To what extent can incentives change teacher motivation?

A case study of teachers in Cambodia

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Summary

Quality is now at the centre of education policy and teacher performance is seen as critical to the enhancement of learning outcomes. Quality has become a particular priority in the developing world following two decades of expansion of access driven by the Education for All (EFA) movement. Teacher quality, performance and effectiveness are widely thought to be dependent on a complex combination of competency and motivation. However, studies have remained heavily focused on competency-related issues, resulting in the neglect of a deeper understanding of motivation in relation to incentives and context. This omission is particularly glaring in the case of research on developing countries – and Cambodia, the focus of the present study, is no exception.

This study therefore investigates the complex relationship between teacher motivation and incentives on the one hand, and motivation and context on the other, exploring how teacher characteristics mediate these relationships. This study defines the 'motivated teacher' as an individual who strives for goals that are closely associated with those of the school in which he or she teaches. To examine these relationships, the study employs a mixed methods approach, combining analysis of national survey data and semi-structured interviews; drawing on responses from a survey of 676 teachers, classroom observations of 284 teachers, and follow-up interviews with 18 teachers. Quantitative datasets reveal larger patterns of association between teacher incentives and motivation, and the qualitative dataset offers a deeper understanding of the phenomenon. This mixed methods approach itself is seen as one part of the contribution of this research: it helps deepen and enrich current understandings of teacher motivation, opening the door for policies that are more sensitive to diverse contexts.

The study found that the meeting of basic needs such as an adequate working environment and living salary was insufficient to satisfy most Cambodian teachers. Indeed, it emerged that salary levels were as low as those of factory workers, a situation that leads to the perceived low social status of teachers. Moreover, the data indicate that while teachers – particularly those who work in rural and remote areas – do identify the work environment as a critical motivator, this in itself cannot guarantee sustained motivation. Beyond such basic incentives, the active support of the school director was identified as the most significant motivator across age groups and regions. Two additional factors were also found to be significant, but differed according to age group: firstly, recognition from community and colleagues is most important to mid-career teachers; and secondly, professional development opportunities represent a strong motivator among newly assigned teachers.

Within this complex nexus of incentives and motivation, the study found initial intrinsic commitment and motivation to become a teacher to be a consistently powerful factor in shaping higher motivation throughout a teacher's career. This was associated with the impact of incentives on motivation; indeed, the data suggest that newly assigned teachers

tend to have higher intrinsic motivation than those who have been in the profession for more than ten years. Thus, the thesis proposes that the same incentives can have different effects on teacher motivation, depending on whether or not the individual is intrinsically driven to enter the profession, and on his or her length of service.

The thesis concludes by proposing the following education policy reforms: (i) improvement of basic working conditions and a raise in the salary level; (ii) strengthening of instructional support; (iii) revision of entry requirements for the 'good teacher award', with greater focus on mid-career teachers; (iv) greater provision of in-service training, as well as induction support for new teachers; and (v) reformation of the current entrance examination for teacher training institutions with greater emphasis on strong intrinsic motivation.

Finally, this study seeks to open up further avenues for future research in the area of intrinsic teacher motivation by identifying the phenomenon as a contributory factor in education delivery, and drawing attention to how this variable has hitherto been absent from research on developing countries.

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List of Acronyms

ADB	Asian Development Bank
ANOVA	Analysis of Variance
DEO	District Education Office
DK	Democratic Kampuchea
DSA	Daily Subsistence Allowance
ECE	Early Childhood Education
EFA	Education for All
EGRA	Early Grade Reading Assessment
EMIS	Education Management Information System
ESIF	Education Sector Investment Framework
ESP	Education Strategic Plan
GER	Gross Enrolment Rate
GPI	Gender Parity Index
HRMIS	Human Resource Management Information System
INSET	In-service Education and Training
JICA	Japan International Cooperation Agency
MDG	Millennium Development Goal
NER	Net Enrolment Rate
NIE	National Institute of Education
NGO	Non-governmental Organisation
NSDP	National Strategic Development Plan
MoEYS	Ministry of Education, Youth and Sports
OECD	Organisation for Economic Cooperation and Development
PEO	Provincial Education Office
PPS	Probability Proportioning to Size
PRESET	Pre-service Education and Training
PTTC	Provincial Teacher Training Centre
RTTC	Regional Teacher Training Centre
RQ	Research Question
SABER	Systems Approach for Better Education Results (World Bank)
SEDP	Socio-Economic Development Plan
SSC	School Support Committee
TPAP	Teacher Policy Action Plan
TPS	Teacher Policy Survey
TTC	Teacher Training Centre
TTD	Teacher Training Department
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
VSO	Voluntary Service Overseas

CHAPTER 1.   Introduction

1.1. Introduction

Development interventions galvanised by the Education for All (EFA) policy and Millennium Development Goals (MDGs) have resulted in marked increases in basic education enrolment in low-income countries worldwide (Lewin & Sabates 2011). Yet, these EFA/MGD-inspired initiatives have at the same time upset the entire equilibrium between supply and demand in a very short space of time; that is, they have generated a rapid increase in students but have failed to create a sufficient number of qualified teachers, school buildings, and other education inputs to keep pace with this demand (Alexander 2008; Lewin & Sabates 2011). For this and other reasons, education quality has recently come to the fore as an important component in policy priority in the developing world (UNESCO 2005). Cambodia is no exception.

Several new instruments for measuring student learning outcomes and, by extension, education quality have appeared over the past ten years in Cambodia, among them standardised national assessment tests (national assessment) and early grade reading assessment (EGRA) (MoEYS 2015a). National Assessment results have indicated consistently low achievement since the first test in 2007 across grades 3, 6 and 9 (MoEYS 2006b; MoEYS 2011). Although each National Assessment test has provided diagnosis of low results and some specific policy suggestions, for the most part, analysis and policy recommendations stop there. The EGRA, which has sampled 24,000 grade 1–6 students tells a similar story of low learning levels (MoEYS 2012a). Specifically, it has found that 33 per cent of such children cannot read the Khmer language, and that 47 per cent of those who are literate do not comprehend what they read. These national assessment exercises also show a large performance disparity between urban and rural students.

In late 2013, a new Minister of Education, Dr Hang Chuon Naron, was appointed to the Ministry of Education, Youth and Sports (MoEYS). He had formerly been at the Ministry

of Finance and Economy and took office promising swift and deep reforms in the education sector (MoEYS 2015a). This vision had eight major points and his first act was examination reform. In mid-2014, a 'radical' restructuring of the upper secondary school certificate examination was undertaken, the cut-off pass score to be set in advance, and all corrupt practices outlawed. As a result, only 40 per cent of Grade 12 students passed − a remarkable deterioration from the previous year when there had been a 90 per cent pass rate (Cambodia Daily 2014). The reform exposed not only the low quality of Cambodian public education, but also led to a strong commitment to improve student outcomes through deep reforms to basic schooling, and, since 2014, the MoEYS has focused heavily on interventions that aim to improve learning (MoEYS 2015a). As part of this agenda, substantial reforms to teaching practice were also introduced in 2015(ibid).

I witnessed this policy shift in Cambodia as an education officer at the World Bank from 2010 to 2015, after several years of experience working for NGO in several South Asian countries. My work focus in Cambodia was clearly shifted from interventions seeking to expand access towards those with a more quality focus. Personally, issues related to 'teachers' were one area that I have been working for several years. I had long wanted to explore this specific topic of teacher motivation as I have repeatedly witnessed clear differences among teachers, particularly among rural teachers, whenever I made school visits and had interviews with teachers.

1.2. Rationale for the Study

There has long been a consensus that the teacher is the most significant school-level influence on student learning (Hattie 1992; Wang et al. 1993; World Bank 2010). In this regard, research has led to a growing recognition that teacher performance is based on a combination of competency and motivation (World Bank HDN 2012). However, studies on teacher effectiveness have to date remained heavily focused on competency issues, particularly those related to qualifications, experience, and environment (Teddlie &

Reynolds 2000). This has come at the cost of neglecting issues around motivation and satisfaction, particularly in the case of developing countries. It is in this wider context that the sources of teacher motivation have begun to enjoy increased attention in education research circles (USAID 2011; World Bank HDN 2012).

Certainly, teacher motivation is not a new branch of research but has long been recognised as a critical factor in the overall equation of student achievement (Tanaka 2010). Although dominant conceptualisations of teacher motivation have largely been formulated from research conducted in developed countries (ibid), many such theories can, to a certain extent, be helpful in understanding the nature of teachers and teaching as a profession in any context. However, unfortunately, a similar level of research is lacking in respect of the specific challenges for developing countries: studies have been conducted, but on a far more limited scale and frequently without sufficient attention to how developed and developing countries might differ (Zembylas & Papanastasiou 2004; Bennel & Akyeampong 2007; Tanaka 2010).

In fact, developing countries continue to show difficulty in directly adapting theoretical models and empirical findings from studies in developed country contexts because vital preconditions are often not met in the developing world (e.g. salary levels that fail to meet basic needs; low levels of accountability), which, in turn, can influence the dynamics of motivation. Thus, there is a pressing need for more studies on teacher motivation grounded in evidence from the developing world.

The present study defines a 'motivated teacher' as an individual who strives for goals that are closely associated with those of the school in which he or she teaches (please see page 26-27 for more detailed about definitions). In this regard, there are clearly numerous factors involved in motivating a national teaching force. These include work-related factors such as remuneration, job posting, working environment, social status of profession, and relationships with colleagues, supervisors and parents. At the same time,

a host of social and private aspects, including gender, living standard, relationships with family, friends and neighbours, and other personal life circumstances are all potentially important as well (Latham 2012).

All these issues are connected and interwoven, affecting motivation in complex ways. Work-related factors are generally open to change through various policy instruments, while social and private aspects are often far less changeable and controllable. Nevertheless, it is important to remember that one major aim of policy-related research in education is to identify the relationship between policy and these factors in order to make well-founded suggestions for reform (McLaughlin & Shepard 1995).

Indeed, many education researchers seek to understand which potential policy instruments can be utilised to generate incentives to best motivate the teaching force, but it is again rare to find such work in the developing world. It is from such a position that the present study seeks to identify how teacher motivation and potential policy instruments – e.g. incentives – are and can be linked in Cambodia, with the aim of contributing to both policy decisions in Cambodia itself and wider contemplations on the better understanding of teacher motivation in the developing world.

1.3. Research Questions

The central question underpinning this study is: 'Are incentives related to motivation and, if so, in what way?'

This overarching question is supported by several research questions (RQs):

(RQ1) What is the nature of the relationship, if any, between teacher incentives and motivation in the context of Cambodia?

(RQ2) What is the nature of the relationship, if any, between school context, teacher characteristics, and motivation?

(RQ3) To what extent is the relationship between teacher incentives and motivation mediated by a variety of demographic, teacher and school characteristics?

(RQ4) What are the implications of the link between teacher incentives and motivation for policy and practice?

To address these questions, this study employed a mixed methods approach in order to reveal larger patterns of association between incentives, context and teacher motivation. It derived its data from responses to a survey of 676 teachers, and lesson observation of 284 teachers conducted between December 2012 and February 2013. Given that teacher motivation is understood as an individual psychological process unfolding within a specific context (Bennel & Akyeampong 2007), in order to deepen understanding of the relationship between incentives, context, and teacher motivation, findings emerging from the quantitative data were explored further by follow-up interviews in April and August 2014 with 18 of the teachers who had been surveyed and observed in the classroom. In addition, the thesis addresses the question of how context mediates the relationship between incentives and motivation by exploring ways in which a variety of demographic, professional and environmental characteristics relate to teacher incentives and motivation.

1.4. Thesis Outline

The thesis consists of eight chapters structured as follows. Chapter 2 presents a review of the literature on work motivation theories, followed by a review of the literature that addresses teacher incentives and motivation. The conceptual framework is also presented. Chapter 3 describes the research context of Cambodia in terms of education policy and teaching conditions. Chapter 4 discusses the methodology and data collection methods employed in this study. Chapter 5 explores the relationship between context, incentives and teacher motivation through both descriptive and regression statistical analyses. Chapter 6 provides a complementary perspective on issues around teacher motivation, drawing on qualitative data obtained through interviews with teachers, school directors,

and district education office staff. Chapter 7 synthesises the results presented in chapters 5 and 6, and offers a conceptual discussion focusing on several key incentives. Finally, Chapter 8 presents explicit answers to the RQs, discusses the policy implications and contribution of the study, and concludes by suggesting promising avenues for further research.

CHAPTER 2.   Literature Review and Theoretical Framework

2.1. Introduction

Much of the most recent literature on motivation theory has originated in developed societies, invariably with the concomitant assumption that the key to understanding motivation is to be found in the workplaces of affluent social contexts.[1] Yet, it seems to make more sense to revisit the classic motivation theories developed in the first half of the 20th Century in framing the present study. The reason is that these theories still emphasise basic human needs such as access to work, food and shelter, both in normal and hazardous conditions. Nevertheless, in addition to these classic work motivation theories, it is also important to understand what might be unique about teacher motivation when constructing the overarching theoretical framework for the study.

The objective of this chapter is to review the existing literature on work motivation and incentives for teachers. It is structured as follows. Section 2.2 reviews relevant work motivation theories; Section 2.3 addresses teacher incentives in developing countries; Section 2.4 discusses the definition of 'motivation' in the context of this study; Section 2.5 outlines teacher motivation research in developed country contexts; Section 2.6 then addresses teacher motivation research in developing countries, organising the discussion along the lines of commonly used incentives; Section 2.7 synthesises the preceding sections to produce a theoretical framework to guide the study; and, finally, Section 2.8 summarises the main findings of the chapter and outlines the key issues to be addressed in subsequent chapters.

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[1] The author could not identify any indigenous motivation theories from Cambodia or other countries in the region.

2.2. Work Motivation Theories

The history of work motivation research spans more than 100 years and crosses various academic fields. It has come to centre on the discipline of psychology, but has been extended into a number of sub-fields, ranging from experimental psychology to industrial organisational psychology (Latham 2012). Much of this work has been applied in other disciplines as well (ibid). The present review seeks to discuss several major works in the field of motivation theory that are potentially the most relevant to teacher motivation in developing countries, the general aim being to lay the foundation of a sound framework for research that can advance the current literature.

Maslow (1943) perhaps occupies the central position in this field, developing his Basic Needs Hierarchy Theory in the mid-20th Century, by postulating that there exists a five-tier hierarchy of goals towards which all people strive during the course of the fulfilment of their basic needs. These are: (i) physiological needs (thirst, sex, hunger); (ii) safety needs (security, stability, protection); (iii) belongingness and love needs; (iv) esteem needs; and (v) self-actualisation needs (Maslow 1943). The crux of this theory is that once a need is fulfilled, its strength diminishes while the strength of the next need at a higher tier in the hierarchy increases in relative terms. In other words, if one or more of the lower level needs remain unfulfilled, higher level needs cannot be met and remain of lesser importance (Maslow 1943).

Maslow's (1943) theory is relevant to the present study given that many teachers in developing countries still face difficulty in securing basic daily needs, including food and shelter (Bennel & Akyeampong 2007). However, this conceptualisation has been criticised, for example, on account of inadequate empirical foundations (Wahba & Bridwell 1983), and a failure to take into consideration the basic and intrinsic human

needs that are essential for personal growth (Deci 1975).[2] Although Maslow's (1943) theory has met with such accusations in some quarters, it remains useful to ground the present study in relation to his conceptualisation, not least because it draws attention to a wide range of needs and forces us to account for the effect of his basic needs hierarchy on motivation in a developing world context.

Herzberg's (1968) Motivation-Hygiene Theory also addresses issues around basic human needs. His theory conceptualises two axes of factors affecting workers' attitude toward work that are termed 'hygienic' and 'motivational'. Hygiene factors, such as salary, supervision, and interpersonal relations, can create dissatisfaction, but cannot motivate or raise satisfaction. Today, we might use a term such as 'basic working conditions' instead of 'hygiene'. On the other hand, five motivational factors determine job satisfaction: achievement, recognition, content of the work itself, responsibility, and advancement. Hygiene factors tend to only produce short-term changes in work motivation, which quickly fall back to their previous levels, whilst motivational factors provide more of a long-term positive impact on work motivation and job performance (Herzberg 1968).

It is worth noting that Herzberg's (1968) theory is widely referred to and has long-standing application in organisational management, which is evidenced by the fact that reprints of his article in the Harvard Business Review (Herzberg 1968) remain to this day among the most sought-after papers published by that journal (Harvard Business Review 2005). As such, Herzberg's (1968) theory is also helpful in constructing a useable theoretical framework to guide the present study.[3]

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[2] Maslow (1955) recognises this problem, and a growth-motivation factor was subsequently incorporated into his Hierarchy Theory.

[3] In addition, McClelland's 'needs theory' (McClelland 1988) underlies Maslow's (1943) theory and is relevant to Herzberg's (1968) theory (Handy 1993). Specifically, McClelland (1988) reviews the way people think across many cultures and diverse groups in society. Through McClelland's works, three categories of human need emerge: (i) need for power, (ii) need for affiliation, and (iii) need for achievement. Kast and Rosenzweig (1970) argue that the concept of the needs theory accords with Maslow's (1943) hierarchy, particularly in terms of the need for achievement that underlies self-actualisation in the conceptualisation of the latter. Although McClelland's needs are not identical to those of Herzberg's (1968)

The present study also finds that it is essential to distinguish intrinsic from extrinsic motivation. Deci (1975) states that intrinsic motivation is innate and develops out of basic intrinsic needs as a result of the individual's interaction with his or her environment. In this regard, intrinsically motivated behaviour is defined as "behaviour which is motivated by a person's need for feeling competent and self-determining in dealing with their environment (Deci 1975: 100)." Accordingly, when an individual is self-determining, he or she selects what to do intrinsically. However, some people select what to do based on extrinsic reasoning. Extrinsically motivated behaviour generally means behaviour which is driven by external rewards, such as food, money, etc.[4] Deci[5] (1975) assumes that the impact of these types of incentive on motivation can take different forms. Based on this assumption, Deci and Ryan (2000) conducted psychological experiments that give great weight to the hypothesis that intrinsic motivation has a strong impact on a range of human behaviours, such as responsibility and sustainability, as compared to extrinsic motivation (Deci & Flaste 1996).

Beyond these three major motivation theories, three further theories may be usefully incorporated here: (i) Equity Theory, (ii) Expectancy Theory, and (iii) Goal Setting Theory. Each conceptualisation helps round out the larger theories. For example, Herzberg's (1968) Motivation-Hygiene Theory states that money can be a major source

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theory, Hersey and Blanchard (1982) point out that people with a strong need for achievement (McClelland) tend to be interested in motivators (Herzberg 1968); on the other hand, those with a strong need for affiliation (McClelland) are more concerned with the hygiene factors of Herzberg's (1968) theory (Hersey et al. 1982). As such, McClelland's theory strongly supports Maslow (1943) and Herzberg's (1968) findings, but as McClelland does not address basic needs, the present study does not incorporate his conceptualisation into its theoretical framework.

