaction through work-life balance policies. *Journal of Academia UiTM Negeri Sembilan, 6*(1), 112-119.

Jonas, J. (2016). Making practical use of Maslow's Hierarchy of Needs theory to motivate employees. a case of Masvingo Polytechnic. *Journal of Management and Administration, 2016*(1), 105-117.

Josely, J., & Devi, V. (2018). Relationship between teachers' motivation and students' academic performance. *International Journal of Trend in Scientific Research and Development, 2*(4), 2223-2231.

Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science & Technology, 7*(4), 396-403.

Joshua, R. J., & Ashok, K. M. (2018). Relationship between burnout and job satisfaction among the teachers in engineering institutes. *International Journal of Mechanical Engineering and Technology, 9*(1), 705-717.

Judge, T. A., Piccolo, R. F., Podsakoff, N. P., Shaw, J. C., & Rich, B. L. (2010). The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior, 77,* 157-167.

Kamarulzaman, W., & Nordin, M. S. (2012). Job satisfaction: The comparison between school-leavers and college graduates. *Proceeding of the 2nd International Conference on Arts, Social Science & Technology,* Penang, Malaysia.

Karna, D., & Ko, I. (2022). The role of we-intention and self-motivation in social collaboration: Knowledge sharing in the digital world. *Sustainability, 14,* https://doi.org/10.3390/su14042042.

Kaur, A. (2013). Maslow's need hierarchy theory: Applications and criticisms. *Global Journal of Management and Business Studies, 3*(10), 1061-1064.

Kavanagh, A. S., Goldizen, A. W., Blomberg, S. P., Noad, M. J., & Dunlop, R. A. (2016). Factors affecting the reliability and validity of behavioural datasets: Assessing the impact of observers' experience and native language on studies of wild animals. *Aquatic Mammals, 42*(1), 1-11.

Khan, A. S., & Aleem, M. (2014). Impact of job satisfaction on employee turnover: An empirical study of Autonomous Medical Institutions of Pakistan. *Journal of International Studies, 7*(1), 122-132.

Khan, A. S., Khan, S., Nawaz, A., & Qureshi, Q. A. (2010). Theories of job -satisfaction: Global applications & limitations. *Gomal University Journal of Research, 26*(2), 45-62.

Kian, S. K., Yusoff, W. F. W., & Rajah, S. (2014). Job satisfaction and motivation: What are the difference among these two? *European Journal of Business and Social Sciences, 3*(2), 94-102.

Kimathi, M. K. (2017). Influence of Principals' Leadership Styles on Teachers' Job Satisfaction in Public Secondary Schools in Meru South Sub-County, Tharaka Nithi County, Kenya. *International Journal for Innovation Education and Research, 5*(11), 28-34.

Kinicki, A. J., McKee-Ryan, F. M., Schriesheim, C. A., & Carson, K. P. (2002). Assessing the construct validity of the Job Descriptive Index: A review and meta-analysis. *Journal of Applied Psychology, 87*(1), 14-32.

Kispal-Vitai, Z. (2016). Comparative analysis of motivation theories. *International Journal of Engineering and Management Sciences, 1*(1), 1-13.

Kitchel, T., Smith, A. R., Henry, A. L., Robinson, J. S., Lawver, R. G., Park, T. D., & Schell, A. (2012). Teacher job satisfaction and burnout viewed through social comparisons. *Journal of Agricultural Education, 53*(1), 31-44.

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102*(3), 741-756.

Klaus, T., Lerouge, C., & Blanton, J. E. (2014). System developers' nature of work characteristics and their relationship with organizational commitment and job satisfaction. *Journal of Information Technology Management, 24*(1), 1-19.

Koseoglu, Y. (2013). An application of the self-determination theory - Academic motivations of the first-year university students for two successive years. *Journal of Emerging Trends in Educational Research and Policy Studies, 4*(3), 447-454.

Kotera, Y., Green, P., & Sheffield, D. (2019). Mental health shame of UK construction workers: Relationship with masculinity, work motivation, and self-compassion. *Journal of Work and Organizational Psychology, 35,* 135-143.

Krauss, S. E. (2005). Research paradigms and meaning making: A primer. *The Qualitative Report*, *10*(4), 758-770.

Kunanitthaworn, N., Wongpakaran, T., Wongpakaran, N., Paiboonsithiwong, S., Songtrijuck, N., Kuntawong, P., & Wedding, D. (2018). Factors associated with motivation in medical education: a path analysis. *BMC Medical Education, 18,* 1-9.

Kyumana, V. (2017). Measuring the level of job satisfaction of library staff at the Institute of Finance Management, Tanzania: A case study. *International Journal of Business and Management Invention, 6*(11), 79-85.

Lake, C. J., Gopalkrishnan, P., Sliter, M. T., & Withrow, S. (2010). The job descriptive index: Newly updated and available for download. *Industrial-Organizational Psychologist, 48*(1), 47-49.

Lalwani, S., & Lalwani, S. J. (2017). Relevance of Herzberg's Hygiene Theory in today's context: An analysis of motivators and hygiene factors in present scenario in Indian context. *Singaporean Journal of Business Economics, and Management Studies, 5*(7), 19-25.

Lawter, L., Kopelman, R. E., & Prottas, D. J. (2015). McGregor's Theory X/Y and job performance: A multilevel, multi-source analysis. *Journal of Managerial Issues, 27*(1-4), 84-101.

Lechien, J. R., Bobin, F., Muls, V., Thill, M. P., Horoi, M., Ostermann, K., Huet, K., Harmegnies, B., Dequanter, D., Dapri, G., Maréchal, M. T., Finck, C., Ruiz, A. R., & Saussez, S. (2019). Validity and reliability of the reflux symptom score. *Laryngoscope, 00,* 1-10.

Lee, Y. C., Hsu, W. C., Wu, H. H., Hsieh, W. L., Weng, S. J., & Huang, C. H. (2016). The development of the job satisfaction scale for hospital staff in Taiwan. *International Journal of Management, Economics and Social Sciences, 5*(1), 1-13.