[4] An important distinction between intrinsic and extrinsic motivation indicated by Deci (1975) is the relation of the reward to the need. In the case of extrinsically motivated behaviour (e.g. hunger and eating), if the goal is attained, the behaviour is rewarded, and the need is temporarily reduced. On the other hand, in the case of intrinsically motivated behaviour (e.g. self-actualisation and working towards a set goal), if the goal is attained, the behaviour is rewarded, but the need is not be reduced.

[5] Deci's (1975) intrinsic motivation is criticised by other scholars mainly due to his provocative conclusion: extrinsic incentives reduce intrinsic motivation (Bandura 1977; Locke and Latham 1990). However, the present study does not support either side of this conclusion, only utilising the distinction between intrinsic and extrinsic motivation.

of dissatisfaction, yet says next to nothing about what people will do as a result of dissatisfaction. Equity Theory attempts to answer this question, linking motivation to the relationship between how fairly an employee perceives his or her treatment, and how hard he or she is motivated to work (Adam 1963).

Other commentators have also shown that fair treatment is significant given that workers compare their own efforts with those of colleagues in other professions (Adams 1963). This theory too, however, is criticised for its lack of precision by Pritchard (1969) and Campbell et al. (1970), who argue that there are numerous modes of inequity resolution, depending on individuals – meaning that predictions derived from Equity Theory have proved to be somewhat elusive. Such critiques in turn gave rise to Expectancy Theory, which is considered to be more explanatory in linking issues of equity and job performance (Latham 2012).

Expectancy Theory, as developed by Vroom (1964), holds that workers are heavily influenced by the expected results of their labour. In other words, what we do depends on what we expect to achieve. Accordingly, workers are motivated to improve their performance if they believe that their efforts will be recognised. Borrowing from Equity Theory, Expectancy Theory further states that the individual acts based on his or her contextual perception. However, Equity Theory departs from Expectancy Theory in that the latter was developed to explain literally all work-related behaviour, ranging from occupational selection to job performance, while the former focuses solely on the outcomes of the individual's perception of fairness relative to others (Adam 1963).

Some criticisms of Expectancy Theory have been raised. For example, Locke (1976) points to two drawbacks: (i) it fails to clearly indicate which components are determinants of performance, and (ii) the assumptions of this theory do not adequately indicate that individuals usually seek to maximise outcomes. In addition, Van Eerde and Thierry (1996) indicate in their meta-analysis that the vast majority of studies based on

Expectancy Theory examine performance between groups of individuals while the conceptualisation provides a 'within-the-individual' framework for predicting and explaining workers' choices. Some of these critiques were later acknowledged by Vroom (2005) himself.

Partially based on the aforementioned critiques, Ryan (1970) instead centres intentions, considering how they affect behaviour through needs, beliefs and attitudes. In other words, behaviour is controlled and regulated by intentions, a dimension that neither Equity Theory nor Expectancy Theory clearly addresses. Ryan's (1970) hypothesis of the effect of intentions was later tested by Locke (1976) through a series of experiments that led to the development of his Goal Setting Theory, which contends that worker motivation tends to rise if work goals are clear, challenging, formulated in a participatory manner, and followed-up by feedback. Locke et al. (1981) further summarise that goals have the effect of directing attention and action, mobilising energy, continuing effort over time, and motivating individuals to develop appropriate strategies for goal attainment.

All the theories reviewed above stem from underlying assumptions about human behaviour. In short, incentive and results-oriented theories assume that people are economic agents,[6] while self-actualising and intrinsic theories assume that they are more complex and that their tastes are anything but stable (Kahneman 2011). Indeed, we have many motives, which have a psychological structure at any given time, but these particular structures may change from time to time and from context to context. The present study thus aims to develop a comprehensive framework for addressing these assumptions in accordance with its working hypothesis that teacher motivation is a subjective, cognitive state within each context.

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[6] Economic agents behave in a rational and egocentric manner, and their tastes are unchanging (Kahneman 2011).

2.3. Work Motivation for Teachers

The term 'motivation' derives from the Latin for movement, *movere* (Steers, Mowday & Shapiro 2004: 3). Work motivation is a general term for the psychological process that orients the behaviour of the individual towards the achievement of workplace goals and tasks (Bennel & Akyeampong 2007). Although research on teacher motivation has been conducted for more than a hundred years across a range of academic fields, surprisingly little attention has been paid to issues around teacher motivation in the area of international education development specifically (Bennel & Akyeampong 2007; Tanaka 2010). A number of conceptualisations addressing motivation for work generally have been discussed since the mid-20th Century, with many of the most influential theories developed to better understand the various indicators that contribute to the improvement of work motivation. As reviewed above, motivation theory has seen various trends and shifts over the years: Maslow's (1943) Basic Needs Hierarchy Theory; Herzberg's (1968) Motivation-Hygiene Theory; Deci's (1975) Intrinsic Motivation Theory; Vroom's (1964) Expectancy Theory; Adams' (1963) Equity Theory; and Locke's (1976) Goal Setting Theory among others.

Although these conceptualisations all coexist, overlap, and have multiple intersections, for the purposes of the present study of teachers in Cambodia, it would seem to make good sense to utilise as the starting point of our inquiry the classic needs-based motivation theories of Maslow (1943) and Herzberg (1968), since they are able to encompass issues related to basic human needs such as food, shelter, and working conditions that still represent major points of concern in this context, as we shall see in this thesis.

Although many scholars have argued that teacher motivation requires no special treatment since teaching is just one type of work and thus general models of work motivation are applicable (Hawkins 2002), rather, Mustafa (1996) conceptualises teachers as having multiple identities – i.e. as (i) humans, (ii) employees, and (iii) cultural

beings – and has thus sought to construct a theory of motivation specific to this profession. In a similar fashion, Dörnyei and Ushioda (2010) classify teaching as a specific professional activity in order to identify certain unique motivational characteristics, including (i) prominent intrinsic aspect;[7] (ii) strong contextual influence;[8] (iii) inadequate career structure, limited promotion opportunities, and lack of intellectual challenge; and (vi) high exposure to powerful negative influences.[9] Thus, Deci's (1975) Intrinsic Motivation Theory also provides a valuable distinction between intrinsic and extrinsic motivation, that is also prominent among teaching profession.

To date, no specific teacher motivation theory has been posited, but, rather, general work motivation theories have been applied across a number of professions, including teaching. Accordingly, the theoretical framework of teacher motivation in the present study has been constructed through the review and discussion of work motivation theories with particular attention to aspects of motivation specific to teachers and those affected by education policy implementation. A hybrid framework formulated out of the main conceptualisations discussed above helps us to understand the determinants of teacher motivation. It is hoped that such a new theoretical starting point will form the foundation for policy aimed at changing teaching behaviour.

2.4. Defining Motivation and Job Satisfaction in this Study

Work motivation is a general term for the psychological processes that orient the behaviour of the individual towards the achievement of workplace goals and tasks (Bennel & Akyeampong 2007). Although multiple meanings are attached to the concept

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[7] Meaning that teaching is more closely associated with intrinsic motivation than many other behavioural domains (Dinham & Scott 2000).

[8] Meaning that school atmosphere and environmental conditions; teachers' relationships with school administrators and participation in decision making; student characteristics; and other staff demographic factors are all associated with organisational commitment and teacher efficacy (Fives & Alexander 2004).

[9] Including bureaucratic pressure, lack of adequate facilities, a low salary, and conflict with students and parents (Dörnyei and Ushioda 2010).

of motivation depending on the theory in question, the present study primarily employs a definition which emphasises its process-orientation function: "to be motivated means to be moved to do something…someone who is energised or activated toward an end is considered motivated" (Ryan & Deci 2000: 54). For the purposes of the present study, I thus define 'teacher motivation' as an individual's subjective, cognitive state that can be measured through specific desirable actions (proxy indicators) defined by local education standards and/or practice. The 'motivated teacher' is one who strives for goals that are closely associated with those of the school in which he or she teaches. Although the scope of these definitions limited to some extent, these are the most feasible definitions within the context of this study. It was simply not possible to undertake applied psychological approach to measuring teacher motivation with the time and budget allotted to this study.

As stated above, it is also important to recognise that motivation is commonly broken down into two dimensions, intrinsic and extrinsic. In addition, some researchers utilise an additional aspect of the phenomenon known as 'altruistic motivation', which they apply to those who are driven to work for the greater social good (Olashinde 1972; Lortie 1975; Yong 1995; Summerhill & Myrna 1998; Bastick 2000). Indeed, there are many occupations whose practitioners are seen to exhibit a high degree of social contribution, including public school teachers. The perception that distinguishes between intrinsic and altruistic motivation is particularly useful for a study on teachers in order that we might capture the specific intrinsic reasons for choosing this profession. Therefore, when this study discusses teacher motivation, three aspects should be kept in mind, namely, intrinsic, extrinsic and altruistic.

Job satisfaction is also a central concept in the course of this study, and thus needs to be defined and measured, given that work motivation and job satisfaction are complex and, sometimes, interchangeable. As with work motivation, several different meanings have been ascribed to the notion of job satisfaction. The definition provided by Scholl (2002) captures the clear difference between motivation and satisfaction: motivation is "future

directed" towards the attainment of goals, while job satisfaction is explained as "the extent to which expectations are met" by recent events (Scholl 2002, cited in Müller et al. 2009: 580–581). Although there is no linear correlation between higher work motivation and higher job satisfaction or vice versa, the present study starts with the assumption that job satisfaction helps to account for work motivation, as asserted by Bennel (2007).

2.5. Teacher Motivation Research in Developed Countries

Before reviewing teacher motivation research in developing country contexts, it is necessary to assess research on teacher satisfaction and motivation originating in developed countries because (a) so little research has been conducted on specifically developing countries (Zembylas & Papanastasiou 2004; Bennel & Akyeampong 2007; Tanaka 2010), and (b) what little does exist is primarily rooted in a set of theoretical assumptions derived from findings in developed countries (Garrett 1999).

Research from Organisation for Economic Cooperation and Development (OECD) member states has generally found that working with children is the main source of teacher job satisfaction, suggesting that the intrinsically rewarding nature of the job itself is the main motivation for individuals to become teachers (OECD 2006). Although there are exceptions, the literature[10] generally points to teacher motivation in developed countries as being founded on intrinsic factors rather than extrinsic ones, and job satisfaction being correlated to fulfilment of higher order needs such as creativity, problem solving, and moral development (Sylvia & Hutchinson 1985).

The International Teacher 2000 Project lends empirical weight to the hypothesis that teachers are motivated more by intrinsic rather than extrinsic factors (Zembylas &

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[10] Teachers in the US have also been found to be motivated by a desire to work with and for people, and to 'make a difference' by supporting the young population in reaching their potential and growing into responsible adults (Dinham & Scott 2000; Scott et al. 2001). In addition, the US Department of Education (1997) found that strong leadership and autonomy are important in respect of a high level of satisfaction among teachers.

Papanastasiou 2004). This series of studies found that teachers obtain their greatest satisfaction through a sense of achievement defined as influencing students, experiencing recognition, and feeling responsible, as well as gaining a feeling of personal empowerment and motivation. Results are remarkably consistent across four major anglophone countries, namely, Australia, England, New Zealand and the United States (US). Similar findings were reported from developed country contexts in Asia: in a comparative study on trainee teachers' motivation in Hong Kong and China, those in the former showed higher intrinsic levels of motivation than their counterparts on the Chinese mainland (Gu & Lai 2012). Finally, another study on trainee teachers' motivation in Japan concludes that most have higher levels of intrinsic and altruistic motivation compared with extrinsic motivation (Yoshida 2014).

At the same time, research from the developed world has also identified a number of things that leave teachers dissatisfied. The Department of Education/United States of America (USA: 1997) found that 40 per cent of American teachers were very dissatisfied with heavy workloads, limited resources and support from school administrators, and unsympathetic work evaluation procedures. In addition, the following aspects were also identified as contributing to teacher dissatisfaction in developed countries: concern about grading and student performance evaluation practices, low pay, narrow career options, declining respect for the profession, an overemphasis on standards, and a lack of participation in decision making (Norton & Kelly 1997; Kelchtermans 1999; Shann 1999; Vandenberghe & Huberman 1999).

This evidence provides useful insight into the teaching profession, and also suggests a complex picture in which job satisfaction and motivation are closely linked with particular social contexts, and the specificities of work and general life (Zembylas & Papanastasiou 2004). Some of the themes identified in this section also feature in the review of the literature on incentives below.

2.6. Teacher Motivation and Incentives in Developing Countries

The definition of the incentive employed in this study is discussed in greater detail below. Before this, it is important to reiterate that this study attempts to focus only on those incentives which can be converted into viable policy options for generating higher teacher motivation from specific social, cultural, political, institutional and individual arrangements.

The purpose of offering one or more incentives is to adjust the behaviour of an individual or a group of individuals in the hope of attaining a particular goal (Chapman et al. 1993). With an increasing emphasis on student learning – however defined – the goal of the teacher incentive is to improve teacher motivation in the short term in hopes of improving student learning over the long term (ibid). Kemmerer (1990: 139) offers a broad definition of the incentive package as encompassing "all the direct and indirect monetary and non-monetary benefits offered to teachers." He then goes on to propose four specific kinds of incentive: (i) remuneration, such as salary, allowances, bonuses, in-kind salary supplements, and benefits; (ii) an attractive working environment, including sufficient facilities and a suitable number of students per class; (iii) instructional support, such as supervision and training opportunities; and (iv) career advancement avenues, including promotion (Kemmerer 1990). Kemmerer's (1990) framework was revised and adapted to analyse the relationship between teachers' job satisfaction and incentives in Botswana using quantitative methods (Chapman et al. 1993).

Kemmerer's (1990) framework is not the only one cited in the recent teacher motivation literature; in fact, many frameworks can be found, although most are comprised of a broadly common set of elements. However, since Kemmerer (1990) treated teacher incentives as just one element of a larger set of policy issues, and the present study seeks to identify some policy drivers for increasing teacher motivation in a developing world context, it adopts Kemmerer's (1990: 139) definition, recognising teacher incentives as

"all the direct and indirect monetary and nonmonetary benefits" attached to a reward package.

Accordingly, the present study focuses on the six most common teacher incentive types found in the literature on developing countries, as well as identified in the local context:

(1) Remuneration

(2) Working environment

(3) Instructional support

(4) Training

(5) Community involvement

(6) Career opportunities and promotion

Each of these elements is discussed in greater detail in the following subsections.

2.6.1. Remuneration

In the course of this research, nearly all of the literature reviewed on teacher incentives suggests that remuneration and motivation comprise the central issue. Nevertheless, there has been a long and intense debate on the question of whether or not financial incentives positively influence teacher motivation (Umansky 2005). Proponents of an increase in teachers' salaries argue that there is a close relationship between monetary incentive and motivation, while opponents argue that after a certain basic level, teacher motivation is not tightly correlated to monetary remuneration (ibid). However, it is clearly impossible to resolve this dilemma without reference to a specific country context, and paying particular attention to how different aspects of economic development affect this relationship.

Salary

Salary itself is perhaps the most powerful and direct teacher incentive (Chapman et al. 1993). Many studies have found that a high level of compensation attracts better qualified candidates into the teaching force, affects how long they remain in their jobs, and determines how they perform in the classroom on a daily basis (e.g. Figlio 1997; Loeb & Page 2000; Rivkin et al. 2005; Barber & Mourshed 2007; Leigh 2012; NEP 2012). At the same time, research has suggested that relative earnings compared with other professions seem less relevant when individuals decide whether to go into teacher or not (Hanushek & Pace 1995).

Developing countries in particular tend to show this trend. For example, a report by a Cambodian non-governmental organisation (NGO) that interviewed 386 teachers and administrators concludes that increasing a basic salary would make the biggest impact as compared with all other incentives, not only in terms of raising motivation levels but also improving teaching performance (NEP 2012). Since the current salary level of Cambodian public school teachers is very low – roughly equivalent to that of non-skilled garment factory workers – more than half of the country's primary teachers need to take second jobs in order to cover basic living costs (Benveniste, Marshall & Araujo 2008).

In a wide-ranging, meta-analytical project based on 12 country studies in sub-Saharan Africa and South Asia, [11] Bennel and Akyeampong (2007) found that teacher remuneration in most of these research contexts was inadequate owing to the fact that overall compensation packages did not meet the basic cost of living. A comparative study on primary teachers' salaries in over twenty developing countries by the United Nations Children's Fund (formerly United Nations International Children's Emergency Fund: UNICEF, cited in Chai et al. 2010) corroborates this in its finding that most teachers in the sample subsisted around the poverty line. These studies collectively make a strong

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[11] Studies were published in two sections: 1) Ghana, Kenya, Lesotho, Malawi, Nigeria, Sierra Leone, Tanzania, and Zambia; and 2) Bangladesh, India, Nepal, and Pakistan (Bennel & Akyeampong 2007).

argument that salary level represents the most important factor affecting motivation in contexts in which current teacher remuneration falls below the minimum cost of living.

However, other research complicates these findings in pointing out that a good salary level alone is insufficient to ensure high teacher motivation, suggesting that other significant indicators include the nature of the school system and student characteristics (Ballou & Podgursky 1997; Hanushek et al. 2001; Chaudhury et al. 2004; Umansky 2005). The influence of non-remuneration factors has been reported in both developed and developing countries, but research to date has not found them to be highly significant in countries in which the current teacher salary level falls below the minimum cost of living.

A study in Cyprus (Zembylas and Papanastasiou 2004) that surveyed 461 basic education teachers and administrators is insightful here. In Cyprus, a middle-income country in Southern Europe, teaching is a popular occupational choice amongst students, one reason for which is a competitive remuneration package. Zembylas and Papanastasiou (2004) thus conclude that, unlike their counterparts in the United Kingdom (UK) or US, Cypriot teachers are motivated to enter the profession by extrinsic incentives (salary and working environment) rather than intrinsically. This case suggests that high salary levels can indeed promote higher quality personnel to enter the teaching profession and remain in their posts, but does not necessarily ensure teacher motivation in the classroom.

In short, the literature suggests that the importance of salary level to teacher motivation depends on whether or not the former is above the minimum cost of living in specific national and local contexts. Moreover, although this strongly indicates that salary level affects teacher motivation to a greater extent in developing countries, it is an important element in attracting high quality teachers and retaining them over any length of time even in middle- and high-income countries.

Performance bonus

The performance bonus is commonly utilised as a direct incentive scheme in the business world, and is another form of remuneration that can potentially supplement teacher income (Bruns et al. 2011). Bruns, Filmer, & Patrinos (2011) point out that there is remarkable agreement in the literature that the widespread pattern of relatively flat salary progression over a teaching career plus a promotion policy that is rigidly linked to seniority combine to create weak incentives for teachers to perform to the best of their abilities or for high performers to remain in the profession.

To address these concerns, there have been a variety of experiments including 'merit pay' and bonus-for-performance plans that aim to depart from traditional remuneration packages, and raise teacher motivation and student performance. Examples include an education policy in Andhra Pradesh, India whereby incentives were given to teachers in 100 pilot schools, research revealing a 0.27 standard deviation improvement in student test scores in intervention schools over a two year period (Muralidharan & Sundararaman 2009). However, such a strong case for merit-based payment policies notwithstanding, these schemes not yet proved to be generalisable in different contexts such as other countries, schools, population groups, or implementation timelines (Umansky 2005).

More recent international evidence does present more positive results in terms of several merit pay programmes (Lavy 2009; Muralidharan & Sundararaman 2009; Glewwe et al. 2010) – as long as certain conditions are met, namely, that parameters of monetary incentive programmes are set up in a transparent manner; target personnel and size of incentives are clearly defined; and methods and standards of evaluation are appropriate (World Bank 2012). Research also indicates that rewards can be influential whether they are based on input measures of performance (e.g. teacher attendance) or results measures (e.g. student learning progress), and can also take the form of targeting either individual teachers or groups of teachers, typically at the school level (Bruns et al. 2011).

However, Glewwe et al. (2010), who conducted randomised control trials of a group-based teacher incentive programme in Kenya, found that teachers' strategies for obtaining the bonus tended to focus on short bursts of effort to improve student scores in assessment tests – such as follow-up coaching in test technique – rather than attempts to make sustainable improvements to motivation levels or core pedagogical skills.

Overall, existing research suggests that bonus-for-performance schemes have positive outcomes if the programme format is designed appropriately, but cautions that the effects could also be limited to a mere short-term increases in motivation levels linked to the promise of remuneration.

Remote allowances

Due to comparatively difficult living and working conditions, rural village schools in particular in most developing countries tend to have fewer numbers of teachers and higher staff attrition rates than urban counterparts (Bennel & Akyeampong 2007; Benveniste, Marshall & Araujo 2008). Unless incentives are extended to rural teachers, the large majority of children who live in such areas will continue to receive poor quality education. Given such a state of affairs, the major improvement of incentives for teachers willing to undertake 'hardship' postings has been identified as a top priority in nearly all developing countries, and, in many, a 'remote area allowance' has been implemented as a major policy intervention (ibid).

Global evidence – mainly in respect of developed countries – from causal and correlational studies suggests that the design of such incentive programmes is the key to their success, and some initiatives have successfully contributed to the deployment of sufficient numbers of qualified teachers to hard-to-staff schools (Hanushek et al. 1999, 2004; Steele et al. 2009), but others have failed or made only a limited impact (Liu et al. 2004; Urquiola & Vegas 2005; Clothfelter et al. 2006). However, in developing countries this kind of intervention does not appear to have much effect in correcting national staff

imbalances, primarily because the monetary value of the incentive is not usually sufficiently substantial to compensate teachers for all the disadvantages of rural village life, such as insecure accommodation, poor infrastructure, and isolation from friends and family (Bennel & Akyeampong 2007).

2.6.2. Working environment

As with any sector, the term 'working environment' with regard to education is very broad, and research conducted several decades ago encompasses many aspects, including teacher-to-student ratio, student behaviour, physical infrastructure, teaching and learning materials, and living conditions (Kemmerer 1990; Chapman et al. 1993). In the present study's regression analysis, three items were selected as working environment variables, namely, teacher-to-student ratio, student behaviour, and teachers' commute time to school, a selection that was made based on the specifics of the Cambodian context and availability of quantitative data. However, in terms of the study's interviews with teachers, the working environment was defined much more broadly, encompassing all the factors listed above.

Teacher-to-student ratio

A high teacher-to-student ratio has been identified globally as a strongly positive cause of teacher demotivation and/or dissatisfaction (Department of Education/USA 1993; Michaelowa 2002; Ramachandran et al. 2005). In particular, the rapid expansion of public school enrolment rates sparked in the 1990s across the developing world by the Education For All initiative has been linked with an abrupt spike in student-to-teacher ratios (Alexander 2008). Class size, especially in early grades, has thus been the focus of numerous studies. Hanushek et al. (1998) identify from a research project in the US the positive effects of smaller classes, particularly for students from low-income backgrounds in the lower grades. In addition, Bennel and Akyeampong (2007) detect class size as a common issue in early grade teaching arrangements in developing countries such that the

lower the grade, the larger the class – even though the least experienced and/or poorly qualified teachers are usually given charge of such classes. Thus, teacher-to-student ratio is a common issue globally in terms of teacher satisfaction and/or motivation, particularly in respect of those teaching at the lower grades, and in rural and/or remote schools in developing countries.

Student behaviour

In developed countries, good student behaviour is often raised as an important working environment indicator of teacher satisfaction and motivation (Department of Education/USA 1997). The impact of student behaviour on teacher satisfaction and motivation in developing countries is thought to be similar, although there is less evidence of it here. Of the few existing developing-world studies, one NGO in Cambodia has confirmed such a linkage, finding that poor student behaviour is a major indicator of teacher demotivation as there is strong pressure to discipline children from their parents (NEP 2012). Similarly, a Voluntary Service Overseas (VSO: 2011) study conducted in Ethiopia found that teachers frequently raised undisciplined student behaviour as a negative aspect of the job. The same report goes on to assert that although its findings lack verifiable evidence, the linkage between poor student behaviour and teacher motivation is not only an issue in Ethiopia, but a global issue reported by many VSO volunteers worldwide (VSO 2011).

Moreover, while a series of case studies comparing 12 sub-Saharan African countries fails to reveal evidence that student behaviour has a major impact on teacher job satisfaction and motivation, student behaviour is recognised as a growing issue for teachers, particularly in urban schools (Bennel & Akyeampong 2007). Drawing on somewhat contradictory findings in Tanzania, Towse et al. (2002) note that teachers perceive student behaviour to be more problematic in rural schools. Thus, a lack of

consistently rigorous evidence notwithstanding, student behaviour has been repeatedly cited worldwide as a key indicator of teacher satisfaction and motivation.

Commute to school

Several recent studies in developing countries have found that the conditions under which teachers are obliged to commute to school can have a negative effect on motivation as such journeys are sometimes costly, time-consuming, and/or tiring. In this regard, a teacher motivation study in Ghana indicates that housing and the commute to school are two critical issues that greatly affect teacher motivation and morale (Bahahudeen 2014). A teacher motivation study in Malawi adds that some teachers are forced to travel long distances to school, often spending a large proportion of their meagre salaries on bus fares or the purchase and maintenance of a bicycle. The latter option means that in rural areas, they have to cycle long distances only to arrive late for work; and the situation becomes markedly worse during the rainy season, when many schools go effectively unstaffed (Selemani-meke 2013). In the cases of Tanzania and Ghana, the issue of long distance commuting is particularly acute for urban teachers, as the cost of bus fares compared to their salary can be prohibitive (Bennell and Mukyanuzi 2005).

Many studies that address developing-world teacher motivation (e.g. Bennell & Mukyanuzi 2005; Urwick et al. 2005; Selemani-meke 2013; Bahahudeen 2014) recommend that the government provide teachers' housing, particularly for those working in rural schools. This is, however, a difficult policy option for developing countries due to limited budgetary resources as well as a general lack of housing in rural and remote areas (Selemani-Meke 2013). Free accommodation is sometimes provided, but it is often severely limited (Urwick et al. 2005). Thus, many teachers still have no free housing and have to travel long distances to school, meaning that commute time is a key working environment indicator that can affect teacher motivation negatively.

Teaching and learning materials

The linkage between teaching and learning materials and teacher motivation is a connection often made in both developed and developing countries. In the US, the limited availability of teaching and learning resources, including textbooks, has been highlighted as a major cause of teachers' stress (Department of Education/USA 1993). In developing countries, adequate textbook provision is just another perennial challenge to the creation of an effective working environment (Kemmerer 1990). Research in Indonesia found that good study materials represented one of the most effective incentives for teachers (Verger et al. 2013). Conversely, a lack of textbooks in the classroom is often the result of a breakdown in the complicated procurement process, inefficient distribution system, and, frequently, involvement of copyright issues (World Bank 2011). Given contexts in which other reading materials are usually scarce, much research has identified adequate textbook provision to have a particularly positive effect on teacher job satisfaction and, of course, student learning (Sepuleda-Stuardo & Farrell 1983; Verspoor 1986; Michaelowa 2002).

School infrastructure

Poor and inadequate school infrastructure is another critical shortcoming with regard to the majority of schools in developing countries compared with the developed world. For example, in Cambodia, one study found that "about a third of primary and secondary schools did not have toilets or access to clean drinking water. Ten to 15 per cent of classrooms lacked an adequate roof or walls and about 5 per cent of rural schools did not possess the most basic elements, such as desks or a blackboard" (Benveniste, Marshall & Araujo 2008: 41). Studies have shown that the poor quality of school infrastructure has a considerable impact on teacher satisfaction (Michaelowa 2002) and absenteeism (Chaudhury et al. 2004). Other research has identified the existence of toilets, a water supply, electricity connection, library, and non-mud floors all to be influences on teacher absenteeism rates (Tournier 2011).

Living conditions

Living conditions are another aspect of overall working conditions, becoming most significant in rural and/or remote schools far from teachers' native communities. The quality of housing is one of the strongest indicators of teacher satisfaction. For those working in remote and/or rural areas of developing countries, finding decent accommodation is one of the hardest aspects of a teacher's life, particularly for females (Ramachandran et al. 2005). Living alone in remote villages far from their families poses difficulties for many teachers that are thought to be linked to motivation rates in these areas (ibid). In addition, the prospect of such harsh living conditions influences teacher deployment, many doing their best to avoid a rural posting or find a way of quickly transferring back to the city, thus leaving an even larger workload and burden of duties for those teachers who remain behind (Michaelowa 2002).

2.6.3. Instructional support

The quality of instructional supervision by both school directors, and provincial and district education office teams is critical to the effective management of teachers (Bennel & Akyeampong 2007). The instructional supervision activities commonly associated with these different administrative levels respectively are reviewed below.

School director

The literature on developed countries states that strong leadership on the part of the school director is a key indicator of teacher satisfaction (Department of Education/USA 1997), and there is a growing consensus on the importance of the instructional leadership role of this individual (Darling-Hammond & Rothman 2011; World Bank HDN 2012). The crucial importance of the director's role is also emphasised in research from selected anglophone African countries, which argues that the influence of this individual can extend to improving teacher attendance and performance, student behaviour, and relationships with parents (Mulkeen 2009). Overall, recent research is in agreement in concluding that the school director plays a significant role in the efficacy of his or her

staff members and influence their levels of satisfaction (Mulkeen 2009; Darling-Hammond & Rothman 2011; World Bank HDN 2012).

Chapman (2005) also confirms the essential role of the school director, and asserts that the selection, preparation and supervision of this individual are significant determinants of an effective school system. However, in many developing countries, such selection is conducted without open competition (Mulkeen 2009), training for school directors is not regularly organised (Bennel & Akyeampong 2007), and the monitoring of performance attracts little attention due to limited external school supervision (Mulkeen 2009). On the whole, research suggests that although the role of the school director may vary from context to context, he or she plays a significant role in the functioning of the school, participating in both administration and the instructional supervision of teachers (Kemmerer 1990).

However, a greater focus on school management tasks than the instructional supervision of teachers means that the current role of the sub-Saharan African school director is heavily weighted in favour of management. Indeed, the relevant literature shows that school 'managers' tend not to see pedagogical leadership as part of their role and often devote the bulk of their time to administrative tasks (Mulkeen 2009). One official study by MoEYS describes how little attention is given to instructional staff supervision, revealing that as many as twenty-five per cent of 150 primary school teachers responded in an official survey that their school director had to their knowledge never visited a classroom (MoEYS 2006b).

Another important role of the school director that is closely related to instructional supervision is the disciplining of teachers, usually through enforcement of established codes of staff conduct. In this regard, it has been suggested that school directors should maintain a certain level of accountability at school level and take the lead in facilitating rewards and sanctions aimed at increasing teacher motivation (World Bank HDN 2012).

However, these issues are complex in the developing world since school directors often invariably do not have the administrative authority to discipline their staff (Mulkeen 2009; Bennel & Akyeampong 2007). Moreover, in many countries few teachers or directors understand the school code of conduct (Van Nuland et al. 2006). Compounding all this, absenteeism is frequently endemic not only on the part of teachers but also their directors, with research from Uganda going as far as to report that the problem in respect of the latter is even much greater than is the case with regular teachers (World Bank 2007).

Provincial and district office instructional supervision

Evidence from developed countries suggests that monitoring from education authorities is critical to the effective implementation of improved teaching and learning methods, in terms of reviewing how well teachers work and whether their students are learning in accordance with the stipulations of national curriculums in particular (World Bank HDN 2012). However, in developed-country contexts, monitoring can also be demotivating as overemphasis on standards set by the centre and monitored through frequent school inspections is often linked to deterioration of teacher satisfaction (Kelchtermans 1999). Current research suggests somewhat similar to findings from developed countries, Bennel and Akyeampong (2007) emphasising the importance of quality over quantity in external supervision, as previously observed. It is also stressed that there must be a frank discussion of teachers' skill deficits and strengths, as well as clear, transparent feedback following inspection and supervision visits in order to increase expertise and motivation (Bennel & Akyeampong 2007). This type of hands-on instructional supervision usually requires high interpersonal and professional skills combined with regular visits (Tanaka 2010). Tanaka (2010), who conducted ethnographic research on teacher motivation in rural Ghanaian schools, stresses the significance of the role of district office staff to teacher motivation since this level of supervision is particularly influential in terms of the long-term career vision of teachers.

However, available research also shows that much existing external inspection and supervision in the developing world is undertaken by untrained staff, and hindered by insufficient travel allowances and emphasis on evaluation rather than training and betterment of the teaching force (Kemmerer 1990). More recent research from African and Asian contexts also reports that the number of external monitoring visits and/or inspections is often too limited to be effective (Ramachandran et al. 2005; Benveniste, Marshall & Araujo 2008). In addition, Mulkeen (2010) found that inspectors were keener on meeting predetermined quotas (number of visits in a given period) rather than focusing on the results and quality of schools visited. However, given the absence of empirical research focusing on what actually happens when supervisors and teachers interact, it remains difficult to understand the dynamics of external instructional supervision and teacher motivation in the developing world context.

Leadership and teacher autonomy

The wider literature on school leadership in developed countries discusses the issues of teacher autonomy and motivation, one study on leadership discourse concluding that effective teacher motivation is based on a compromise between the individual's wish for autonomy and an institutional need for structure (Chemers 2001). Several studies stress a strong correlation between school leadership, teacher autonomy, and level of teacher commitment (Department of Education/USA 1997; Blase & Blase 1999). One such study also found the increasing of staff autonomy and facilitating participatory decision making to be popular policy actions with regard to building teacher enthusiasm, particularly in terms of enhancing intrinsic aspects of motivation (Twenge 2010).

However, discussion around school leadership in the developing world places comparatively less emphasis on teacher autonomy than in developed countries, probably because it is assumed that it is not possible to meet the basic conditions for completely autonomous school management in respect of school directors in the former context.

Obstacles include the limited administrative authority of school directors and teachers' low levels of understanding about codes of conduct, as mentioned above. Cambodia is no exception here as clarification of the balance between teacher autonomy and institutional structure is still regarded as a policy challenge (Benveniste, Marshall & Araujo 2008).

2.6.4. Community Involvement

Although 'community involvement' can be literally defined as involvement of and support from the surrounding community in school activities, the focus of this term has diversified over time. In somewhat earlier literature, community involvement frequently signifies positive, tangible support to schools and their teachers, as well as recognition from the community (Ankrah-Dove 1982; Kemmerer 1990; Chapman 1993). However, the more recent literature refers to community participation more in terms of school-based management as the central tool in the implementation of education decentralisation policies (Bruns et al. 2011).

No matter what the definition, most of the literature debates whether or not community involvement is a positive strategy in terms of teacher motivation. Some commentators argue that it helps through the creation of a mutually beneficial accountability relationship between the school and its community, while others stress that it invites community politics into schools and leads to outside interference in an area traditionally held to be the preserve of teachers (Bruns et al. 2011).

With regard to the original notion of community support and recognition, the teacher incentive framework proposed by Kemmerer (1990) does not even cite any term that represents the idea of 'community'. Chapman's (1993) study on Botswana does, however, include the notion of 'community support, recognition and approval.' This is partly associated with the fact that Chapman (1993) and also Ankrah-Dove (1982) argue that the high attrition rate of teachers in rural communities is due to a weak relationship with the school community. Several recent education studies in developing countries also

present evidence of the positive influence of community support and recognition on teacher satisfaction and motivation (e.g. NEP 2012; Bahahudeen 2014).

The later development of the concept of community support within a system of school-based management in the wider context of education decentralisation tends to focus more on community involvement to ensure accountability and ownership. Studies that address this aspect identify several successful cases of community intervention in Indonesia, such as the Urban Poverty Programme, Kecamatan Development Programme, and the National Programme for Community Empowerment (Bruns et al. 2011). Additional research indicates that informal social pressure from the local community can help to eradicate corruption and the appropriation of school funds, and construct school accountability mechanisms (ibid).

On the other hand, there are many more cases of the failure of community participation initiatives in African and Asian countries to be found in the literature. In some, increased community involvement has been criticised for creating unnecessary tension between school and community, and negatively influencing teacher motivation through the undermining of their autonomy (Michaelowa 2002; Haq & Islam 2005; Ramachandran et al. 2005). Elsewhere, many schools have been found to involve the community only in particular aspects of school management, often only the most inconsequential jobs (Lindsey et.al. 2015), and in ways that are guaranteed not upset the status quo (Cook 2007, cited in Bruns et al. 2011, page 93). As a result, some studies have found community involvement through the local school committee to have no discernible effect on teacher motivation (Lassibille et al. 2010).

From these studies it can be concluded that, although largely dependent on context, there is a positive correlation between community recognition and support, and teacher satisfaction and motivation, while deeper and more substantial community involvement in school management may actually create more problems for teachers that it solves.

Finally, in many developing countries, such involvement can often be superficial and make no impact on the running of the school or conduct of its teachers.

2.6.5. Training

The literature from the US indicates that training and professional development are without exception crucial to the promotion and sustainment of teacher competency (Shann 1999). In developing countries, the focus of existing research on training is not wholly positive but, rather, marked by considerable scepticism about its outcomes (Craig et al. 1998; Stuart & Lewin 2002; Ramachandran et al. 2005; Courtney 2006).

Training can be viewed as an incentive in many ways: appropriate training for teachers should result in greater self-respect, community status, job satisfaction, and positive student learning outcomes (Carrier & Chapman 1990). Indeed, the chance to undertake continuous professional development can be a major source of motivation, and, in most countries, the ability to upgrade qualifications is a critically important incentive since it is often a teacher's major means of obtaining a pay rise (Bennel & Akyeampong 2007).