Legault, L. (2016). Intrinsic and extrinsic motivation. In: Zeigler-Hill, V., & Shackelford, T. (Eds.), *Encyclopedia of Personality and Individual Differences*. New York: Springer.

Legault, L. (2017). Self-determination theory. In: Zeigler-Hill, V., & Shackelford, T. K. (Eds.). (2017). *Encyclopedia of personality and individual differences.* New York: Springer International Publishing.

Leite, N. R. P., Rodrigues, A. C. A., & Gualberto, L. (2014). Organizational commitment and job satisfaction: What are the potential relationships? *Brazilian Administration Review, 11*(4), 476-495.

Lensen, C. M. M., Moons, C. P. H., & Diederich, C. (2015). Saliva sampling in dogs: How to select the most appropriate procedure for your study. *Journal of Veterinary Behavior, 10*(6), 504-512.

Leong, T. W., & Yazdanifard, R. (2014). The impact of positive reinforcement on employees' performance in organizations. *American Journal of Industrial and Business Management, 4,* 9-12.

Li, M., & Su, Y. (2014). Coworker's relation influence on individual job performance: A contextuanzing research. *Journal of Chemical and Pharmaceutical Research, 6*(5), 1986-1993.

Lien, P. T. (2017). Factors affecting lecturer job satisfaction: Case of Vietnam universities. *International Journal of Academic Research in Economics and Management Sciences, 6*(2), 138-148.

Lin, H., Werner, K. M., & Inzlicht, M. (2021). Promise and perils of experimentation: The mutual internal validity problem. *Perspectives on Psychological Science,* https://doi.org/10.1177/1745691620974773.

Liu, Y. (2014). The incentive mechanisms of the new generation employees. *International Journal of Business and Social Science, 5*(8), 310-318.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57*(9), 705-717.

Locke, E. A., & Latham, G. P. (2006). New directions in goal-setting theory. *Association for Psychological Science, 15*(5), 265-268.

Lopes, S., Chambel, M. J., Castanheira, F., & Oliveira-Cruz, F. (2015). Measuring job satisfaction in Portuguese military sergeants and officers: Validation of the Job Descriptive Index and the Job in General Scale. *Military Psychology, 27*(1), 52-63.

Lopez-Cepero, J. (2020). Current status of animal-assisted interventions in scientific literature: A critical comment on their internal validity. *Animals, 10,* DOI:10.3390/ani10060985.

Lumley, E. J., Coetzee, M., Tladinyane, R., & Ferreira, N. (2011). Exploring the job satisfaction and organisational commitment of employees in the information technology environment. *Southern African Business Review, 15*(1), 100-118.

Lunenburg, F. C. (2011). Expectancy theory of motivation: Motivating by altering expectations. *International Journal of Management, Business and Administration, 15*(1), 1-6.

Luo, L. (2008). The individual-oriented and social-oriented Chinese bicultural self: Testing the theory. *Journal of Social Psychology, 148*(3), 347-373.

Mabaso, C. M., & Dlamini, B. I. (2017). Impact of compensation and benefits on job satisfaction. *Research Journal of Business Management, 11,* 80-90.

Mahadi, T. S. T., & Jafari, S. M. (2012). Motivation, its types, and its impacts in language learning. *International Journal of Business and Social Science, 3*(24), 230-235.

Makombe, G. (2017). An expose of the relationship between paradigm, method and design in research. *Qualitative Report, 22*(12), 3363-3382.

Malik, M. E., Danish, R. Q., & Munir, Y. (2012). The impact of pay and promotion on job satisfaction: Evidence from higher education institutes of Pakistan. *American Journal of Economics, Special Issue,* 6-9.

Malone, H. E., Nicholl, H., & Coyne, I. (2016). Fundamentals of estimating sample size. *Nurse Researcher, 23*(5), 21-25.

Mansur, S. A., Jibrin, D. U., Lukman, S., Umar Buba, U., Sabo, M. S., & Suleiman, A. F. (2017). Business studies teachers' motivation and its influence on students' academic activities in public junior secondary schools during economic recession in Bauchi State. *International Journal of Advanced Academic Research, 3*(12), 1-13.

Marijani, R., & Marwa, Y. (2016). The validation of the Minnesota Job Satisfaction Questionnaire (MSQ) in Tanzania: A case of Tanzania public service college. *International Journal of African and Asian Studies, 23,* 162-172.

Masath, F. B. (2015). 'Teacher job satisfaction' and 'intention to leave the profession': Does age matter? *Journal of Education, Humanities and Sciences, 4*(2), 66-75.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50,* 370-396.

Mayangdarastri, S., & Khusna, K. (2020). Retaining millennials engagement and wellbeing through career path and development. *Journal of Leadership in Organizations, 2*(1), 42-48.

McGregor, D. M. (1957). Human side of enterprise. *Management Review, 46,* 622-628.

Mesarosova, M. (2016). Psychometric properties of a job satisfaction survey in Slovakia in helping professionals: Preliminary results. *Global Journal of Psychology Research, 6*(4), 195-201.

Merriman, K. K., Turner, L. A., & Galizzi, M. (2016). Pay mix policies as (dis)incentives in motivated job choice decisions. *Translational Issues in Psychological Science, 2*(2), 184-191.

Miah, M. M. (2018). The impact of employee job satisfaction toward organizational performance: A study of private sector employees in Kuching, East Malaysia. *International Journal of Scientific and Research Publications, 8*(12), 270-278.

Miao, S., Rhee, J., & Jun, I. (2020). How much does extrinsic motivation or intrinsic motivation affect job engagement or turnover intention? A comparison study in China. *Sustainability, 12,* 1-18.

Mohajan, H. K. (2017). Two criteria for good measurements in research: Validity and reliability. *Annals of Spiru Haret University, 17*(3): 58-82.

Mohammed, S. M,, Yap, V. C., & Chan, K. T. (2019). The impact of human resource practices on employees' performance through job satisfaction at Saudi Ports Authority based on the assumption of Maslow Theory. *International Journal of Engineering and Advanced Technology, 8*(5C), 245-253.

Moniz, J. (2010). The basics for building and maintaining incentive plans at smaller firms. *Compensation & Benefits Review, 42*(4), 256-264.