Teachers in Cambodia have even been known to use their own resources to attend training courses (MoEYS 2011), and a recent report from a locally based NGO stresses the importance of training for motivating the teaching force, going on to recommend sessions to upgrade pedagogical skills and knowledge (NEP 2012). Another benefit of training in terms of teacher motivation is that it provides the opportunity for teachers to take time away from the often difficult conditions of rural classrooms (Bennel & Akyeampong 2007).

However, both education research and international organisations are concerned that teacher training does not always function positively in terms of upgrading the teaching force and delivering better instruction at the classroom level (Craig et al. 1998; Stuart & Lewin 2002). It has been widely reported that the contents of teacher training programmes

are often inadequate with regard to meeting the needs of participants (Ramachandran et al. 2005; Courtney 2006). This is because in-service teacher training is invariably planned in an ad-hoc manner (Guthrie 1983; MoEYS 2015b) and its quality is often less than satisfactory (Kunje 2002; Benveniste, Marshall & Araujo 2008).

Generally favourable views on the potential of continuous teacher education notwithstanding, the literature shows at least one negative aspect, namely, shortcomings in terms of accountability and transparency in the process of selecting training participants whereby corruption is often related to political gain and interference; that is, those close to powerful figures are much more likely to get coveted training opportunities. A study by an NGO working in Nigeria reported a case in which teachers paid bribes to be appointed to attend training courses (VSO 2007). Research has also identified the existence of patronage networks that often determine who is selected for training courses, which undermines any notion of an incentive structure around such opportunities (Choudhury 2005).

Additionally, rural teachers are usually less able to access residential training courses than their urban counterparts owing to the remoteness of their schools, and the added expense of public transport fares and lodgings (Benveniste, Marshall & Araujo 2008). This may further negatively affect the motivation of such teachers, and also contribute to the exacerbation of the quality imbalance between rural and urban schools in developing countries.

2.6.6. Career opportunities and promotion

Research has frequently recognised that a career in teaching can have some inherent disadvantages when it comes to advancement. Specifically, teachers often face an inadequately developed career structure and limited promotion possibilities, shortcomings that seem to be true in both developed and developing countries (Dörnyei & Ushioda 2010). A study in the US found that few opportunities for career promotion

and growth represented one major contributory factor to teacher dissatisfaction (Norton & Kelly 1997). Recent studies also report that most efficient education systems offer teachers the possibility of horizontal promotion, that is moving into an academic position that allows them to both deepen professional expertise as well as remaining up to date with pedagogical practice – as opposed to a vertical move upwards to a managerial position (Darling-Hammond 2010; OECD 2012).

However, in most developing countries, teachers' career advancement opportunities remain limited (VSO 2002) and promotion prospects are generally worse than those for other civil servants in comparable occupations (Bennel & Akyeampong 2007). Indeed, it has been found that few opportunities for promotion exist unless the teacher is prepared to consider a position outside the public education sector (Mulkeen 2009; Pole de Dakar 2009). Moreover, a lack of transparency in terms of what few promotion opportunities there are is a common problem across many countries (Pole de Dakar 2009; VSO 2011).

For these reasons, there is a growing debate around the question of how teacher career advancement might be reformed and, currently, there is no consensus in the literature about the way forward. However, around the world, teacher recruitment and promotion remain largely based on number of years of pre-service training, formal certification, and years in service (Bennel & Akyeampong 2007: 37; Bruns et al. 2011). As a result, promotion tends not to be linked to actual current teaching performance. In view of this situation, Mulkeen (2009) argues that merit-based promotion can encourage the pursuit of excellence and promote the retention of talented teachers.

In a study on Cambodian teachers, Benveniste et al. (2008) also suggest that pay and promotion should be strongly linked to qualifications and continuous professional development, who go on to suggest that opportunities to reward teachers according to specific performance criteria could be woven into the civil service salary and promotion schedule. Yet, much research shows the various difficulties around the adaptation of

merit-based promotion to the existing education system in developing countries (Mulkeen 2009; Pole de Dakar 2009). For example, the basis for selection was found not always to be transparent in Liberia, the interview procedure did not adequately recognise the best candidate in respect of Malawi, and some teachers felt that promotions were conducted in an unfair manner with regard to Gambia (VSO 2007).

Research has also questioned whether there is adequate empirical evidence to show that teacher performance can be effectively and fairly monitored in the Cambodian classroom (Benveniste, Marshall & Araujo 2008). Rather, a weak system of performance monitoring and accountability (Bruns et al. 2011) has repeatedly arisen as the major obstacle to merit-based promotion system in developing countries.

Although research from the field has often suggested the need to introduce a new type of professional career path for teachers, with transparent promotion criteria based on performance (e.g. Kadzamira 2006), findings from a teacher policy workshop recently organised by the World Bank Systems Approach for Better Education Results (SABER) team[12] indicate there is virtually no hard evidence from developing countries to show how merit-based promotion could be implemented and/or might function effectively in the realities of developing countries.

2.7. Theoretical Framework

The theoretical framework of this study is organised around the overall aim of attempting to identify factors that will increase teacher motivation in a developing-world context. It is informed by the review of motivation theories above, including the key concepts relating to teacher motivation/satisfaction defined above.

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[12] The author personally attended this workshop, which was held on 6th and 7th February, 2013 in Washington DC.

It begins with the theories proposed by Maslow (1943) and Herzberg (1968) respectively, who had congruent views on workers' needs, motivation and satisfaction. Indeed, Maslow (1971: 238) remarks that workers are fundamentally human and thus have a need for 'meaningful' work, and Herzberg (1968) later adapted Maslow's (1943) set of hierarchal principles in his Motivation-Hygiene Theory in the field of industrial organisational psychology. Herzberg (1968: xii) thus echoes Maslow (1943) in stating that the primary aim of the employer should be to fulfil the need of human beings to enjoy a meaningful existence, going on to argue that:

> The three lower level needs of Maslow's scheme were considered to be equivalent in their psychological meaning to the hygiene factors [and] the higher-needs categories adapted from Maslow represented the motivators (Herzberg 1968: 159).

In other words, both theorists identify meaningful work as a key human need, with Herzberg (1968) explicitly promoting it as an organisational goal. He also states that meaningful work itself can meet higher psychological needs and increase the intrinsic aspects of motivation in particular, while basic needs factors impact more on extrinsic motivation (Herzberg 1968). Given that the present study seeks to assess holistically how incentives can increase the motivation of teachers in disadvantaged social contexts, it takes advantage of these commonalities in the aforementioned two theories to create a hybrid research framework. In addition, the study incorporates Deci's (1975) basic concept into its framework in an attempt to view the relationship between each incentive and the intrinsic and/or extrinsic components of motivation more comprehensively.

Specifically, the framework shown below (Table 2-1) (i) suggests that low-level satisfaction factors (e.g. status, job security, salary, benefits, working environment) are essential to the fulfilment of basic human needs (Maslow), but do not motivate workers in isolation (Herzberg); (ii) only high-level satisfaction factors (e.g. challenging work, recognition, responsibility) have the potential to motivate people (Herzberg) in the longer term; (iii) low-level satisfaction factors must be fulfilled before higher-level ones in sequential order (Maslow); and (iv) higher-level satisfaction factors are linked more

closely to intrinsic motivation, while basic ones accord more with extrinsic motivation (Deci).

Table 2-1. Theoretical framework for teacher motivation

Maslow (1943)		Herzberg (1968)	Deci (1975)
Hierarchical Needs Theory		**Motivation Hygiene Theory**	**Intrinsic Theory**
5	Self-actualisation (morality, creativity, problem solving, lack of prejudice, acceptance of facts, etc.)	Motivators: challenging work, recognition, responsibility, promotion, growth, etc.	Intrinsic components
4	Self-esteem (confidence, achievement, respect for others, respect by others, etc.)		
3	Social needs and sense of belonging (friendship, family, sexual intimacy)	Satisfaction factors: status, work remuneration, job security, working conditions, supervision, etc.	Extrinsic components
2	Safety needs (security, employment, resources, morality, health, etc.)		
1	Physiological needs (breathing, food, water, sex, sleep, etc.)		

Source: The author, based on Maslow (1943), Herzberg (1968), and Deci (1975).

As this study analyses how education policy incentives and other employment factors relate to teacher motivation, the incentives reviewed above should also be incorporated into this framework. Accordingly, this combined framework[13] (Table 2-2) allows us to review whether incentive policies are implemented in a manner conducive to increased motivation; whether basic and/or higher-level needs are met; whether intrinsic and/or extrinsic motivators are affected; and whether other factors also influence teacher motivation. The contents of this framework are detailed further in the discussion on methods and methodology in Chapter 4.

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[13] It is worth noting that this framework does not incorporate other motivation theories (e.g. Equity Theory, Expectancy Theory, Goal Setting Theory) because the basic preconditions assumed by such conceptualisations are often not met in developing countries, in which there can be low levels of accountability and transparency in governance).

Table 2-2. Overall theoretical framework

Maslow (1943)		Herzberg (1968)	Deci (1975)	Incentive indicators	Other Factors
Hierarchical Needs Theory		**Motivation-Hygiene Theory**	**Intrinsic Theory**		
5	Self-actualisation (morality, creativity, problem solving, lack of prejudice, acceptance of facts, etc.)	Motivators: challenging work, recognition, responsibility, promotion, growth, etc.	Intrinsic components	Instructional supervision	Local context, socio-economic status, school, other teachers, etc.
4	Self-esteem (confidence, achievement, respect for others, respect by others, etc.)			Community support, training, promotion,	
3	Social needs and sense of belonging (friendship, family, sexual intimacy)	Satisfaction factors: status, work remuneration, job security, working conditions, supervision, etc.	Extrinsic components	Working environment	
2	Safety needs (security, employment, resources, morality, health, etc.)			Working environment	
1	Physiological needs (breathing, food, water, sex, sleep, etc.)			Remuneration	

Source: The author, based on Maslow (1943), Herzberg (1968), and Deci (1975).

2.8. Conclusion

This chapter reviewed some major contributions to the literature on work and teacher motivation. It also developed an overarching theoretical framework for the study, which was developed from classic needs-based motivation theories, contemplation on intrinsic motivation, and the literature on teacher incentives in developing countries.

One common finding from the literature on developed countries is that teacher motivation is often founded on intrinsic rather than extrinsic factors; yet, on the other hand, the

literature from developing countries frequently discusses primarily extrinsic motivators, such as remuneration, working environment, and other non-financial incentives.

Based on this extensive literature review, an original theoretical framework was developed that places classic needs-based motivation theories at its centre due to their emphasis on basic human needs, including access to work, food and shelter. Deci's (1975) Intrinsic Motivation Theory was also incorporated into the theoretical framework to highlight my belief that intrinsic motivation is a relatively neglected characteristic of the teaching profession[14] in teacher motivation research in developing countries.

Although there is a large volume of academic research on education development, there has been none to date that utilises nationally representative data to examine the relationship between incentives and teacher motivation levels in Cambodia. Nor does any study adopt both quantitative and qualitative approaches to better understand this linkage in Cambodia. There is, thus, a need to fill this knowledge gap.

Through the undertaking of such an examination, this study aims to test its theoretical framework against the Cambodian case and explore new theoretical findings on teacher motivation in other developing countries with similar contexts. The next two chapters detail the research context, methodology, and methods utilised in conducting the study.

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[14] I am not arguing that intrinsic motivation is actually unique to teachers, but that this factor may be neglected in the existing literature on teacher motivation in developing countries.

CHAPTER 3.   Cambodian Context

3.1. Introduction

This chapter briefly describes the context in which the study was conducted, focusing specifically on its historical and social configuration, as well as the course of education development. The structure of the chapter is as follows. Section 3.2 provides a historical overview of Cambodia, highlighting moments of significant transition in education policy; Section 3.3 then describes the profound and enduring social disparities of the country, and the education system and its performance; Section 3.4 offers a discussion on teacher qualifications and development, current working conditions, and existing incentives for primary school teachers; and, finally, the findings of the chapter are summarised in Section 3.5.

3.2. Modern Historical Background: political transition and education policy formation

In 1863, a treaty was signed between the French and Cambodia's King Sihanouk that guaranteed Cambodia's protection from other countries (Chandler 2007). Since then, Cambodia has had seven governing regimes, together with seven major political transitions: French colony (1863–1953); Sihanouk monarchy (1953–70); Lon Nol republic (1970–75); Pol Pot socialist/Maoist regime (1975–79); Heng Samrin and Hun Sen communist regime (1979–93); Hun Sen and Norodom Ranariddh liberal democracy (1993–97); and Hun Sen liberal democracy (1997 to the present). Such political and regime changes inevitably impacted on national policy, often very clearly and explicitly in the education sector (Clayton 1998; Ayres 2000; Dy 2004; Brehm & Silova 2014).

Traditionally, the Cambodian education system was centred in Buddhist temples, with instruction emphasising the importance of appropriate conduct and maintenance of correct relations between members of society (Hansen 2007). Although Franco-Khmer

primary schools were established for elite Cambodians and expatriates in the early 20th Century, the general policy was to reform temple schools to facilitate modern education for ordinary citizens. As temple schools had not been organised around a curriculum, timetable, inspectors or examinations, the French supported reform and also the expansion of modernised temple schools throughout the country (Ayres 2000).[15] Indeed, although the French would later undermine the traditional Buddhist education system, they introduced and built the basic structure of modern education in Cambodia from the foundations of the existing system[16] (Ayres 2000: 24).

Once Cambodia had gained independence from France in 1953, Prince Sihanouk developed an independent education policy in 1955 that focused mainly on the expansion of a modern system through formal schools (Ayres 2000). An international advisor from the United Nations Educational, Scientific and Cultural Organisation (UNESCO) suggested that rather than just simple expansion, the government should pay more attention to education quality, particularly in terms of teacher training, thus improving the curriculum and learning environment, and, in fact, slowing down the pace of reform (Bilodeau 1955).

However, Prince Sihanouk remained focused on the rapid expansion of schools throughout the country. As a result of this policy, the number of Khmer (formerly Franco-Khmer) public schools increased from 1,352 in 1955/56 to 1,653 in 1957/58 (Ayres 2000). Nevertheless the country faced a financial deficit, meaning that the pace of expansion inevitably had to be slowed. Since this regime, the focus on increasing access has been at the centre of education policy right through until the present day – other than during the

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[15] As of 1939, there were 18 Franco-Khmer primary schools in the country, while there were 908 reformed temple schools (Ayres 2000).

[16] During this period, the French also invested in the training of male students for the higher ranks of the civil service in their colonial government, over 100 such individuals studying in France. However, the French had handed control of the education sector back to an indigenous government by 1950 (Ayres 2000).

brief interlude of the Pol Pot regime, when schooling took the form of ideological indoctrination (Brehm & Silova 2014).

Duggan (1996) points out that the education policy implemented by Sihanouk was biased in favour of the urban population, rural people deriving little benefit from it. Indeed, more schools were built in cities and also more modern education facilities were found there. Specifically, urban schools offered more subjects in science and technology than their rural counterparts, which placed greater emphasis on traditional basic subjects such as literacy and numeracy over the period (Dy 2004).

During this early period of education reform – the late 1950s and the early 1960s – public school teachers achieved such a high status that they were treated equally with monks, who had been traditionally thought of as the country's principal intellectuals in pre-modern society (Ayres 2000). Nevertheless, teachers were now regarded as being in a powerful position to impart the new values of a modern nation; indeed, many of those who had studied in France became public school teachers,[17] further attesting to their high status (ibid). However, in accordance with expansion-focused education policies, the status and quality of teachers would gradually decline, a trend that has continued right up to the present today (ibid).

In March 1970, backed by the US, General Lon Nol launched a coup d'état and declared a new regime, the Khmer Republic, a move that was largely a reflection of foreign policy and closed-door intrigue around the Vietnam War – Sihanouk supported Communist Vietnam. From 1970 to 1975, there was little constructive socio-political reform from the Lon Nol regime, precipitating the slide towards civil war. Fights occurred between Lon Nol and the Cambodian Communist party, which was backed by the Vietnamese, particularly in rural areas, which were being left behind in terms of modernisation.

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[17] Including one Saloth Sar, later Pol Pot, who was employed as a teacher at a public secondary school after his return from France (Ayres 2000).

Overall, during the Lon Nol regime, gains in socioeconomic development largely vanished (Ayres 2000; Dy 2004).

In terms of education specifically, the Lon Nol regime basically continued the implementation of similar policies to those of the previous regime, but placed higher priority on the 'Khmerisation' of the instructional language in line with the government's anti-Vietnamese policy (Ayres 2000). However, nationwide instability and political disorder forced the Lon Nol regime to reduce education funding, which resulted in the closure of many school in rural areas. Consequently, Lon Nol education policies remained largely unimplemented and ineffective (ibid).

In 1975, the lingering friction of the Sihanouk–Lon Nol civil strife ceased as a result of the establishment of Democratic Kampuchea (DK) led by Pol Pot of the Khmer Rouge, a regime that continued up to 1979 (Chandler 2000). As one of its first acts, the Khmer Rouge evacuated Phnom Penh and all other urban centres, sending their populations to the countryside where they were forced to work in agricultural cooperatives under strict supervision (ibid). Many of those who were suspected of being associated with the previous regime were executed (Clayton 1998), and the regime rejected most modern social infrastructure, including urban centres, money, schools, the law, and commercial markets (Chandler 2000).

During the Pol Pot regime, DK education policy generally centred on literacy and numeracy, nationalism, and an extreme egalitarian ideology. Additionally, the Khmer Rouge incorporated 'labour principals' into the system. A national education system as such did not exist, although some form of schooling was still provided in parts of the country (Ayres 2000).

Yet, the impact of the Khmer Rouge ultimately centres on the now notorious genocide of those who were most highly educated in the society: doctors, engineers, teachers, and students. Government estimates indicate that 75 per cent of teachers, 96 per cent of

university students, and 67 per cent of all primary and secondary school students were murdered as part of the Khmer Rouge initiated genocide (Ayres 2000). This has left a deep and wide scar across the nation that, even today, greatly impairs efforts in national education development (Chandler 2000).

After the fall of Pol Pot in 1979, the Heng Samrin regime began to rebuild the country with prominent support from Vietnam and other socialist states (Ayres 2000). This period lasted from roughly 1979 to 1993, during which, Cambodia faced not only the difficulty of reconstructing public sector systems that made up the nation, but did so in a context in which multiple political groups fought for supremacy and dominance, in addition to the significant presence of Vietnamese (Dy 2004). In other words, the vacuum left by the demise of the Khmer Rouge was only filled with more in-fighting that stalled progress. Nevertheless, in 1990, Vietnam withdrew from Cambodia, leading to the Paris Peace Accords signed in October 1991; and, in 1993, the first national elections finally offered the hope of a unified government capable of formally reconstructing the nation (Dy 2004; Benveniste, Marshall & Araujo 2008).

In terms of education policy, international consultants report that there were so few qualified teachers under the Heng Samrin regime that they were literally recruited from city streets and village pathways, and more than half of new teachers were sent to their classrooms without any training (UNESCO 1979). By November 1979, there were only 13,619 teachers in post to cater for 716,553 students, producing a student-to-teacher ratio of 53 to 1, and of this total, only 4,000 were trained to national standard (Coxon 1996, cited in Ayres 2000: 132). However, MoEYS made considerable effort in the 1980s to develop a teacher training system and deploy staff to newly-built schools in an attempt to meet the high demand. Yet, although the Heng Samrin regime accepted suggestions from international donors such as UNICEF to prioritise improvement in the quality of education, throughout the 1980s, the MoEYS concentrated on achieving universal access

to primary education and the construction of schools in line with dominant socialist ideology of the time (Ayres 2000).

In 1980, teacher training schemes recommenced as a short-term measure for preparing basic education teachers, followed by the establishment of more permanent teacher training centres (TTCs) in 1982 (MoEYS 2015a). This relatively swift recovery of the public teacher training system notwithstanding, TTC instructors were often unqualified former teachers "without training, experience, or [the] knowledge necessary to prepare future educators" (Ayres 2000: 143). Consequently, teachers tended to be poorly trained and also poorly remunerated, which was a major obstacle to the improvement of education quality at this time.

In 1993, the new government formed by a coalition of multiple parties faced difficulty in coming up with a unified state ideology for the new Kingdom of Cambodia, mostly as a result of the tension between the two major parties (Ayres 2000). At the same time, the international community played a significant role by imposing on the new government an ideology in line with the New World Order[18] that emerged after the end of the Cold War (Dy 2004). Given this wider political context, the structure of Cambodia's new education policy launched in the mid-1990s and known as the Education Sector Investment Framework (ESIF)[19] was strongly affected by the EFA initiative, which had been ratified by the global community in 1990 just across the border in Jomtien, Thailand (UNESCO 2000). The Cambodian commitment to EFA had (and continues to) pushed for a drastic, immediate increase in basic education enrolment (MoEYS 2001).

As in most developing countries, this policy upset the entire equilibrium of supply and demand in basic education. Interestingly, the global EFA movement's arrival in

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[18] This ideology prioritised development according to the Anglo-American model that placed heavy emphasis on market principles.

[19] ESIF was set up in response to an overarching socio-economic development plan launched in 1995 (MoEYS 2001).

Cambodia became fused to a long history of political leaders' prioritisation of quantitative expansion as a way of consolidating their political legitimacy at the expense of further neglecting qualitative improvement (Ayres 2000). Thus, the EFA policy led to the rapid enrolment of many new students, but failed to generate sufficient numbers of qualified teachers or other education inputs to keep pace with demand. Education access might have been opened to more people as a result of EFA, but grade repetition and dropout rates have remained stubbornly high right up to the present day.[20]

In 1997, Hun Sen took control of the divided government in another coup d'état and has been the central power of national politics ever since (Ayres 2000). Cambodia has achieved tremendous socio-economic growth during the most politically stable time in its modern history. Under the current regime (1997 to the present), national development has been guided by successive five-year socio-economic development plans (SEDPs), followed by a national strategic development plan (NSDP), in accordance with which MoEYS developed its first five-year education strategic plan (ESP) in 2001 (MoEYS 2015a).

To date, this plan has been substantially revised three times (in 2006, 2009 and 2014a). Since its second revision, the ESP has set out to achieve education development goals through three major policy pillars: (i) equitable access to services, (ii) improved quality and efficiency, and (iii) strengthened institutional capacity to deliver services (MoEYS 2001; MoEYS 2006a; MoEYS 2009; MoEYS 2014a). However, until recently, MoEYS resolutely continued to overwhelming prioritise the expansion of education access.

Only with the appointment of the current minister, Dr Hang Chuon Naron, in late 2013 did MoEYS finally concentrate on interventions in quality improvement, which included curriculum reform, usage of standardised, international benchmarks, and high-profile

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[20] Repetition and dropout rates at the primary level were recently found to be approximately ten per cent, while the dropout rate alone at lower secondary level was over 20 per cent (MoEYS 2012b).

examination reform designed to eradicate corruption (MoEYS 2015a). As a result of the latter, only 40 per cent of Grade 12 students passed the final certificate examination in 2014 – a reduction of over 50 per cent given that about 90 per cent of candidates had passed in 2013 (ibid). This revelation shocked the nation, but also demonstrated ministerial commitment to fundamental reform (Cambodia Daily 2014).

This sketch of the modern history of Cambodia and its education sector shows that government policy has repeatedly sought to switch attention to qualitative improvement, but has invariably swung back to quantitative expansion. The current trend is towards quality of delivery, but only time will tell if this is again followed by a swing back towards greater expansion.

In terms of the status of teachers, pedagogy used to be one of the most desired and respected vocations in the country, similar to that of monks, and so prized were teaching positions that throughout the 1950s and 1960s, returnees from overseas higher education aspired to become teachers (Ayres 2000). Yet, the standing of the profession has been eroded in accordance with the expansion of education opportunities – partly the inevitable aftermath of the havoc wrought by the Pol Pot regime, and partly due to the pursuit and support of international policies such as EFA that prioritise access over quality.

3.3. Regional Disparities

Inequality is an endemic problem in most developing countries and Cambodia is no exception. Since French colonisation, the modernisation of urban areas has been the primary focus of Cambodian development, which has led naturally and gradually to large regional disparities (Dy 2004). Although the living standards of rural households are improving at present, as measured by increased consumption as well as ownership of

more consumer durables,[21] regional gaps in socio-economic status are still substantial. As of 2013, 90 per cent of Cambodia's poor were to be found in rural areas and much of the social research on the country highlights the impact of urban–rural inequality across a range of sectors (World Bank 2013).

Today, about 80 per cent of Cambodians live in rural areas and contribute one-third of the country's GDP, which derives mainly from farming (World Bank 2013). However, rural infrastructure is largely underdeveloped and lags far behind urban areas. For example, only 16 per cent of rural farmers are able to irrigate their paddy fields, the vast majority relying on natural rain water (Phyrum et al. 2007). This results in lower productivity and correspondingly lower income amongst this demographic.

Additionally, most provincial and rural roads are unpaved, which makes them nearly always unpassable during the rainy season (Sum 2008). As a result, people who do not live close to a permanently accessible road – 15 per cent of the rural population in 2006 (ibid) – are often cut off during the rainy season, and the concomitant lack of access to markets and public services poses a major problem.

Finally, only 8.6 per cent of rural households have access to electricity due to lack of infrastructure (MoP 2011). Even those who are connected suffer from the large regional variation in the cost of electricity[22] due to limited supplies in rural areas – and which most such households cannot afford anyway. Consequently, rural populations are obliged to fall back on traditional sources of power such as paraffin and batteries for lighting (Sum 2008).

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[21] In 2011, 61 per cent of rural households reported that they had a television, 85 per cent a mobile phone, and 64 per cent a motorcycle. This represents an increase of 16 percentage points from 2004 with regard to televisions, 77 for mobile phones, and 37 for motorcycles (MoP 2011).

[22] United States Dollars (USD) 0.20 per KWh for the urban population and USD 0.75 per KWh for the rural population (Sum 2008).

Regional disparities also run deep in terms of human development. Although levels of healthcare and sanitation have improved over time in terms of access and quality, significant gaps between urban and rural populations continue to be revealed. For example, only 66 per cent of the rural population currently has access to a piped water supply, in contrast to 94 per cent of urban dwellers. Furthermore, only 25 per cent of the rural population has access to improved sanitation, compared with 82 per cent of the urban populace (WHO & UNICEF 2014).

There are similar disparities in terms of access to quality healthcare. Child mortality has been reduced since 2005, but the rate of reduction in urban areas is twice that in the countryside. With regard to child malnutrition – a widely used proxy measure for health status – past gains notwithstanding, improvement among the rural population has stagnated (World Bank 2013). In general, child malnutrition is correlated with low socioeconomic status, and both lead to poorer cognitive development (ibid). In terms of access, women in rural areas are more than three times as likely to give birth at home due to limited access to public health centres, which results in a higher maternal mortality amongst this group (ibid).

Thus, significant disparities persist in terms of infrastructure, healthcare and sanitation, all which of are also linked to regional inequality in terms of education, as exemplified by marked differences in literacy, access to schools, and the quality of formal education. Firstly, the adult literacy rate[23] is 75.7 per cent among the rural population, but 92.3 per cent in respect of urban dwellers. Of those who are 65 years and older, the disparity is much larger: 71.0 per cent among urban senior citizens and 41.8 per cent among their rural counterparts (MoP 2011). Data show a gradual improvement in the regional gap over time, but the inequality they represent still remains significant.

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[23] An adult is defined as an individual who is 15 years or above (MoP 2011).

Secondly, there is a regional disparity in terms of number of teachers allocated to schools, meaning a student-to-teacher ratio of 50 to 1 in rural schools, but 32 to 1 in urban schools (MoEYS 2014b). In fact, there are many unfavourable aspects of working conditions for teachers in rural areas, which conspire to create an acute teacher shortage (the causes of this are addressed in the following section). Additionally, standardised national assessment test results for grades 3, 6 and 9 consistently show significant regional gaps in learning outcomes (MoEYS 2015a). Thus, multifaceted inequality in education provision can be observed, which is reinforced by disparities in other social sectors such as health and sanitation.

3.4. The Education System in Cambodia

3.4.1. Overall system

The various levels of Cambodian education are organised into the following series of cycles: (i) home-based childcare for children under six years; (ii) non-compulsory pre-school education for children from three to five years; (iii) compulsory primary education for children six to eleven years; (iv) secondary education, which is divided into lower secondary and upper secondary for 12 to 17 year-olds; and (v) tertiary or higher education for students above the age of 17 years.

Table 3-1. Formal education in Cambodia: Ages, levels and grades

Child Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
Education Level				Pre-school			Primary School						Lower Secondary			Upper Secondary			Tertiary		
Grade							1	2	3	4	5	6	7	8	9	10	11	12	1	2	3+

Source: The author, based MoEYS data.

In parallel to general education, students can select technical or vocational training stream at the upper-secondary level. This is available for 15 to 17 year olds, tertiary students,

and all students older than 17 years. MoEYS is also responsible for non-formal education and teacher training for all levels from pre-school to upper-secondary (MoEYS 2014a).

Cambodia's basic education system is mostly public[24] and regulated MoEYS, which is the overarching national education provider monitoring quality and access at all levels, and ensuring that basic conditions are met. Under the central ministry, provincial education offices (PEOs: 25) and district education offices (DEOs: 165) are structured to deliver education in all state pre-primary schools (3,184), public primary schools (6,993), and public secondary schools (2,103) (MoEYS 2014b).

The PEO has responsibility for financial, personnel and education administration in the implementation and monitoring of programmes designed by central departments. The main task of the DEO is to support the PEO in carrying out education administration and monitoring, providing managerial support to school directors, and providing pedagogical support to teachers (MoEYS 2014a).

3.4.2. Overall performance

As a result of the aforementioned policy prioritisation of access, Cambodia has met with some success in this aspect: the net enrolment rate (NER) at the primary level rose from 77.6 per cent in 1997 to 95.5 per cent in 2014, and the gross enrolment rate (GER) at the lower-secondary level increased from 23.7 per cent in 1997 to 53.3 per cent in 2014. Moreover, girls now have equal access to education opportunities: the NER gender parity index (GPI) for primary education in 2012/13 was 1.00 in both urban and rural schools, and the GER GPI at the lower-secondary level was 1.02 (0.99 urban and 1.03 rural).

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[24] The private sector is increasing its role in the pre-school subsector, with 19.1 per cent of all enrolments in 2011, but remains less well represented in the primary and secondary subsectors, with less than 2 per cent (MoP 2011).

Finally, the early childhood education (ECE) enrolment rate for 5-year-olds also rose from 24.6 per cent in 2004 to 52.7 per cent in 2012 (MoEYS 2014b).

Figure 3-1. Primary and lower secondary enrolment and completion rates

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Primary NER	77.6	76.3	85.5	83.8	87	88.9	90.1	91.9	91.3	92.1	93.3	94.4	94.8	95.2	96.4	97	95.5	94.5
Primary Completion										90.1	86.3	85.6	83.2	85.3	89.7	87.3	88.9	84.1
L.Sec GER	23.7	23	22.9	27	32.7	36.5	39.3	45.8	55.3	60	63.6	61.6	58.1	58.5	55	53.6	53.5	53.3
L.Sec Completion										41.9	48.7	49.1	48.7	44.4	42.1	40.6	39.5	40.3
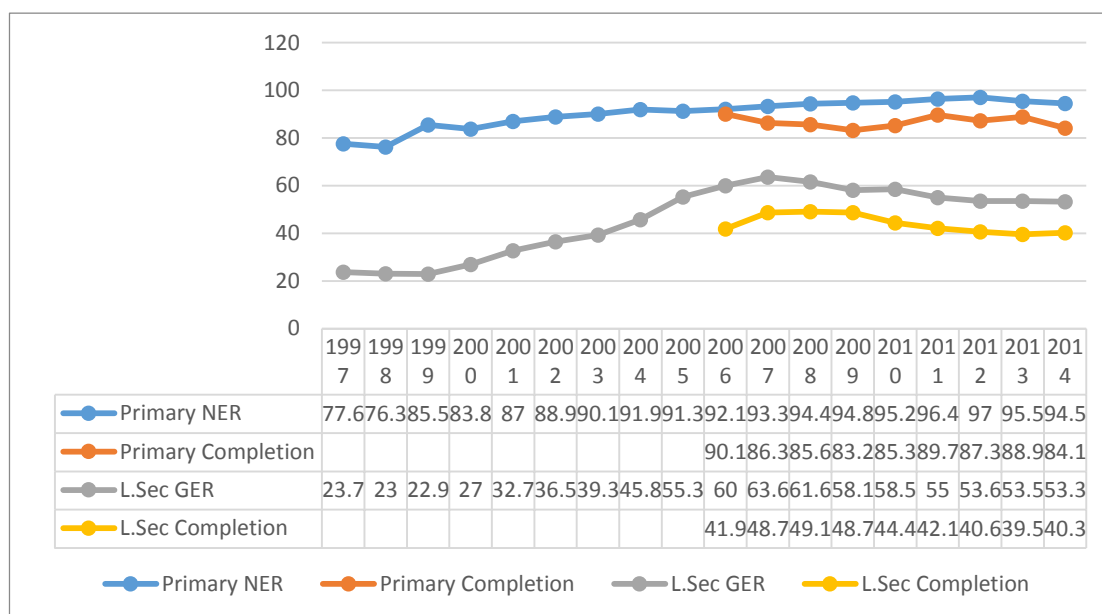
Source: MoEYS 2015[25]

However, issues around quality improvement in learning outcomes remain the most significant challenge: in addition to consistently high grade repetition and dropout rates at primary and secondary levels, EGRA results for 24,000 children in grades 1 to 6 reveal a low level of student learning (MoEYS 2012a). At the extreme end, the study found that 42 per cent of Grade 1 and 33 per cent of Grade 2 children could not read a single word. Additionally, although there had been some demonstrable improvement since 2010, large performance disparities persisted between urban and rural students (MoEYS 2012a).

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[25]Education management information system (EMIS) data for MoEYS are only available from 1997.

3.4.3. Teacher qualifications and development, current working conditions, and incentives

In 2012, MoEYS developed a teacher policy, followed by an implementable action plan approved in early 2015 (MoEYS 2015a). The subsequent Teacher Policy Action Plan (TPAP) covers a wide range of areas in which it is considered teachers need to work on in order to improve student learning (MoEYS 2015b). This section provides a brief background to the issues that constitute the main focus of TPAP, namely, the features that initially attract individuals to the profession, the teacher training system, and teacher incentives designed to retain them in the profession.

Teacher Training System

Pre-service teacher training was significantly reformed along with the normalisation of the country after the fall of the Khmer Rouge in 1979. Cambodians worked quickly to reconstruct the education system by opening schools and recruiting and training new teachers. One of the earliest teacher training schemes was the short-term course implemented in 1980 for pre-primary, primary, and secondary teachers. In 1982 provincial TTCs started to offer more formal, year-long pre-service training courses for aspiring primary teachers (MoEYS 2015a).

In 1984, Grade 7 completion was set as the minimum entry qualification for enrolment on the year-long pre-service training course, and, in 1990, this was enhanced and extended to a two-year programme, the entry requirement for which has been gradually revised over the years to a Grade 12 certificate (MoEYS 2015a). Currently, MoEYS applies a dual-path approach, meaning that in the case of primary school teacher trainees, a Grade 12 certificate is required for national teacher recruitment and a Grade 9 certificate for local recruitment, the latter being a scheme that is only implemented in rural areas in respect of primary school trainee teachers. Although they have different entry

qualifications, both groups study together at one of the 18 provincial teacher training centres (PTTC) located across the country (MoEYS 2014a).

In terms of both lower and upper secondary school teachers, a year-long pre-service training course was launched in 1982 at the Royal University of Phnom Penh (MoEYS 2015a). The programme has since been transferred to six regional teacher training centres (RTTCs) that offer a two-year course to lower secondary trainees, with a minimum entry qualification of a Grade 12 certificate; and to the National Institute of Education (NIE), which offers a one-year course to upper secondary trainees, with a minimum enrolment qualification of a Bachelor of Education.

Although pre-service programmes have been expanded, there is still no system of institutionalised, regular in-service training for those currently teaching (MoEYS 2014a). Rather, many of the country's development partners have implemented in-service training on an ad hoc basis as an element of a donor-funded project. Such programmes include basic education teacher Training (World Bank); school director training (Asian Development Bank: ADB, World Bank); mathematics and science teacher training (Japan International Cooperation Agency: JICA, ADB); and inclusive education training (UNICEF, World Bank) (MoEYS 2015b). Although some of the contents of such programmes have been incorporated into the pre-service training curricula, MoEYS officially only mainstreams basic education teacher training, that is, an upgrade for primary school teacher training to include the lower-secondary level through an intensive course spread over two summer holidays. MoEYS manages other types of in-service training in the form of donor-funded programmes, but these are usually discontinued when the funding is terminated (MoEYS 2015a).

In-service training is conventionally organised centrally by the teacher training department (TTD) of MoEYS (MoEYS 2014a). The typical model is the 'cascade' approach, whereby training first takes place at the central level, is then passed down to

the district level, and, finally, to school level. The cascade begins with national trainers of the TTD, who firstly visit the provinces to provide training to target audiences such as class teachers, school directors, etc. Although much in-service training is organised during the school holidays, some courses are scheduled in term time. Sessions are usually held at the nearest TTC, but sometimes at provincial or district education offices, or schools, participants either travelling to the training site or staying at or near it. Travel expenses and a daily subsistence allowance (DSA) are paid to both participants and trainers in accordance with rates set by MoEYS.[26] Thus, such a programme is an attractive opportunity for teachers not only in terms of professional development, but also because it provides some additional income.