Morgan, M. & O'Leary, M. (2004). A study of factors associated with the job satisfaction of beginning teachers. *The Irish Journal of Education*, *XXXV,* 73-86.

Mousavy, S., Thomas, N. S., Mukundan, J. & Nimehchisalem, V. (2012). Burnout among low and high experienced teachers. *International Journal of Applied Linguistics & English Literature, 1*(4), 24-29.

Mukhtar, Ali, H., & Rusmini (2017). Teacher's job satisfaction: An analysis of school's principal leadership and school culture at the State Islamic senior high school in Jambi Province. *Saudi Journal of Humanities and Social Sciences, 2*(5), 404-415.

Mukul, A. Z. A., Rayhan, S. J., Hoque, F., &, Islam, F. (2013). Job characteristics model of Hackman and Oldham in garment sector in Bangladesh: a case study at Savar area in Dhaka district. *International Journal of Economics, Finance and Management Sciences, 1*(4), 188-195.

Munir, S., & Khatoon, T. (2015). Job satisfaction scale. *International Journal of Multidisciplinary Research and Development, 2*(8), 454-457.

Muresherwa, E., & Jita, L. C. (2022). The value of a pilot study in educational research learning: In search of a good theory-method fit. Journal of Educational and Social Research, 12(2), 220-236.

Musah, A. A., Zulkipli, G., & Ahmad, N. S. I. (2017). Relationship between organizational communication and job satisfaction in temporary work environment: An empirical study of plant turnaround workers. *Global Business and Management Research: An International Journal, 9*(1), 73-84.

Myskova, R. (2011). A new measure of employee satisfaction. *Global Journal of Business Research, 5*(1), 101-110.

Nanjundeswaraswamy, T. S. (2019). Development and validation of job satisfaction scale for different sectors. *International Journal for Quality Research, 13*(1), 193-220.

Nassaji, H. (2015). Qualitative and descriptive research: Data type versus data analysis. *Language Teaching Research, 19*(2), 129-132.

Naveed, A., Usman, A., & Bushra, F. (2011). Promotion: A predictor of job satisfaction A study of Glass Industry of Lahore (Pakistan). *International Journal of Business and Social Science, 2*(16), 301-305.

Nayak, M. S. D. P., & Narayan, K. A. (2019). Strengths and weakness of online surveys. *Journal of Humanities and Social Science, 24*(5), 31-38.

Ndulue, T. I., & Ekechukwu, H. C. (2016). Impact of job satisfaction on employees performance: A study of Nigerian Breweries Plc Kaduna State Branch, Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review, 5*(11), 13-23.

Ngunia, S., Sleegersb, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement, 17*(2), 145-177.

Nigama, K., Selvabaskar, S., Surulivel, S. T., Alamelu, R., & Joice, D. U. (2018). Job satisfaction among school teachers. *International Journal of Pure and Applied Mathematics, 119*(7), 2645-2655.

Nikolaou, I., & Georgiou, K. (2018). Fairness reactions to the employment interview. *Journal of Work and Organizational Psychology, 34*(2), 103-111.

Nisar, S., & Siddiqui, D. A. (2019). A Survey on the role of fringe benefits in employee satisfaction – An analysis of organizations of Pakistan. *International Journal of Human Resource Studies, 9*(1), 232-252.

O'Connor, J. (2018). The impact of job satisfaction on the turnover intent of executive level central office administrators in Texas Public School Districts: A quantitative study of work related constructs. *Education Sciences, 8*(69), 1-13.

OECD (2016), *PISA 2015 Results (Volume I): Excellence and Equity in Education, PISA*. Paris: OECD Publishing.

Omer, A. A. A., & Abdularhim, M. E. (2017). The criteria of constructive feedback: The feedback that counts. *Journal of Health Specialties, 5*(1), 45-48.

Omomia, O. A., & Omomia, T. A. (2014). Relevance of Skinner's Theory of Reinforcement on effective school evaluation and management. *European Journal of Psychological Studies, 4*(4), 174-180.

Oparanma, A. O. (2011). The relationship between motivation and job satisfaction of managers in the retail business in Nigerian. *International Multidisciplinary Journal Ethiopia, 5*(5), 137-151.

Ordu, A. (2021). Mediating role of work-life balance and job satisfaction in the relationship between person-job fit and life satisfaction among teachers. *Psycho-Educational Research Reviews, 10*(2), 29-41.

Orvis, J. N., Sturges, D., Tysinger, P. D., Riggins, K., & Landge, S. (2018). A culture of extrinsically motivated students: Chemistry. *Journal of the Scholarship of Teaching and Learning, 18*(1), 43-57.

Osborne, S., & Hammoud, M. S. (2017). Effective employee engagement in the workplace. *International Journal of Applied Management and Technology, 16*(1), 50–67.

Osman-Gani, A. M., Anwar, M. A., Hamid, Z. A. (2017). Impacts of emotional intelligence and spiritual intelligence on leadership effectiveness mediated by personal values: A conceptual framework. *Journal of Islamic Management Studies, 1*(1), 43-53.

Othman, M., Kamarohim, N., & Maan, L. K. (2018). Factors that influence employees job satisfaction. *The European Proceedings of Social & Behavioural Sciences,* 348-355.

Ozyurek, A., Kahraman, O. G., & Pekdogan, S. (2020). Temperament scale for children: Reliability and validity study. *International Journal of Humanities and Social Science Invention, 9*(1), 5-12.

Paleksic, V., Naric, S., Vukotic, M., & Stankovic, S. (2017). The relationship between personality traits and job satisfaction of teachers. *Scripta Medica, 48*(1), 11-15.

Pan, X. F., & Qin, Q. (2007). An analysis of the relation between secondary school organizational climate and teacher job satisfaction. *Chinese Education and Society, 40*(5), 65-77.

Panchal, I. (2016). The impact of job satisfaction; hhile performing responsibilities. *International Research Journal of Engineering and Technology, 3*(7), 1859-1866.

Parijat, P., & Bagga, S. (2014). Victor Vroom's expectancy theory of motivation – An evaluation. *International Research Journal of Business and Management, 7*(9), 1-8.