However, a recent policy action plan recommends that the quality of both pre- and in-service TTC instruction should be significantly improved. In this regard, it was found that there were adequate facilities in most TTCs as they had consistently received generous resourcing from development partners and NGOs, but it emerged that the capacity of trainers, monitoring practices, and curriculums were in need of improvement (MoEYS 2015b).

Teacher qualifications and attractiveness of the profession

Teachers' qualifications have improved markedly of late, particularly among the younger generation. In 2013, more than 50 per cent of all primary school teachers held an upper secondary school certificate or higher, compared with only 25 per cent in 2007; And over 80 per cent of secondary teachers held an upper secondary certificate or higher, which was up from 65 per cent in 2007 (MoEYS 2009). MoEYS aims to further upgrade such qualifications to the equivalent of a Bachelor's degree by 2020 (MoEYS 2015a).

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[26] Rates depend on rank: according to the most recently revised guidelines, primary school teachers receive approximately USD 30.00 per day, which includes both DSA and accommodation (MoEYS 2015a). Participants are able to save some of this money as accommodation costs range from USD 5.00 to USD 20.00 per night.

In fact, TTC entry requirements have progressively risen, as each centre usually receives more applications than the number of available positions and can accept only about 15 per cent of the total number of applicants (MoEYS 2015a). However, although many secondary school graduates apply to TTCs, teaching is still not a popular profession among high-performing students. The TPAP addresses this issue and raises serious concern about the impact on the long-term education development of the country (MoEYS 2015b). The majority of trainee teachers are not high performing Grade 12 students, but have obtained a D or E (Tandon & Fukao, 2015).[27] However, we can see that selection to the teaching profession has been much improved over time along with the country's wider socio-economic development, as there are now many more TTC applicants, while teachers were, as previously noted simply recruited more or less indiscriminately just after the fall of the Khmer Rouge (Ayres 2000).

Second job

There are several reasons for the low attractiveness of the teaching profession from the point of view of high performing students. The first is the low level of remuneration: the average monthly teacher salary of about USD 115.00 is broadly equal to what a recent study identified as the living wage for garment workers (Chandararot & Dannet 2009).

Consequently, about 68 per cent of primary teachers and 50 per cent of secondary teachers are obliged to take a second job after regular working hours to supplement their incomes (Benveniste, Marshall & Araujo 2008). Additionally, a popular source of supplementary income is private tutoring, as exemplified by 42 per cent of teachers at the primary level in urban areas, and 87 per cent of lower secondary teachers across both urban and rural locations (World Bank 2011).

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[27] A is the highest mark and F is classified as a failure.

After low remuneration, working environment and inadequate incentives may be contributory factors in the profession's unpopularity, which is discussed in the following section.

Working environment and incentives

Officially, primary teachers should work eight hours a day, but those who only have one class of students only work four hours, either in the morning or afternoon. This is common practice nationwide (Beveniste, Marshall & Araujo 2008). If a teacher is responsible for two classes, he or she works two shifts, totalling eight hours a day, and receives twice the money accordingly, a convention that is known as the 'double-shift' system (ibid). Currently, 75 per cent of primary schools accommodate such a system and 26 per cent of primary teachers work a double shift (MoEYS 2014b).

There are also large differences in the working environments of teachers based in urban and rural schools respectively. The conditions of rural and remote schools are extremely rudimentary: facilities are often poor, with no power supply to most primary schools, little provision of piped water or toilets,[28] and insufficient teaching and learning materials (MoEYS 2014a). In addition, students' parents are comparatively not as supportive of their children's education in rural areas because they are invariably employed in agricultural work and lack the relevant skills to help their offspring, and tend not to consider education to be as important as their urban counterparts (MoEYS 2014a).

Furthermore, there are few opportunities for professional development. In addition, the monetary compensation such a posting is low, usually being just a monthly hardship allowance of USD 20.00 (MoEYS 2015a).

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[28] Of all primary schools, 58 per cent have piped water and 82 per cent have toilets. However, most primary schools in disadvantaged areas lack even these basic facilities (MoEYS 2014b).

As the working environment for teachers who work in rural and remote schools in particular can be problematic, such schools face constant teacher shortages (MoEYS 2014b). To address this issue, MoEYS increased the hardship allowance for those who work in disadvantaged schools and initiated a local recruitment scheme in selected challenging areas (MoEYS 2015a). The latter allows Grade 9 graduates to apply to a TTC on the understanding that on graduation, they will be posted to a primary school in their home district – nearly half of all TTC primary education trainees are now registered in this scheme.[29]

3.5. Conclusion

This chapter has presented in brief the development of Cambodian education policy over the past 30 years and discussed it in relation to multiple aspects of the teaching profession. Overall, national policy has consistently focused on the expansion of education opportunities to the detriment of quality of outcome. As a result, the teaching profession has lost its high regard as one government after another in recent times has neglected teacher development. International initiatives such as EFA added further impetus to this trend. However, once Cambodia had succeeded in achieving a primary education net enrolment rate of 97.0% in 2013 (MoEYS 2014b), the government finally changed its policy direction towards quality improvement in 2014. The education system had basically collapsed during the Pol Pot regime, but the teacher training system was quickly put back together after its fall by those who had survived, and it has undergone continuous evolution ever since. Currently, MoEYS has public, pre-service teacher training programmes for all education levels; however, the quality of training is lacking, particularly in terms of human resources, monitoring practices, and curriculums.

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[29] As of 2012, there were 3,654 trainees registered in TTCs, of which 1,651 (45 per cent) had been selected through the local recruitment scheme (MoEYS 2014a).

Additionally, there are shortcomings in terms of an institutionalised in-service teacher education system to support staff once they are in post.

Furthermore, few high-performing secondary students currently apply to TTCs, a situation that is in all likelihood due to issues around low professional esteem, inadequate incentives, and problematic working environments. Added to this, large regional disparities across the country are reflected in the education system, exacerbating the shortage of qualified teachers in rural and remote schools (MoEYS 2014a).

This background information is necessary in order to understand the composition of the Cambodian teaching force, issues facing teachers, and changes to the sector over time. Such a review of the sociocultural and historical contexts of Cambodia is significant as that presented in this chapter is pertinent to any understanding of the rationale and findings of the study. The next chapter detail the research methodology and methods utilised in conducting the study.

CHAPTER 4.   Research Questions and Methodology

4.1. Introduction

This study employs a mixed methods methodology through which I seek to reveal larger patterns of association between incentives and teacher motivation. To this end, I employ quantitative datasets to understand the wider picture of the Cambodian context; but then go a step further through qualitative data collection in the form of interviews to reach a deeper understanding of the relationship between incentives and teacher motivation, given that it represents both a socio-structural phenomenon and an individual psychological process within a specific context.

Section 4.2 describes the author's academic positioning and approach to the study; Section 4.3 elaborates the overarching question and four RQs, describing the data source and method of data collection utilised to address each of them; Section 4.4 explains more deeply why a mixed methods approach is employed and how specific methods were applied in the design of the study; Section 4.5 discusses the data collection methods employed in the quantitative and qualitative research respectively; Section 4.6 describes the various limitations of the study; Section 4.7 addresses ethical issues; and Section 4.8 concludes by summarising the chapter and linking to Chapter 5.

4.2. My Academic Positioning

The adoption of a mixed methods approach reflects both the nature of the RQs and my own academic positionality. In this regard, I identify most closely with critical realism[30], which "provides an alternative to both hopes of a law-finding science of society and the

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[30] This positioning may not be my choice, but probably comes from my work experiences, mixed of International Organizations operating at policy level and NGOs active at grass-roots level. In other words, international organization work tries to search for law-finding science solutions to policy, but the local context always confounds these efforts because of the interpretation of meaning.

interpretivist reductions of social science to the interpretation of meaning" (Sayer 2000: 2-3). On the one hand, critical realism dismisses the belief that human society and interaction is governed by a set of laws or principles in the same way as the physical world. The attempt to define such 'laws' was a central occupation of many scholars in the previous century, but the uncertainty, contingency, and randomness of human existence has constantly thwarted such a venture (Lagemann 2002). Yet, on the other hand, interpretivism taken to the extreme would dismiss any wider trends or the ability to say something general about social institutions. Such an approach would quickly devolve into the inability to say anything substantive or move beyond individual interpretations – including those of the researcher.

I thus view critical realism as a means of taking up a position between these two extremes. It is a difficult and somewhat uncertain stance in many respects, but the one that perhaps best facilitates the arrival at a combination of general views and yet still allows one to remain sensitive to individual interpretations; in other words, to balance objectivity and subjectivity such that the RQs might be addressed in a substantive way. In addition, it has also been argued that critical realism is compatible with the application of a mixed-methods approach in many diverse fields of study, such as management economics, political science, and public health (McEvoy & Richards 2006; Maxwell & Mittapalli 2010). Moreover, the critical realism approach makes the most sense for addressing the proposed research methodology and questions (presented below) as it is believed that human actions (e.g. teacher motivation) must be explained by both structural factors (e.g. working environment, geographical location) and human agency factors (e.g. pride for the job, recognition from people) (Archer 2003).

As stated in the introduction to this chapter, my aim in adopting such a position was to reveal the bigger picture in terms of teacher motivation, as well as the correlation between incentives and motivation revealed through quantitative datasets, and then move towards a deeper understanding of the reasons for this phenomenon in the Cambodian context. I

thus combined quantitative and qualitative data to analyse education phenomena in a more comprehensive way. Specifically, I sought to utilise a sequential transformative strategy (Creswell 2003) – firstly, attempting to capture the extent of the problem through quantitative data analysis; secondly, employing a qualitative approach to understand the cultural and socio-economic factors driving the issues; and finally, interpreting these results and drawing some conclusions.

My overall framework of RQs, methods and data sources is described below.

4.3 Can Incentives Change Teacher Behaviour?

The central question underpinning this study is: 'Are incentives related to motivation and, if so, in what way?' Supporting this central question, there are several RQs, which, together, are designed to fill the current knowledge gaps identified in the Chapter 2. A summary of the RQs, along with their respective methods of analysis and data sources is presented in Table 4-1.

Table 4-1. Summary of research questions, methods, and data sources

Research Question	Method	Data Source
Are incentives related to motivation and, if so, in what way?		
RQ1: What is the nature of the relationship, if any, between teacher incentives and motivation in the context of Cambodia?	Literature review	Relevant literature
	Descriptive analysis	Survey of 676 teachers, 149 school directors, and 534 community members
	Regression analysis	As above
	Personal interview	Interviews with 18 teachers, 10 school directors, and 10 district officers
RQ2: What is the nature of the relationship, if any, between school context, teacher characteristics, and motivation?	Literature review	Literature
	Descriptive analysis	Survey of 676 teachers, 149 school directors, and 534 community members
	Regression analysis	As above
	Personal interview	

		Interviews with 18 teachers, 10 school directors, and 10 district officers
RQ3: To what extent is the relationship between teacher incentives and motivation mediated by a variety of demographic, teacher and school characteristics?	Literature Review	Relevant literature
	Descriptive analysis	Survey of 676 teachers, 149 school directors, and 534 community members
	Regression Analysis	As above
	Personal interview	Interviews with 18 teachers, 10 school directors, and 10 district officers
RQ4: What are the implications of the link between teacher incentives and motivation for policy and practice?	Literature Review	Relevant literature
	Personal Interview	Interviews with 18 teachers, 10 school directors, and 10 district officers

Source: The author.

4.4. Mixed Methods

The mixed-methods approach is now recognised as a third methodological paradigm of sorts that takes a midpoint between a purely qualitative or quantitative technique, and is now widely utilised in the social and behavioural sciences (Johnson & Onwuegbuzie 2004; Teddlie & Tashakkori 2010). Indeed, there is a growing consensus that mixed methods can be used to synthesise qualitative and quantitative analyses to better illuminate a single phenomenon from various vantage points (Teddlie & Tashakkori 2010).

Bryman (2008) argues that the strength of the qualitative approach is to cast light on in-depth, detailed and long-term processes, while its weakness is the inability to facilitate reliable extrapolation from its normally small sample; On the other hand, the quantitative approach has the advantage of being able to generalise characteristics from large samples, but is disadvantaged in its inability to fully comprehend the research context and describe the transformative process from input to output variables (Bryman 2008). Thus, it is a fair

assumption that combining the two will enable the researcher to offset, to an extent, the disadvantages of one approach with the advantages of the other (Axinn & Pearce 2006). Mixed methods are therefore able to address a broader and wider range of RQs because the approach is not limited to a single method and/or technique (Johnson & Onwuegbuzie 2004). Indeed, there is a growing body of recent studies that have adopted such an approach (Greene 2008) and researchers have firmly proved its successful implementation (Denzin & Lincoln 2011).

Although defined in different ways by different researchers, Johnson et al. (2007) review 19 different definitions of the mixed-methods approach and come up with the following synthesis:

> Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration (Johnson et al. 2007:123).

This broad approval notwithstanding, the mixed-methods approach has been subject to some criticism, the most of which is that qualitative and quantitative methodologies represent opposing epistemological and ontological positions, and thus cannot be effectively utilised in a single study (Smith 1983; Denzin & Lincoln 2011). Indeed, over time, debate around paradigms and mixed-methods research has evolved into a deliberation on the legitimacy of various research methods, including data collection and analysis, and how much it does or should emphasise the individual's philosophical and theoretical preferences (Teddlie & Tashakkori 2010).

In terms of the conceptualisation of mixed-methods research, the following six possible models are posited by Teddlie & Tashakkori (2010):

1. A-paradigmatic thesis: paradigm and methods are independent of one another; however, an epistemology–methods conflict is not an issue as the approach makes use of whatever methods seem appropriate for the question at hand.

2. Incompatibility thesis: coordination of quantitative and qualitative methods is impossible due to the incompatibility of the paradigms that underlie them. Much criticism has been levelled against this approach because it assumes that only one knowledge orientation is possible for a given study.

3. Complementary strengths thesis: different methods must be kept as separate as possible in order to realise the strengths of each paradigmatic position.

4. Single paradigm thesis: One paradigm is selected to support the methodology.

5. Dialectical thesis: all paradigms have something to offer and the use of multiple paradigms in one study contributes to greater understanding of phenomena.

6. Multiple paradigms thesis: multiple paradigms may be applied to diverse mixed methods designs. The best paradigm is decided by particular questions that arise at different parts of a particular study.[31]

Of these six conceptual positions, the present study adopted the multiple-paradigm thesis in which no single paradigm applies to all of the phenomena under study. Creswell (2013) gives several examples of multiple-paradigm positions that enable the RQs to be addressed by capturing the extent of a phenomenon through quantitative methodology framed by a positivist paradigm, and then seek to understand salient processes and reasons in respect of the phenomenon through qualitative methodology framed according to an interpretivist paradigm (Teddlie & Tashakkori 2010).

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[31] In contrast to the principles of the dialectical thesis, "Multiple paradigm theorists believe that one type of paradigm is best used when one is doing one type of study, while another paradigm is best used if one is doing another type of study. Those advocating the dialectical stance reject the selection of one paradigm over another" (Teddlie & Tashakkori 2010: 18).

I concur in the conclusion that multiple paradigms may be utilised to frame diverse, mixed-methods research (Denzin & Lincoln 2011), and such an understanding serves as the foundation for the mixed-methods design of the present study.

There are several different ways of combining quantitative and qualitative research in a single project: the present study specifically applied a sequential, explanatory strategy, which is better suited to the explanation and interpretation of relationships in general (Creswell 2003). This strategy is characterised by the collection and analysis of quantitative data in an initial phase of research, followed by the collection and analysis of qualitative data in a second phase that builds on the findings of the quantitative results. The mixing of data occurs when the initial quantitative data results inform the secondary qualitative data collection; the two datasets are therefore separate but connected (Creswell 2003).

This methodological approach derives from my choice of critical realism (for reasons discussed above), not only attempting to define a set of laws governing human society, but also capturing uncertainty, contingency, and randomness of human existence in each context. Specifically, in this study, I first sought to generalise associations between context, and teacher characteristics and incentives, and motivation through quantitative methods and datasets. I next employed a qualitative approach to data collection in an attempt to understand the deeper processes at work behind the preliminary superficial quantitative correlation, particularly focusing on the aspects of cultural and socio-economic context that drove teacher behaviour. The latter data derived from interviews with teachers who had been identified by means of quantitative screening. I finally turn to the interpretation of these findings using both forms of analysis in the discussion section of the thesis, and develop a synthesis that allows both breadth and depth. Figure 4.1 shows the steps of this methodology.

This study also employs both quantitative and qualitative datasets to (i) improve my impression of the broad picture and generate a more comprehensive account of the area of enquiry; (ii) help assimilate findings generated by other research; and (iii) improve the robustness of and integrate my own findings through the triangulation of the two datasets and analysis of this final stage (Bryman 2008).

Figure 4-1. Sequential explanatory strategy

Source: Cresswell 2008, adapted by the author
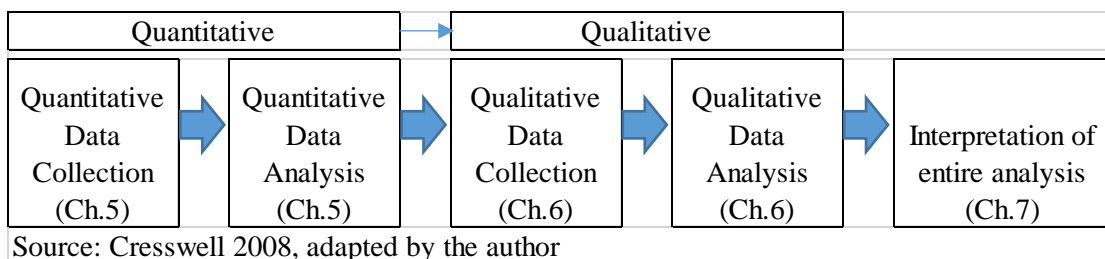
4.5. Data Collection

4.5.1. Assessing teacher motivation

Past research has repeatedly confirmed that there is no single best way to measure teacher motivation, but invariably draws on data gathered from diverse sources, such as questionnaires, observations, proxy measures, interviews, existing documentations and quantitative datasets (Muijs 2006, also see: Bastick 2000; Michaelowa 2002; VSO 2002; Zembylas & Papanastasiou 2004; Bennel & Akyeampong 2007; Tanaka 2010; Guajardo 2011; VSO 2011; NEP 2012). Nearly all teacher motivation studies on developing country contexts reviewed in the present thesis (see Chapter 3) gathered their data regarding the level of teacher motivation either through surveys, interviews or existing quantitative datasets.

The questionnaire instrument enables researchers to identify the level of teacher motivation through several lenses: (i) how teachers themselves feel about their motivation; (ii) others' perceptions of the motivation of their colleagues; and (iii) the extent to which teachers are satisfied as well as motivated. However, the weaknesses of the questionnaire are that (i) respondents engagement tends to be rather shallow, and (ii) complex perceptions cannot be explored directly (Dörnyei & Ushioda 2010).