Park, J. E., Park, S. Y., Kim, H. J., & Kim, H. S. (2019). Reproducibility and generalizability in radiomics modeling: Possible strategies in radiologic and statistical perspectives. *Korean Journal of Radiology, 20*(7), 1124-1137.

Pavalache-Ilie, M., & Ursu, G. (2016). Burnout, locus of control and job satisfaction: A study on high school teachers. *Bulletin of the Transilvania University of Braşov, Special Issue Series VII: Social Sciences, Law, 9*(58), 1-6.

Payne, S. W., & Dozier, C. L. (2013). Positive reinforcement as treatment for problem behavior maintained by negative reinforcement. *Journal of Applied Behavior Analysis, 46,* 699-703.

Petty, G. C., Brewer, E. W., & Brown, B. (2005). Job satisfaction among employees of a youth development organization. *Child and Youth Care Forum, 34,* 57-73.

Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies, 47,* 1451-1458.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, *52*(2), 126-136.

Pouryazdan, M., Kantarci, B., Soyata, T., Foschini, L., & Song, H. (2017). Quantifying user reputation scores, data trustworthiness, and user incentives in mobile crowd-sensing. *IEEE Access, 5,* 1382-1397.

Priya, T. U., & Eshwar, T. S. (2014). Rewards, motivation and job satisfaction of employees in commercial banks- An investigative analysis. *International Journal of Academic Research in Business and Social Sciences, 4*(4), 70-78.

Putra, E. D., Cho, S. & Liu, J. (2017). Extrinsic and intrinsic motivation on work engagement in the hospitality industry: Test of motivation crowding theory. *Tourism and Hospitality Research, 17*(2), 228-241.

QS World University Rankings (2019). Top Universities in the World 2018/19. Retrieved November 8, 2019 from https://www.topuniversities.com/university-rankings/world-university-rankings/2019.

Queiros, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies, 3*(9), 369-387.

Qureshi, M. A., & Hamid, K. A. (2017). Impact of supervisor support on job satisfaction: A moderating role of fairness perception. *International Journal of Academic Research in Business and Social Sciences, 7*(3), 235-242.

Rababah, A. M., Alzoubi, K. H., Ababneh, M., & Khabour, O. (2020). Awareness of Jordanian investigators about the importance of Ethics Review Committees: A pilot study. *Science and Engineering Ethics, 26*(2), 821-831.

Rahman, K. U., Akhter, W., & Khan, S. U. (2017). Factors affecting employee job satisfaction: A comparative study of conventional and Islamic insurance. *Cogent Business & Management, 4,* 1-15.

Ramayah, T., Jantan, M., & Tadisina, S.K. (2001). Job satisfaction: empirical evidence for alternatives to JDI. *32nd Annual Meeting of Decision Sciences Institute Conference,* San Francisco, USA.

Razak, A., Sarpan, S., & Ramlan, R. (2018). Influence of promotion and job satisfaction on employee performance. *Journal of Accounting, Business and Finance Research, 3*(1), 18-27.

Recepoglu, E. (2013). A study of teachers' job motivation in the high schools of the Ministry of National Education in Turkey (Karabük and Sinop Sample). *Middle-East Journal of Scientific Research, 13*(4), 532-537.

Rice, S., Winter, S. R., Doherty, S., & Milner, M. (2017). Advantages and disadvantages of using internet-based survey methods in aviation-related research. *Journal of Aviation Technology and Engineering, 7*(1), 58–65.

Ritsema, T. S., & Roberts, K. A. (2016). Job satisfaction among British physician associates. *Clinical Medicine, 16*(6), 511-513.

Roditis, K., Samara, E., & Louis, K. (2019). A survey to assess job satisfaction among junior doctors in Greece. *Scientific Chronicles, 24*(1), 72-96.

Roos, W., & Eeden, R. V. (2008). The relationship between employee motivation, job satisfaction and corporate culture. *SA Journal of Industrial Psychology, 34*(1), 54-63.

Roy, R. R., & Halder, U. K. (2018). Job satisfaction of secondary school teachers. *International Journal of Innovative Research & Studies, 8*(4), 288-292.

Royle, M. T. (2012). The relationship between McClelland's Theory of Needs, feeling individually accountable, and informal accountability for others. *International Journal of Management and Marketing Research, 5*(1), 21-42.

Ryan, R. M. & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classis definitions and new directions. *Contemporary Educational Psychology, 25*, 54-67.

Ryan, R. M. & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality, 74*(6), 1557-1585.

Samaden, I. S. B., Najihah, I., Alwi, S., Munirah, R., Yusof, M. A. M., & Nordin, M. N. (2021). Time element in the construct of special education teacher workload in Malaysia. *Turkish Journal of Computer and Mathematics Education, 12*(11), 5141-5145.

Sango, M. G. (2016). The impact of low salaries on teacher motivation: The case for Mutasa District-Zimbabwe. *Case Studies Journal, 5*(5), 20-24.

Sato, M., & Loewen, S. (2019). Do teachers care about research? The research–pedagogy dialogue. *ELT Journal, 73*(1), DOI:10.1093/elt/ccy048.

Schalkwyk, L., & Rothmann, S. (2010). Job satisfaction in a chemical factory. *Southern African Business Review, 14*(3), 108-130.

Schatt, M. D. (2011). Achievement motivation and the adolescent musician: A syntheses of the literature. *Research & Issues in Music Education, 9*(1), 1-10.

Schmidt, S. W. (2007). The relationship between satisfaction with workplace training and overall job satisfaction. *Human Resource Development Quarterly, 18*(4), 481-498.

Seale, C., & Silverman, D. (1997). Ensuring rigour in qualitative research. *European Journal of Public Health, 7*(4), 379-384.

Serhan, C., & Tsangari, H. (2019). Reliability and validity of a modified job diagnostic survey for fresh graduates' retention. *Academy of Strategic Management Journal, 18*(5), 1-17.