Conversely, the 'proxy measure' approach reads variables such as teacher attendance or teacher misconduct like a scientific instrument to reveal levels of teacher motivation (Bennel & Akyeampong 2007). One problem with such an approach is the difficulty in obtaining data systematically, often due to political reasons. For example, ministry or school officials might not want to disclose such information and open themselves to criticism or sanctions.

In addition to the questionnaire, observation is another potential methodology (Muijs 2006). A striking finding that emerged from an earlier literature review (Fukao 2013) was the absence of studies that incorporated classroom observation methodologies in teacher motivation research in developing countries. How can teacher motivation be effectively assessed if we cannot observe the 'consequences' of it? Given the complexity around the notion of motivation, careful classroom observation would enable the researcher to assess how teachers prepare for classes and allocate their time during instructional periods to promote student learning – in effect, the consequences of their motivation. However, observation data collection takes much more effort, time and cost, as compared with the questionnaire and/or utilising existing datasets (see also Section 4.6. with regard to the limitations of observation data collection).

In short, the 'best' measurement method is determined by the particular socio-economic context under study. Inevitably, it is also determined by the resource constraints faced by the researcher, including time, cost, access, and effort. It would seem that a hybrid data

collection strategy would come closest to the ideal of pure 'objectivity': balancing survey and observation data collection with analysis of existing datasets, and followed up with a set of interviews. The present study sought to adapt a hybrid data collection strategy[32] to measure levels of motivation, which lends it more credibility and reliability than utilising any single method alone.

4.5.2. Survey Data

This study utilises the raw dataset of a research project jointly sponsored by the World Bank and MoEYS. This nationwide survey was conducted from December 2012 to February 2013, and primarily comprised a questionnaire administered to teachers, school directors, and community representatives, and a series of standardised classroom observations. The questionnaire instrument used with teachers contained items regarding teacher perceptions of financial incentives, working and living conditions, instructional support, teacher and student behaviour, work satisfaction, and motivation. There were 180 questions in total, which participants were allocated approximately 60 minutes to answer, giving their responses to enumerators who filled out the questionnaire form. In total, 676 respondent teachers distributed among 150 primary schools participated in the survey. These schools, which had already been selected for a pilot national standardised test, were located in both urban and rural areas.

Of the 676 surveyed individuals, 284 teachers were also observed at work. Such classroom observation included checking teacher attendance and lesson plan preparation prior to the class. Preliminary analysis of variables identified trends and associations in terms of teacher motivation and its determinants, which allowed me to make selections for follow-up interviews.

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[32] That is, a hybrid data collection strategy was used to measure teacher motivation while a mixed-methods approach was utilised for the overall study.

I personally took charge of survey design as well as its implementation with a MoEYS team in order that I might interpret the analysis with awareness and reflexivity with regard to design weaknesses or dataset limitations. The dataset is further discussed in the next chapter (Section 5.2), and specimen survey questions and observation formats can be found in Appendix III.

4.5.3. Individual interview data

After reviewing the raw data on 284 teachers who had participated in both the survey and had had their classes observed, I selected from their number 18 individuals to interview. Accordingly, I sought to make a balanced selection based on the results of my quantitative analysis according to three criteria: (i) level of motivation (both positive and negative) as determined by answers to key survey and observation variables, teacher attendance, and lesson plan preparation); (ii) biometric characteristics (gender, years of work experience, training history, etc.); and (iii) school context criteria (urban or rural).

The primary objectives of these semi-structured individual interviews were to (i) verify the results of the quantitative analysis, such as the correlation between motivation and its determinants; and (ii) understand the complexities of the process that generates motivation (and lack of motivation) in the Cambodian context.

In addition to teachers, this study also conducted interviews with 11 school directors and 10 district education officers mainly to (i) verify the general motivation level of teachers, (ii) learn more about strong drivers of motivation, and (iii) understand how principals viewed current issues related to the motivation of their staff. Further details of these interviews and the corresponding dataset are presented in Section 6.2, and relevant interview questions can be found in Appendix III.

4.6. Limitations of the Study

It should be noted explicitly that there are several limitations to this study. The primary limitation is that it was not possible to undertake rigorous applied psychological research on teacher motivation. Rather, the study utilises proxy indicators of teacher behaviour obtained through the survey and lesson observations to measure motivation levels.

Secondly, primary quantitative survey and observation data were collected only once, which means that the data are cross-sectional and can only be used to understand the correlation between teacher motivation and its determinants at a single point in time – time-series data would be necessary to further establish the causality of policy impacts on changes in teacher motivation.

Thirdly, the small number of interviews conducted is yet another limitation: of 284 observed teachers in 24 provinces, the study interviewed only 18 teachers in 7 provinces; a limitation that arose from physical and logistical constraints. In this regard, it should be borne in mind that although quantitative data is expected to improve the credibility and generalisability of the findings of qualitative data, and vice versa, findings from a qualitative dataset alone face limitations when attempting to generalise back out to a national sample (Pope et al. 2007).

Finally, the reliability of observation data was necessarily limited to some extent. In most schools, the school directors selected teachers to be observed from among those who taught grades 3 and 4. Accordingly, in small schools, such selections could only have been made from one or two teachers, but the school directors, of a larger school in particular, might have intentionally selected staff he or she regarded as more highly dedicated or motivated in order to ensure the greatest likelihood of the observation team obtaining positive results, given that it is reasonable to assume that the school suspected one of the aims of the observation exercise at least to be the evaluation of teachers.

4.7. Ethical Issues

Ethical issues were carefully addressed throughout this study in accordance with the researcher's obligations to academic institutions, donors, colleagues, and participants (UK Social Research Association 2003; Bryman 2008).

Firstly, the study maintained strict confidentiality and anonymity in order to protect the interests of individuals interviewed. The main ethical issue faced was that the study was designed to conduct interviews with specific teachers identified through quantitative data screening, but the anonymity of those interviewed had to be protected, and care taken to ensure that the fact they had been selected was not disclosed to their colleagues. Therefore, dummy interviews with other teachers were conducted in all selected schools. Although this was an additional drain on my resources, it was crucial if the anonymity of my informants were to be protected. Moreover, this extra investment was also useful as a means of verifying data collected from actual survey participants. [33] Additionally, since only the research team is aware of all the schools whose teachers were interviewed, it would not be possible for anyone else to identify individuals referred to in this thesis.

Secondly, the qualitative data deriving from this study was carefully handled in accordance with the UK Data Protection Act 1998.[34] Accordingly, the dataset was not utilised for any purpose other than this study, and was not disclosed to any third party.

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[33] When the World Bank conducted the teacher policy survey in 2012, it included all the teachers available at any given school on the survey day and observed the classes of one or two teachers. As the present study had access to all raw survey data, 18 teachers were selected from among that pool according to criteria emerging from the results of the quantitative analysis. Although I was able to identify each individual teacher through his or her survey identification (ID) to locate and select the 18 individuals most suitable for interviewing, I did not submit their IDs to MoEYS when asking for approval for my interviews. My foremost concern was in ensuring that participants' IDs were not disclosed to the government or education authorities (e.g. MoEYS). Rather, I submitted only the institutional IDs of those schools in which prospective interview participants worked, requesting permission to engage in follow up with some of the individuals who had participated in the survey (each school had at least four such teachers). In so doing, I was able to gain access to each selected school with appropriate clearance from MOEYS, but was not obliged to disclose the ID of specific teachers I intended to interview.

[34] For further details, see http://www.legislation.gov.uk/ukpga/1998/29/contents

Thirdly, this study did not engage any external field investigators or data entry staff, but utilised the services of a Khmer translator who had signed an employment contract with me and was under contractual obligation to maintain the confidentiality and anonymity of interviewees.

4.8. Conclusion

This study employed mixed methods – in particular those conducive to a sequential, explanatory approach – to collect and analyse its datasets. This approach was judged to be the best suited to the research context and RQs set. Generalisation of the relationship between incentives, context, and teacher characteristics and motivation were derived largely from the quantitative dimension of this study, while the processes behind these correlations were addressed through qualitative interviews with teachers and other stakeholders.

A total of 676 teachers were selected by probability proportion-to-size sampling in order to complete a survey; of these 676 individuals, the classroom practices of 284 teachers were observed; and from these 284 teachers, the study then identified 18 individuals to interview. Although most teacher motivation studies on developing-country contexts primarily utilise the survey as a research instrument, the present study applied a hybrid data collection strategy to measure teacher motivation, balancing survey, observation, and follow-up interview. Thus, the study sought to ensure greater robustness and reliability of data than one might expect from the utilisation of any single method.

Having adopted the methods and methodologies outlined in this chapter, a formal analysis of data derived from the survey, observation and interview of participants – exploring the relationship between motivation and incentives – was undertaken and is presented in the following three chapters.

CHAPTER 5.   Teacher Motivation: Analysis of Survey and Observation Data

5.1. Introduction

This chapter describes and analyses patterns of association between incentives and teacher motivation, with the aid of quantitative datasets derived from a nationally representative survey and quantified observational data on primary school teachers. Section 5.2 introduces our principal dataset, namely, the Teacher Policy Survey (TPS) conducted in Cambodia in 2012. Section 5.3 enumerates, defines and describes all the variables utilised in the study, roughly categorising them into teacher incentive-related variables, local context features, and teacher and school characteristics. Section 5.4 then offers a descriptive analysis of each variable, cross-tabulating them to reveal dominant relationship patterns – which form the focus of an in-depth regression analysis addressed later in the chapter. Such analysis helps reveal overall trends and tendencies in teacher motivation in relation to number of incentives and socio-economic status. In Section 5.5, a multinomial-logit regression analysis is conducted in order to reveal associations between motivation and incentives, teacher characteristics, and local context, quantifying the relative strength of each factor. Section 5.6 reviews the analysis to identify key findings. Finally, Section 5.7 concludes the chapter by linking the analysis back to the overarching theoretical framework of the overall study and discussing the significance of the findings in light of the RQs.

5.2. Dataset

5.2.1. Teacher Policy Survey

Piloted in 6 schools from November to December 2012, the TPS collected data on 150 primary schools in all 24 provinces from December 2012 to June 2013. This was a joint study designed and conducted MoEYS and the World Bank (MoEYS 2012b). Five trained

teams, each comprising four enumerators, were involved in the data collection. In each school, one team spent up to two days collecting data on a wide range of teacher and school performance characteristics. This involved administering questionnaires to teachers (180 questions), school directors (140 questions), and community representatives (24 questions). The TPS also included classroom observations, focusing on teacher preparation and pedagogical methods. In total, the survey and observation coverage of the TPS was as follows: (i) 149 school directors surveyed; (ii) attendance of 150 teachers and their respective students observed; (iii) 676 teachers surveyed; (iv) 284 classes observed (Grade 3 mathematics and Khmer language classes); and (v) 534 community representatives surveyed.

MoEYS officials and a World Bank staff member (the author) developed the survey in English and then translated it into Khmer, and the contents of each component were verified by means of back-translation. Questions were developed based on a previous teacher survey conducted in 2007 (Benveniste, Marshall & Araujo 2008), to which several items on teacher motivation were added based on a review of the relevant literature.[35] The survey was implemented by BN Consulting, a firm with extensive experience in conducting household surveys in Cambodia. The author personally provided suggestions for the improvement of training contents for survey enumerators, as well as conducting numerous 'spot checks' to verify the accuracy of data input. The number of valid responses for each component of the fieldwork is presented in Appendix II.

The TPS selected schools based on a single criterion: the same 150 schools in which MoEYS had piloted its standardised national achievement test (MoEYS 2006b). The standardised test sample designs were prepared by a specialised software program

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[35] As mentioned in Section 4.5.1, this study adopted a hybrid data collection strategy that included a questionnaire and as well as classroom observation in order to triangulate findings on teacher motivation. For further discussion, see Section 4.5.

(SAMDEM[36]) that enabled the efficient generation of a range of sampling options and satisfied the statistical accuracy requirements of the programme. SAMDEM utilises probability proportion to size (PPS), a random sampling methodology that facilitates generalisability to the larger population with sufficient sample weights[37] to ensure precision.

As the central focus of this study is to understand the relationship between incentives and teacher motivation in Cambodia, it was crucial to select nationally representative samples. Nevertheless, there are some concerns around robustness of representation as follows:

Firstly, based on statistical calculations, data from the 150 sampled schools should be nationally representative, but all selected institutions had already been subject to the national test pilot, meaning that they cannot be considered to be unaffected by outside intervention, unlike many schools across the country. Secondly, the Hawthorne effect[38] cannot be ruled out. Thirdly, biases within the sample could potentially derive from the fact that my visits to 18 schools (for interview) revealed that many schools chosen seemed to be those with good accessibility by road, i.e., those within the target areas making the annual data collection for the national test more feasible for government officials. Fourthly, it appears that at least some enumerators might have tended to rate cleanliness

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[36] Program for sampling designed by the UNESCO IIEP for selecting the sample units. Please refer to the following website. http://edu.cmb.ac.lk/nerec/wp-content/uploads/2014/11/Appendix-ii-Sampling-Methodology.pdf

[37] The weight of both survey and observational data was constructed by a simple balancing of study participants across all sampled schools based on number of teachers who completed questionnaires and those whose classes were observed. In each school, all teachers present on the day of the survey completed the questionnaire. One or two teachers were also selected for classroom observation by the school director based on the twin criteria of availability, and the study's focus on grades 3 and 4 mathematics and Khmer language classes.

[38] The Hawthorne effect is generally defined as the problem encountered in fieldwork whereby the subject's awareness that that he or she is participating in a research project modifies his or her behaviour from what it would have been without such consciousness (Adair 1984).

lower for rural and remote schools based on the overriding principle that their facilities were usually older and more rundown than their newer counterparts in urban areas.

It is regrettably impossible to measure the potential effects of all these biases within the scope of this study; nevertheless, to the best of my knowledge, it includes the most comprehensive, nationally representative dataset on teaching in Cambodia currently available. Moreover, although bias and contamination cannot be ruled out, these data are sufficiently robust to enable the drawing of original conclusions in respect of the overarching RQs.

The classroom observation component of the fieldwork followed the same methodology as a similar teacher survey conducted in Cambodia in 2007 (Benveniste, Marshall & Araujo 2008), which adopted the time-on-task and time-segment methodologies pioneered by Bool and David (1956), and Stallings and Kaskowitz (1974). In addition to these techniques, survey enumerators also collected data ahead of actual observations on classroom cleanliness and the extent to which lessons were planned in advance.

As several core members of the research team had experience of the classroom observation method originated by Stallings and Kaskowitz (1974), this aspect of classroom observation ran smoothly without any major problems. However, the additional techniques adopted for the present study proved challenging as this was the first time enumerators had been engaged in such an exercise. Specifically, this concerned the monitoring of lesson plans and classroom cleanliness. During pilot data collection, some enumerators discovered that many teachers had photocopied others' lesson plans instead of developing and writing plans for specific lessons themselves. In this case, we consulted MoEYS officers and set a clear standard for enumerators to note whether teachers had prepared unique lesson plans by themselves.

In terms of school hygiene, although standards for monitoring degree of classroom cleanliness were set and no major issues were identified during pilot data collection, it is

possible that the aforementioned subjectivity of enumerators' judgement skewed the data. However, as requests to observe classes were only made to a school on the date of the actual visit, it is unlikely that teachers were able to prepare in advance for classroom observations (each dependent variable is discussed in greater detail in Section 5.3.2).

5.2.2. Analytical framework

As introduced in Chapter 2, the guiding analytical framework for this study is a combination of work motivation models derived from Maslow (1943), Herzberg (1968), and Deci (1975). This framework assumes that teacher motivation is determined not only by financial incentives, but is also substantially shaped by non-financial incentives. It also supposes that higher incentives (e.g. professional development, promotion opportunities) will make a stronger impact on teacher motivation once basic needs (e.g. salary, acceptable working conditions) have been met. Conversely, it also assumes that some higher incentives will not be properly realised if basic teacher needs remain unfilled. Finally, the analytical framework is also based on the premise that intrinsic motivation makes a stronger impact on human behaviour than extrinsic motivation.

The quantitative analysis seeks to explain overall tendencies in teacher motivation, specifically in relation to the level of incentives and socio-demographic status of teachers and schools. It attempts to identify a linkage between the level of teacher motivation and incentives, as well as the strength of such correlation, in order to examine the various findings of the existing relevant literature. I now introduce the empirical model utilised in this quantitative analysis.

5.3. Selected Variables

5.3.1. Independent variables

This study assumes that the following three factors have some association with teacher motivation, and have thus been set as categories of explanatory variable; (i) incentives (e.g. salary, working environment, promotion opportunities); (ii) context (e.g. location of school, teacher's second job, private tuition); and (iii) teacher characteristics (e.g. years of teaching experience, education level, gender). These categories of variable are explained in greater detail below.

5.3.1.1 Incentive variables

As discussed in Chapter 2, this study focuses on the six most common teachers' incentives identified in the literature: (i) remuneration; (ii) working environment; (iii) school director's support; (iv) community involvement; (v) training and professional development opportunities; and (vi) career opportunities and promotion. Although there is no simple means of evaluating such factors, the study set TPS questions designed to collect relevant data in these areas. Open questions constituted the means of measuring basic needs variables (i, ii), while closed questions were set to address higher-level incentive variable (iii, iv, v, vi).

Basic needs

Remuneration

Table 5-1. Variables and questions I

Variable	Questions
(1)　Salary	How much is your total salary including all allowances?
(2)　Timing of payment	Have you experienced any delays in the receipt of your basic salary this year?

Two explanatory variables were set for determining remuneration: (1) salary level (a logarithm encompassing all types of allowance)[39] and (2) timing of payment. As the salary remains the central issue in teacher incentive and motivation research (Umansky 2005), the inclusion of this factor as a variable can also be justified in respect of Cambodia. In this survey, this self-reported salary is utilised because the actual figure is hard to gain from government sources.

Additionally, not only the simple receipt of one's salary, but also obtaining it on time was seen as a key issue. In the Cambodian context in particular, punctuality of salary payment has emerged as a serious issue in the literature (e.g. Benveniste, Marshall & Araujo 2008). Moreover, in the most recent TPS (MoEYS 2012b), almost all teachers under study expressed strong concern about late payment. The survey also revealed that timely payment was considered to be one of the most significant prerequisites to the improvement of teachers' working conditions (MoEYS 2012b). Accordingly, 'timing of payment' has been incorporated as a supplementary explanatory variable, which was also addressed in the questionnaire. It should also be noted that relative salary may be as important as absolute salary in determining motivation.

Working environment

Table 5-2. Variables and questions II

	Variable	**Question**
(1)	Student behaviour	How would you rate your students' behaviour in respect of motivation to do well in school?
(2)	Teacher-to-student ratio	How many students are enrolled in your class?
(3)	Teacher commute time	How long does it usually take you to travel to school?

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[39] As the survey primarily targeted teachers and school directors, it utilised absolute salary level for teaching staff; however, relative salary levels are also identified and discussed in Chapter 7.