Shah, M. J., Musawwir-Ur-Rehman, Akhtar, G., Zafar, H., & Riaz, A. (2012). Job satisfaction and motivation of teachers of public educational institutions. *International Journal of Business and Social Science, 3*(8), 271-281.

Shaikh, M. A., Bhutto, N. A., & Maitlo, Q. (2012). Facets of job satisfaction and its association with performance. *International Journal of Business and Social Science, 3*(7), 322-326.

Shaikh, S. H., Pathan, S. K., & Khoso, I. (2018). The impact of extrinsic motivation on employees' performance: A comparative analysis of food and textile industries in Sindh, Pakistan. *International Business Research, 11*(12), 61-66.

Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research, 3*(7), 749-752.

Shen, B., Wingert, R. K., Li, W. D., Sun, H. C., & Rukavina, P. B. (2010). An amotivation model in Physical Education. *Journal of Teaching in Physical Education, 29,* 72-84.

Sherpa, K. (2018). Importance of professional ethics for teachers. *International Education & Research Journal, 4*(3), 16-18.

Shkoler, O., & Kimura, T. (2020). How does work motivation impact employees' investment at work and their job engagement? A moderated-moderation perspective through an international lens. *Frontiers in Psychology, 11*(38), DOI: 10.3389/fpsyg.2020.00038.

Sidik, M. H. M., Hamid, M. R. A., Ibrahim, A., & Ali, Z. M. (2017). Theoretical support for staff satisfaction in higher education institutions: A conceptual framework. *Journal of Quality Measurement and Analysis, 13*(2), 1-16.

Singh, M. P., & Sinha, J. (2013). Job satisfaction in organizational executives. *International Journal of Scientific and Research Publications, 3*(4), 1-6.

Singh, R. (2016). The impact of intrinsic and extrinsic motivators on employee engagement in information organizations. *Journal of Education for Library and Information Science, 57*(2), 197-206.

Singh, S. K., & Tiwari, V. (2011). Relationship between motivation and job satisfaction of the white collar employees: A case study. *Management Insight, 7*(2), 31-39.

Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education, 27*, 1029-1038.

Skitsou, A., Anastasiou, M., Charalambous, G., & Andrioti, D. (2015). Job Satisfaction of Nurses in a Psychiatric Hospital, in Cyprus. *International Journal of Caring Sciences, 8*(3), 683-697.

Smith, G. G. (2012). Increasing teacher attendance. *SubJournal, 2*(1), 8-17.

Smith, P. C., Kendall, L., & Hulin, C. L. (1969). *The measurement of satisfaction in work and retirement: A strategy for the study of attitudes*. Chicago: Rand McNally.

Sohail, A., Safdar, R., Saleem, S., Ansar, S., & Azeem, M. (2014). Effect of work motivation and organizational commitment on job satisfaction: A case of Education Industry in Pakistan. *Global Journals Incorporated, 14*(6), 41-46.

Sonmez, S. (2018). "11 steps" process as a research method. *Universal Journal of Educational Research, 6*(11), 2597-2603.

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the job satisfaction survey. *American Journal of Community Psychology, 13*(6), 693-713.

Sree, R. N. B., & Satyavathi, R. (2017). Employee job satisfaction. *International Journal of Engineering and Management Research, 7*(5), 85-94.

Staw, B. M., & Cohen-Charash, Y. (2005). The dispositional approach to job satisfaction: More than a mirage, but not yet an oasis. *Journal of Organizational Behavior, 26,* 59-78.

Steele, L. M., McIntosh, T., & Higgs, C. (2017). Intrinsic motivation and creativity: Opening up a black box. In Mumford, M. D., & Hemlin, S. (Eds.). *Handbook of Research on Leadership and Creativity.* Norman: University of Oklahoma.

Sudarsana, I. K., Darma, I. W. P. S., Arini, N. W., Selasih, N. N., & Setyaningsih. (2019). Computer as media in improving teacher performance and student learning process. *Journal of Physics,* DOI:10.1088/1742-6596/1175/1/012161.

Sulaiman, W. S. W., Zainal, A. H., & Shafie, M. A. (2010). Analysis of the job descriptive index (JDI) using convergent and discriminant validity. *Jurnal Psikologi Malaysia, 24,* 137-149.

Sumedho. (2015). The effect of nine facets of job satisfaction for creative employees in creative agency. *iBuss Management, 3*(1), 21-27.

Taherdoost, H. (2016). How to design and create an effective survey/questionnaire: A step by step guide. *International Journal of Academic Research in Management, 5*(4), 37-41.

Taherdoost, H. (2018). Determining sample size: How to calculate survey sample size. *International Journal of Economics and Management Systems, 2,* 237-239.

Tan, T. H., & Waheed, A. (2011). Herzberg's Motivation-Hygiene Theory and job satisfaction in the Malaysian retail sector: The mediating effect of love of money. *Asian Academy of Management Journal, 16*(1), 73-94.

Tasios, T., & Giannouli, V. (2017). Job Descriptive Index (JDI): Reliability and validity study in Greece. *Archives of Assessment Psychology, 7*(1), 31-61.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2,* 53-55.

Taylan, S., Ozkan, I., & Celik, G. K. (2020). The validity and reliability analysis of the Turkish version of the 8-item passion scale. *New Ideas in Psychology, 59,* 1-6.

Taylor, I. M., Ntoumanis, N., & Standage, M. (2008). A self-determination theory approach to understanding the antecedents of teachers' motivational strategies in Physical Education. *Journal of Sport & Exercise Psychology, 30,* 75-94.

Tayyar, K.A. (2014). Job satisfaction and motivation amongst secondary school teachers in Saudi Arabia, PhD thesis, University of York.

Tentama, F., Subardjo, & Dewi, L. (2020). The correlation between work motivation and job satisfaction of the academic staffs. *International Journal of Scientific & Technology Research, 9*(2), 2295-2297.

Thiagaraj, D., & Thangaswamy, A. (2017). Theoretical concept of job satisfaction - A study. *International Journal of Research – Granthaalayah, 5*(6), 464-470.

Thirulogasundaram, V. P., & Sahu, P. C. (2014). Job satisfaction and absenteeism interface in corporate sector – A study. *Journal of Humanities and Social Science, 19*(3), 64-68.

Tohidi, H., & Jabbari, M. M. (2011). The effects of motivation in education. *Procedia - Social and Behavioral Sciences, 31,* 820-824.

Torraco, R. J. (2016). Writing integrative literature reviews: Using the past and present to explore the future. *Human Resource Development Review, 15*(4), 404-428.

Tran, N. T. (2018). Determinants of job satisfaction among teachers in Vietnam. *Journal of Education & Social Policy, 5*(1), 65-76.

Tremblay, M. Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2009). Work extrinsic and intrinsic motivation scale: Its value for organizational psychology research. *Canadian Journal of Behavioural Science, 41*(4), 213-226.

Triwahyuni, L., Abdullah, T., & Sunaryo, W. (2014). The effect of organizational culture, transformational leadership and self-confidence to teachers' performance. *International Journal of Managerial Studies and Research, 2*(10), 156-165.

Tsang, K. K. (2012). The use of midpoint on Likert scale: The implications for educational research. *Hong Kong Teachers' Centre Journal, 11,* 121-130.

Tsounis, A., Niakas, D., & Sarafis, P (2017). Social capital and job satisfaction among substance abuse treatment employees. *Substance Abuse Treatment, Prevention, and Policy, 12*(8), DOI 10.1186/s13011-017-0093-6.

Tsounis, A., & Sarafis, P. (2018). Validity and reliability of the Greek translation of the Job Satisfaction Survey (JSS). *BMC Psychology, 6*(27), 1-6.

Triandani, S. & Anggriani, I. V. (2015). The effect of career paths and career planning toward career development of employees: A case study Penetentiary Office in Pekanbaru. *First International Conference on Economics and Banking,* 427-434.

Troussas, C., Krouska, A., & Virvou, M. (2017). Reinforcement theory combined with a badge system to foster student's performance in e-learning environments. *8th International Conference on Information, Intelligence, Systems & Applications, Larnaca, 2017,* 1-6.

Tsounis, A., Niakas, D., & Sarafis, P. (2017). Social capital and job satisfaction among substance abuse treatment employees. *Substance Abuse Treatment, Prevention, and Policy, 12*(8), 1-11.

Tudor, T. R. (2011). Motivating employees with limited pay incentives using equity theory and the Fast Food Industry as a model. *International Journal of Business and Social Science, 2*(23), 95-101.

Turabik, T., & Baskan, G. A. (2015). The importance of motivation theories in terms of education systems. *Procedia - Social and Behavioral Sciences, 186,* 1055-1063.

Turner, A. (2017). How does intrinsic and extrinsic motivation drive performance culture in organizations? *Cogent Education, 4,* 1-5.

Ulutas, M. (2018). The effect of empowerment on employees' job satisfaction: A research on Konya Industrial Zone. *MANAS Journal of Social Studies, 7*(1), 589-600.

Ukandu, N. E., & Ukpere, W. I. (2011). Strategies to improve the level of employee motivation in the fast food outlets in Cape Town, South Africa. *African Journal of Business Management, 5*(28), 11521-11531.

Usop, A. M., Askandar, K., Langguyuan-Kadtong, M., & Usop, A. S. O. (2013). Work performance and job satisfaction among teachers. *International Journal of Humanities and Social Science, 3*(5), 245-252.

Uysal, H. T., Aydemir, S., & Genc, E. (2017). Maslow's hierarchy of needs in 21st century: The examination of vocational differences. *Researches on Science and Art in 21st Century Turkey, 1*(23), 211- 227.

Valaei, N., & Rezaei, S. (2016), Job satisfaction and organizational commitment: An empirical investigation among ICT-SMEs, *Management Research Review, 39*(12), 1663-1694.

Valentine, M., Geoffrey, M., & Paul, O. (2020). Teacher demographic factors accounting for promotion to headship in public primary schools in Kenya. *International Journal of Contemporary Applied Researches, 7*(1), 58-70.

Valerio, K. M. (2012). Intrinsic motivation in the classroom. *Journal of Student Engagement: Education matters, 2* (1), 30-35.

Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In Zanna, M. P. (Ed.) (1997). *Advances in experimental social psychology.* San Diego: Academic.

Vallerand, R. J., & Blssonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality, 60*(3), 599-620.

Van Merrienboer, J. J., & De Bruin, A. B. (2014). Research paradigms and perspectives on learning. In *Handbook of Research on Educational Communications and Technology* (pp. 21-29). Springer New York.

Vansteenkiste, M., Lens, W., & Deci, E. L. (2006). Intrinsic versus extrinsic goal contents in self-determination theory: Another look at the quality of academic motivation. *Educational Psychologist, 41*(1), 19-31.

Varma, C. (2017). Importance of employee motivation & job satisfaction for organizational performance. *International Journal of Social Science & Interdisciplinary Research, 6*(2), 10-20.

Vehkakoski, T. (2020). "Can do!" Teacher promotion of optimism in response to student failure expectation expressions in classroom discourse. *Scandinavian Journal of Educational Research, 64*(3), 408-424.

Veleza, J. I., & Morales, J. C. C. (2015). A modified Q-Q plot for large sample sizes. *Comunicaciones en Estadistica, 8*(2), 163-172.

Vito, L. D., Brown, A., Bannister, B., Cianci, M., & Mujtaba, B. G. (2016). Employee motivation based on the Hierarchy of Needs, Expectancy and the Two-factor Theories applied with higher education employees. *International Journal of Advances in Management, Economics and Entrepreneurship, 3*(1), 20-32.

Vlachopoulos, S. P., & Gigoudi, M. A. (2008). Why don't you exercise? Development of the amotivation toward exercise scale among older inactive individuals. *Journal of Aging and Physical Activity, 16,* 316-341.

Vroom, V. H. (1964). *Work and motivation.* New York: Wiley.

Walliman, N. (2010). *Research methods: The basics.* London: Routledge.

Walter, M. M. (2010). The politics of the data: How the Australian statistical Indigene is constructed. *International Journal of Critical Indigenous Studies*, *3*(2), 45-56.

Wang, M., & Russell, S. S. (2005). Measurement equivalence of the job descriptive index across Chinese and American workers: Results from confirmatory factor analysis and item response theory. *Educational and Psychological Measurement, 65*(4), 709-732.

Wang, Y. X., & Farooq, M. (2019). Conceptual framework development for job satisfaction in Fujian Banking Industry, China. *International Journal of Human Resource Studies, 9*(1), 253-265.

Weiss, D. J., Dawis, R. V., England, G. W. & Lofquist, L. H. (1967). *Manual for the Minnesota Satisfaction Questionnaire.* Minneapolis: University of Minnesota.

Wery, J., & Thomson, M. M. (2013). Motivational strategies to enhance effective learning in teaching struggling students. *British Journal of Learning Support, 28*(3), 103-108.

Westreich, D., Edwards, J. K., Lesko, C. R., Cole, S. R., & Stuart, E. A. (2018). Target validity and the hierarchy of study designs. *American Journal of Epidemiology, 188*(2), 438-443.

White, P. (2017). *Developing research questions.* London: Palgrave.

Willits, F. K., Theodori, G. L., & Luloff, A. E. (2016). Another look at Likert scales. *Journal of Rural Social Sciences, 31*(3), 126-139.

Wong, C. Y. (2020). The use of L1 in English reading lessons of Hong Kong Chinese-medium secondary schools. *International Journal of Instruction, 13*(2), 863-880.

Yamoah, E. E. (2014). Exploratory analysis of compensation and employee job satisfaction. *Developing Country Studies, 4*(12), 27-36.

Yang, C. L., Hwang, M., & Chen, Y. C. (2011). An empirical study of the existence, relatedness, and growth (ERG) theory in consumer's selection of mobile value-added services. *African Journal of Business Management, 5*(19), 7885-7898.

Yavuz, M. (2018). Examination of the job satisfaction of teachers working with individuals in need of special education with regard to certain variables. *Journal of Education and Training Studies, 6*(7), 73-85.

Yu, X. G., Zheng, M. Y., Cheng, X. Q., Xu, B., Tao, Z., Ding, J. H., Zhang, K. J., Jin, H., & Xie, B. (2018). Job satisfaction among doctors from Jiangsu Province in China. *Medical Science Monitor, 24,* 7162-7169.

Yunus, N., & Azimi, C. A. (2016). The influence of Herzberg's motivator factor on employees' organizational citizenship behaviour. *Advances in Business Research International Journal, 2*(1), 1-13.

Yusoff, W. F. W., Kian, T. S., & Idris, M. T. M. (2013). Herzberg's Two Factors Theory on work motivation: Does its work for today's environment? *Global Journal of Commerce & Management Perspective, 2*(5), 18-22.

Zanna, M. P. (Ed.) (1997). *Advances in experimental social psychology.* San Diego: Academic.

Zembylas, M., & Papanastasiou, E. (2004). Job satisfaction among school teachers in Cyprus. *Journal of Educational Administration, 42*(3), 357-374.

Zeng, W. (2007). Medium of instruction in secondary education in Post-Colonial Hong Kong: Why Chinese? Why English? *Working Papers in Educational Linguistics, 22*(1), 42-56.

Appendix 1: Informed Consent

UNICAF UNIVERSITY

Informed Consent Form

Part 2: Certificate of Consent

This section is mandatory and should to be signed by the participant(s)

Student's Name: Wing Cheung TANG

Student's E-mail Address: tang010402@yahoo.com.hk

Student ID #:   R1711D3843021

Supervisor's Name: Suleiman YUSUF

University Campus: Unicaf University Malawi (UUM)

Program of Study: PhD in Education

Research Project Title: Job Satisfaction and Motivation amongst Secondary School Teachers in Hong Kong

I have read the foregoing information about this study, or it has been read to me. I have had the opportunity to ask questions and discuss about it. I have received satisfactory answers to all my questions and I have received enough information about this study. I understand that I am free to withdraw from this study at any time without giving a reason for withdrawing and without negative consequences. I consent to the use of multimedia (e.g. audio recordings, video recordings) for the purposes of my participation to this study. I understand that my data will remain anonymous and confidential, unless stated otherwise. I consent voluntarily to be a participant in this study.

Participant's Print name:

Participant's Signature:

Date:

If the Participant is illiterate:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had an opportunity to ask questions. I confirm that the aforementioned individual has given consent freely.

Witness's Print name:

Witness's Signature:

Date:

Appendix 2: Questionnaire for teachers' job satisfaction and work motivation

Section A: Job Satisfaction

	JOB SATISFACTION SURVEY	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
	Please circle the one number for each question that comes closest to reflecting your opinion about it.						
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 supervisor is quite competent in doing his/her job.	1	2	3	4	5	6
4	I am not satisfied with the benefits 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 organization.	1	2	3	4	5	6
10	Raises 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 supervisor is unfair to me.	1	2	3	4	5	6
13	The benefits we receive are as good as most other organizations 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 organization are not clear to me.	1	2	3	4	5	6

	Please circle the one number for each question that comes closest to reflecting your opinion about it.	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
19	I feel unappreciated by the organization 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 supervisor shows too little interest in the feelings of subordinates.	1	2	3	4	5	6
22	The benefit 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 coworkers.	1	2	3	4	5	6
26	I often feel that I do not know what is going on with the organization.	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 supervisor.	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

Section B: Motivation

Please circle the one number for each of the following items corresponds to the reasons why you are presently involved in your work as a teacher.

Does not Corresponds at all		Corresponds moderately			Corresponds exactly	
1	2	3	4	5	6	7

37	Because this is the type of work I chose to do to attain a certain lifestyle.	1 2 3 4 5 6 7
38	For the income it provides me.	1 2 3 4 5 6 7
39	I ask myself this question, I don't seem to be able to manage the important tasks related to this work.	1 2 3 4 5 6 7
40	Because I derive much pleasure from learning new things.	1 2 3 4 5 6 7
41	Because it has become a fundamental part of who I am.	1 2 3 4 5 6 7
42	Because I want to succeed at this job, if not I would be very ashamed of myself.	1 2 3 4 5 6 7
43	Because I chose this type of work to attain my career goals.	1 2 3 4 5 6 7
44	For the satisfaction I experience from taking on interesting challenges.	1 2 3 4 5 6 7
45	Because it allows me to earn money.	1 2 3 4 5 6 7
46	Because it is part of the way in which I have chosen to live my life.	1 2 3 4 5 6 7
47	Because I want to be very good at this work, otherwise I would be very disappointed.	1 2 3 4 5 6 7
48	I don't know why, we are provided with unrealistic working conditions.	1 2 3 4 5 6 7
49	Because I want to be a "winner" in life.	1 2 3 4 5 6 7
50	Because it is the type of work I have chosen to attain certain important objectives.	1 2 3 4 5 6 7
51	For the satisfaction I experience when I am successful at doing difficult tasks.	1 2 3 4 5 6 7
52	Because this type of work provides me with security.	1 2 3 4 5 6 7
53	I don't know, too much is expected of us.	1 2 3 4 5 6 7
54	Because this job is a part of my life.	1 2 3 4 5 6 7

Section C: Demographics

Please put a "√" on the response that best describes you.

55. What is your gender?   ___ Male   ___ Female

56. What is your marital status?   ___ Single   ___ Married   ___ Widowed / Divorced

57. What is your age?   ___ ≤ 24 or under   ___ 25–34   ___ 35–44

   ___ 45–54   ___ ≥ 55

58. How many years of full time teaching? ___ ≤ 5   ___ 6–15   ___ 16–25   ___ ≥ 26

59. What is your rank?   ___ GM   ___ SGM   ___ PGM   ___ P

60. What is your monthly household income?   ___ < $40,000   ___ $40,001–$60,000

   ___ $60,001–$80,000   ___ $80,001–$100,000 ___ ≥ $100,000

61. Number of children?   ___ None   ___ 1   ___ 2   ___ ≥ 3

62. How many hours are you working per week? ___ ≤ 25 ___ 26-40 ___ 41-55 ___ ≥ 56

63. What is your highest qualification? ___ Bachelor ___ PCEd / PGDE

   ___ Master   ___ EdD / PhD

64. What is your administrative role? ___ None ___ Panel Head ___ Functional Head

   ___ Assistant / Vice Principal

65. What is the banding of your students? ___ Band 1 ___ Band 1-2 ___ Band 2

   ___ Band 2-3 ___ Band 3

Thank you for your participation.

Appendix 3: Debriefing Form

UNICAF UNIVERSITY

Informed Consent Form

Part 1: Debriefing of Participants

Student's Name: Wing Cheung TANG

Student's E-mail Address: tang010402@yahoo.com.hk

Student ID #: R1711D3843021

Supervisor's Name: Suleiman YUSUF

University Campus: Unicaf University Malawi (UUM)

Program of Study: PhD in Education

Research Project Title: Job Satisfaction and Motivation amongst Secondary School Teachers in Hong Kong

Date: 16-Aug-2020

Provide a short description (purpose, aim and significance) of the research project, and explain why and how you have chosen this person to participate in this research (maximum 150 words).

The purpose of this research study is to explore the job satisfaction and motivation amongst secondary school teachers in Hong Kong.
There are two qualifications to participate in this study: (1) Participants are teaching in secondary school currently and able to speak, read and write English in Hong Kong; (2) Age is 21 to 60.
Participating in this study may not benefit you directly, but it will help us to find out the essential information about job satisfaction and motivation amongst secondary school teachers in Hong Kong. You may find answering some of the questions upsetting, but we expect that this would not be different from the kinds of things you discuss with family or friends. You may skip any questions you don't want to be answered and you may end the survey at any time.

The above named Student is committed in ensuring participant's voluntarily participation in the research project and guaranteeing there are no potential risks and/or harms to the participants.

Participants have the right to withdraw at any stage (prior or post the completion) of the research without any consequences and without providing any explanation. In these cases, data collected will be deleted.

All data and information collected will be coded and will not be accessible to anyone outside this research. Data described and included in dissemination activities will only refer to coded information ensuring beyond the bounds of possibility participant identification.

I, Wing Cheung TANG , ensure that all information stated above is true and that all conditions have been met.

Student's Signature: _____

Appendix 4: Approval email for using JSS and WEIMS

Seek for permission to use Job Satisfaction Survey

Dear Mr. Tang:

You have my permission to use the JSS in your research. You can find copies of the scale in the original English and several other languages, as well as details about the scale's development and norms, in the scales section of my website. I allow free use for noncommercial research and teaching purposes in return for sharing of results. This includes student theses and dissertations, as well as other student research projects. Copies of the scale can be reproduced in a thesis or dissertation as long as the copyright notice is included, "Copyright Paul E. Spector 1994, All rights reserved." Results can be shared by providing an e-copy of a published or unpublished research report (e.g., a dissertation). You also have permission to translate the JSS into another language under the same conditions in addition to sharing a copy of the translation with me. Be sure to include the copyright statement, as well as credit the person who did the translation with the year.

I do not know who owns the WEIMS. Maybe you can find it through some of the scale resources I have linked on the scales page in my website.

Thank you for your interest in the JSS, and good luck with your research.

Best,

Paul Spector, Distinguished Professor
Department of Psychology
PCD 4118
University of South Florida
Tampa, FL 33620
813-974-0357

Permission for using the Work Extrinsic and Intrinsic Motivation Scale - 18 items

mtrem001@uottawa.ca
收件人 Ron Tang

Hello, thank you for your interest in our work. You can certainly use the WEIMS as part of your research. Simply properly reference it in your thesis and keep us informed of the results.

Best of luck in your work.

Maxime

> Dear Dr. Tremblay,How are you?I am a doctoral candidate of PhD in
> Education of Unicaf University and seeking your permission for using
> theÂ Work Extrinsic and Intrinsic Motivation Scale - 18 items.Â Do you
> know who own the copy right of theÂ Work Extrinsic and Intrinsic
> Motivation Scale - 35 items? Thank you very much for your kind
> attention.Please write back as soon as possible.Yours sincerely,Mr. Tang