Three explanatory variables were set for this factor: (1) student behaviour; (2) teacher-to-student ratio; and (3) teachers' commute time to school. Clearly, many features go to make up a working environment, but the present three factors were selected as the existing literature has often highlighted their importance in a developing-world context (e.g. Bennel & Akyeampong 2007; Benveniste, Marshall & Araujo 2008). Variables (1) and (3) were addressed through survey questionnaires, while variable (2) was obtained from attendance observation. The reason for supplementing the analysis with teacher commute time is that there were little other objective data available, for example, those on the age of school facilities.

Higher incentives

Table 5-3. Variables and questions III

	Variable	Questions
(1)	School director's support	How often does the school director attend regular teachers' meetings?
(2)	Community involvement	How often do representatives of the community meet with the school director and teachers?
(3)	Training and professional development opportunities	Have you attended any teacher INSET activities over the past 12 months?
(4)	Career opportunities and promotion	How often are your steps and grades advanced?

One question was set for each of these four explanatory variables, as shown above. Firstly, the efficacy of the school director was measured by frequency of attendance at teachers' technical meetings. Such gatherings are usually organised once a month, but school directors do not always attend all of them. The primary aim is to discuss pedagogical issues and share ideas for lessons plans (MoEYS 2009). While simple frequency of attendance cannot capture content or quality of school director involvement, interview

data suggest that school directors did not discipline, punish or reprimand teachers at such meetings but that their involvement was nearly always positive.

This quality dimension was also investigated more deeply through qualitative, semi-structured interviews, which are analysed in Chapter 6. To calculate this variable, TPS responses were utilised rather than those from school directors directly, and results in respect of teachers who worked in the same school were averaged.

Secondly, the level of community involvement was measured by the frequency of school–community meetings. At the time the survey took place (and still at the time of writing), there were no official guidelines for the frequency of meetings with community representatives. However, it was recommended that schools organised these meetings once a month. The frequency of meeting with community representatives can also be adopted as proxy indicator to measure the support to and recognition of schools and their teachers from the local community.

Details of community involvement are also addressed followed up in Chapter 6. The survey responses of community representatives provided the answers to this question. Here, too, results with regard to community representatives to the same school were averaged.

Thirdly, the level of professional development and training were measured by asking if teachers had participated in any INSET during the previous 12 months. Attending INSET is a very rare opportunity for Cambodian teachers, particularly if they work in rural or remote areas. Most teacher INSET is provided by donors and/or NGOs on an ad-hoc basis. Such training is also regarded as both a reward and a professional development opportunity. The survey focused on only frequency rather than quality of training. Responses were gathered from the questionnaire given to teachers.

Fourthly, the extent of career advancement and promotion opportunities was measured by the frequency of opportunities in recent years. As the teaching career path is somewhat linear in Cambodia (MoEYS 2015b), the frequency of promotion was considered to be a more reliable variable for gauging career opportunities. Officially, teachers are entitled to apply for promotion[40] every two years, but in, reality, it is customary that only 70 per cent of applications per year are successful (MoEYS 2015b). This means that some teachers are only promoted every two year.

5.3.1.2. Local context and characteristics variables

The study also sought to gauge local context and teacher and school characteristics, controlling for these non-incentive factors – the impact of background on teacher incentives in particular – in an attempt to better understand the correlation between teacher incentives and motivation, and mediate the relationship.[41]

Local context

Table 5-4. Variables and questions IV

	Variables	Questions
(1)	Paid tuition	Do you offer extra tuition to students after school (with pay)?
(2)	Second job	Do you have another job outside school?
(3)	Double shift	Do you teach a double shift?
(4)	Home village	Were you born here? (school location)
(5)	Geographical location	Is your school located in an urban or rural area?

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[40] In this context, promotion means the advancement of ranking in salary schedule (Tandon & Fukao 2015).

[41] This is, how much of the effect of incentives on teacher motivation is eradicated when controlling for context, and teacher and school characteristics (Preacher & Hayes 2004; Vandenabeele 2009).

Variables related to local context were generated based on categories derived from the existing research base on education in the Cambodian context. Five context-related variables were selected for the present study: (1) engagement in extra, paid tuition; (2) the simultaneous holding a second job together with teaching; (3) whether the teaching timetable is organised according to the single- or double-shift system; (4) teaching in one's home village; and (5) whether the school is located in an urban or rural area.

As reviewed in Chapter 3, a frequent practice in Cambodian schools is the organisation of a teacher's timetable into two shifts (commonly known as 'double-shifting'). Usually, the morning shift lasts from 7 a.m. to 11 a.m., and the afternoon shift from 1 p.m. to 5 p.m. Almost 75 per cent of public primary schools are organised according to this system (MoEYS 2014b). As a result, most teachers only teach half a day and devote the remainder of the working day to a second job (commonly farming in rural areas and private tuition in urban areas) due to the low level of remuneration. However, some schools are encouraged by MoEYS to allow their teachers to work a double shift,[42] a policy measure sweetened by additional allowances and adopted as a means of dealing with the shortage of trained teachers (MoEYS 2014a).

Another policy measure addressing the teacher shortage in rural and remote villages is local recruitment. This policy aims to enrol students in TTCs directly from villages facing teacher shortages. As a result of this policy, many teachers work in their home villages (Benveniste, Marshall & Araujo 2008).

Lastly, but most importantly, there is yawning gap between urban and rural schools due to socio-cultural and economic inequalities (World Bank 2013).

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[42] This study adopted it as a context characteristic rather than a teacher incentive intended to enhance motivation.

These five contextual variables were generated based on reports and the wider literature on Cambodian education in order to capture the main features of teaching in this context.

Teacher characteristics

Table 5-5. Variables and questions V

	Variables	Questions
(1)	Length of service	How long have you been teaching since you first became a teacher?
(2)	Length of service at present school	How long have you been teaching in your current school?
(3)	Gender	Are you female or male?
(4)	Education grade completed	Which education level/grade did you complete?
(5)	PRESET	Have you finished one-year PRESET or longer?
(6)	Primary reason for becoming a teacher	Why did you become a teacher?

Explanatory variables related to teacher characteristics were formulated after a review of teacher effectiveness studies (Teddlie & Reynolds 2000) that primarily focused on qualifications and experience. The present study thus set seven teacher characteristic variables: (1) length of service, (2) length of service at present school, (3) gender, (4) education grade completed (1 to 12), (5) teacher PRESET, and (6) primary reason for becoming a teacher. The justification for setting each of these independent variables is as follows:

Firstly, the age of participants could have been utilised as an indicator of teaching experience [43] given that most people go directly into teaching after graduation from secondary school (MoEYS 2014b). However, in view of the specificities of the Cambodian context – the civil war made a long term impact on the teaching force, that is, many untrained or unqualified individuals were nevertheless employed as teachers in the

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[43] As age per se is, nevertheless, deemed to be relevant, supplementary discussion in respect of different age groups is conducted in the chapter.

hurried rebuilding of the country – a more precise measure is actual length of service. Secondly, the PRESET system has been undergoing extensive reform for quite some time, and most teachers recruited in recent years have undergone a full two-year training cycle, although there are still many exceptions to this general rule (MoEYS 2015b). Thirdly, teacher recruitment is mostly conducted through merit-based rather than qualitative selection processes that would measure a candidate's aptitude for teaching (Benveniste, Marshall & Araujo 2008).

The last question sought to capture the individual's intrinsic drive to become a teacher.

5.3.2. Dependent variables

Past research has repeatedly argued that that there is no single best way of measuring teacher motivation (Bennel & Akyeampong 2007; Dörnyei & Ushioda 2010). As noted in the Chapter 4, the present study combines multiple datasets to triangulate the phenomenon of teacher motivation, that is, balancing questionnaire responses, existing school data, and direct observation of classes, in order to better understand whether participants exhibit behaviour usually associated with the motivated teacher.

At this point, I would like to briefly reiterate the definition and measurement of motivation operationalised in this study. Given that motivation is fundamentally unobservable, observation can only be used to obtain data on the consequences of motivation rather than motivation itself (Dörnyei & Ushioda 2010). The present study defines the motivated teacher as an individual who strives to achieve goals that are closely associated to those of his or her school.

Accordingly, this study assumes that such goals represent the meeting of the Cambodian Teacher Professional Standards (MoEYS 2014a), which were officially approved in 2010 and clearly articulate the duties of teachers across four domains: professional knowledge, professional practice, professional learning, and professional ethics. Each domain

includes several standards that constitute observable competencies and behaviour that are assumed to affect student learning positively (ibid). As there are inevitably some differences between activities stated in the standards and actual teaching practice, the present study also discussed with school directors how actual teacher motivation could be measured based on existing teacher professional standards.

Directors suggested that the discussion should generate a motivation measurement framework comprising specific behaviours grouped according to four key factors, namely, (i) attendance of school on time; (ii) interaction with colleagues on professional development; (iii) appropriate and adequate preparation of lessons; and (iv) efficient class management. In other words, a motivated teacher as defined in the present study should exhibit the following four behaviours: (1) attendance of school on time; (2) interaction with colleagues on substantive teaching matters as a form of professional development; (3) preparation of lesson plans and physical organisation of the classroom; and (4) efficient class and student time-on-task management. Additionally, apprehending the teacher's attitude in respect of his or her job and job satisfaction is critical to the fundamental mindset that frames motivation.

Table 5-6. Variables and questions VI

	Variables	Questions to teacher/enumerator
(1)	Satisfaction	Overall, how satisfied are you with your occupation as a teacher?
(2)	Attendance	Including both official and personal reasons, approximately how many days in total have you been absent in the current school year?
(3)	Interaction with other teachers	How often do you unofficially visit another teacher's classroom to observe his or her teaching?
(4)	Lesson plan	Have you written your lesson plan for today's lesson? (observed class)
(5)	Cleanliness of classroom	How would you classify the general cleanliness and orderliness of the classroom? (question to enumerator)

(6)	Classroom management	(No question, but observed by Stallings method[44])

5.3.2.1. Satisfaction

Job satisfaction emerged as central concept through the course of this study, which makes a clear distinction between motivation and satisfaction; adopting the definition that motivation is 'future directed' towards the attainment of goals, while job satisfaction is explained as "the extent to which expectations are met" by recent events (Scholl 2002, cited in Müller et al. 2009: 581). Although satisfaction may also include one or more future elements, the present study takes the position that they are much weaker compared with those that govern motivation. There is no linear relation between higher work motivation and higher job satisfaction or vice versa, although many studies treat teacher satisfaction and motivation indiscriminately as essentially the same phenomenon (e.g. Bennel & Akyeampong 2007).

However, in treating these central terms as different concepts, the present study affirms the view of Bennel (2007) that job satisfaction helps us to account for work motivation, but they are not the same things. Accordingly, the study applied the self-reported teacher satisfaction indicator as a proxy measure (variable) for assessing the level of teacher motivation in its quantitative analysis. Relevant data were collected from the questionnaire.

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[44] The Stallings method utilises a standardised coding grid to record the activities and materials teachers and students use during a single class. Ten 30-second observations are made at regular intervals. In these 30 seconds, the observer captures the room in a 360-degree circle starting with the teacher and codes. Four key aspects of classroom dynamics in detail: class time use – instruction (active/passive), classroom management, or other activities (considered off-task); pedagogical practices; learning materials; and share of students visibly engaged in teacher-led activity and/or in off-task behaviours (such as social interaction with other students or tuned out). The Stallings method creates quantitative data and standardised measures of key variables. All Stallings results are presented as a percentage of class time (Tandon & Fukao 2015).

5.3.2.2. Attendance

In teacher motivation research, the attendance–absenteeism dichotomy has long served as a standard proxy indicator of motivation (Michaelowa 2002; Kadzamira 2006; Bennel & Akyeampong 2007). Although Michaelowa (2002) collected data through self-reporting, she still treats the attendance variable as one of three primary data sources for use in the assessment of teacher job satisfaction. Kadzamira (2006) also assumes that absenteeism is a typical consequence of poor teacher motivation in Malawi. Additionally, Moleni and Ndalama (2004, cited in Kadzamira 2006: 2) argue that the teacher attendance–absenteeism dynamic is largely influenced by motivational factors. Bennel and Akyeampong (2007) also recognise this dichotomy as a manifestation of motivation. In line with this literature, self-reported teacher attendance was utilised in the present study as a proxy variable to assess level of teacher motivation within its quantitative framework. These data were also collected through the questionnaire (i.e. teacher self-reporting).

5.3.2.3. Interaction with other teachers

Interaction with other teachers in terms of professional development is highlighted and recommended under the section on learning in the Teacher Professional Standards (MoEYS 2014a). The present study's more informal discussions with school directors also revealed that most of them considered such interaction to be a key variable in teacher motivation. Interaction with colleagues can be measured by the frequency with which any given teacher visits colleagues' classrooms for the purposes of methodological input. It reveals more than simply the desire to interact, but suggests higher level motivation: to learn and improve their pedagogical mastery. Thus, this study operationalised teachers' self-reported answers to questions about the 'frequency to visit to other teachers classes' as a variable to further gauge levels of motivation.

5.3.2.4. Lesson plan preparation

Lesson plan preparation is largely absent from existing research on teacher motivation in developing countries. However, the development of a plan in advance of each class is one of several crucial activities emphasised in the Cambodian Teacher Professional Standards (MoEYS 2014a). Thus, it is a key indicator in the monitoring of teachers' work by School cluster, PEO and DEO inspection teams (Tandon & Fukao, 2015). Regionally, a recent study on the correlation between teacher incentives and effort in Laos also utilises the number of hours devoted to lesson plan preparation as one of two key indicators in the assessment of teacher work rate (Deng & King 2013).

Logically, a teacher who writes a lesson plan in advance demonstrates greater focus, preparation and commitment to the delivery of a coherent lesson than one who does not. Accordingly, the level of preparation represented by a lesson plan may also be regarded as an indicator of level of motivation. Therefore, with regard to the quantitative research of the present study, lesson plan preparation was also set as a proxy variable to assess level of teacher motivation. These data was collected as part of the classroom observation exercise, as describe below.

Clear instructions were set for enumerators in monitoring whether the teachers under study had written lesson plans. In this regard, enumerators were trained (i) to ask whether each teacher had developed a lesson plan for the class being observed, and, if the answer was 'yes', (ii) to verify that an original hand-written plan had been written in the official notebook dedicated for this purpose. This procedure was adopted to minimise observational bias. Indeed, there were many teachers who initially said they had a written a lesson plan but refused to show it to the enumerator.[45]

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[45] This behaviour could potentially indicate a self-reporting bias which would lead to greater caution in interpreting other self-response items in the study. However, the author suggests that such an eventuality could be caused not only by self-reporting bias, but also because (i) a given lesson plan was copied from

5.3.2.5. Classroom cleanliness

Classroom cleanliness was set as another proxy variable to assess the level of teacher motivation. Such cleanliness, which is defined as general tidiness and orderliness, is a monitoring activity priority indicator in the Child-Friendly School Framework (MoEYS 2010), a programme widely disseminated throughout Cambodian schools. In the informal discussions with school directors, it became clear that most of them also considered classroom cleanliness to be a key proxy for level of teacher motivation. These data were collected in classroom observations, as follows.

Enumerators were trained to assign one of three cleanliness categories to each observed classroom, namely, (i) classroom is extremely clean and well maintained, (ii) classroom is reasonably clean and well maintained, or (iii) classroom is not clean or well maintained. One problem with this variable was, as mentioned above, ensuring the minimisation of enumerator subjectivity: given that neither MoEYS nor individual schools set specific standards of cleanliness and conditions varied widely, there was strong potential for a higher degree of bias in terms of this variable than with other dependent variables.

5.3.2.6. Classroom management

Nearly all teacher motivation studies reviewed for this project miss the chance to employ an observation methodology that captures the level of teacher motivation in actual classroom practice. Conversely, teacher effectiveness studies do utilise classroom observation to capture teacher behaviour and have developed a number of observation schemes to aid such analyses (Teddlie & Reynolds 2000). Careful observation can assess how teachers prepare for classes and whether they utilise instructional time effectively to promote student understanding. Bennel and Akyeampong (2007: 53) corroborate this in

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another teacher; (ii) the plan had not had not been written for that day's lesson and/or looked very old; and/or (iii) the lesson plan had not been neatly written.

their assertion that, "Low teacher time-on-task is also indicative of low job satisfaction and motivation." Accordingly, 'active instructional time' and 'off-task time' were applied as variables to assess the level of teacher motivation in the present study.[46] These data were collected as part of classroom observation, as describe below.

Previous research has identified several key concerns about the quality of data obtained through classroom observation (Muijs 2006). One major problem is observational bias: classroom observation suffers heavily from researcher bias unless there a standardised methodology and recording scheme is established and agreed upon, and enumerators are well trained (Teddlie & Reynolds 2000). Another issue is that observations are, by definition, 'snapshots' and do not provide a full picture of a specific teacher's long-term behaviour pattern. In addition, the presence of observers in the classroom inevitably influences the teacher's behaviour either consciously or unconsciously (Muijs 2006) in a way similar to the Hawthorne effect.

To minimise observational bias, this study utilised Stalling's time-on-task methodology for measuring classroom management variables. This method has been widely utilised and gradually refined over years of research to assess how instructional time is allocated (Stallings 1980; Stallings & Freiberg 1991). However, the Stalling method cannot avoid the Hawthorne effect, namely, the possibility of influencing the class through the mere act of observation. However the Stalling method is useful in minimising the other two concerns, that is, observation effects and the snapshot effect. The observation method was widely shared and utilised in order to minimise observer's subjectivity. Although the method still only constitutes a snapshot, these form a series of snapshots (every 30

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[46] All results for time-on-task are presented as a percentage of instructional time in the categories active instruction, passive instruction, class management, and off-task time. The study pays particular attention to active instructional time and off-task time, as it is assumed that the higher the proportion of active instruction time (or the lower the off-task time), the more efficiently the teacher manages his or her classes.

seconds), which helps to generate a unified picture of how the teacher manages his or her class over the entire class lesson.

One problem the study faced in terms of application of the Stalling method was training. Although experienced trainers explained in detail the method, shared their experiences, and conducted a demonstration classroom observation in the pilot study, it emerged that enumerators needed more practice if they were to conduct their work smoothly. Indeed, there were many requests to use additional videos and/or visual aids to further practice the Stalling method. We also experienced some difficulty in the classroom, particularly in the following two ways: (i) selection of one major activity during each 15-second interval when multiple activities were taking place, and (ii) inability to classify student activities from a standardised list (e.g. some students simply left the classroom, which was not an option on the list of activities).

5.4 Descriptive Analysis

Before the regression analysis, a descriptive analysis of data derived from all the aforementioned variables was conducted to capture a clearer overall picture of local context, and teacher characteristics and incentives.

5.4.1. Teacher characteristics and local context

Gender and geography

In this dataset, female teachers account for 45.9 per cent of total respondents of the TPS, while EMIS dataset (2012/13) indicates that female teachers account for 49.1 per cent of the total teaching force. Geographically, 19.6 per cent of teachers work in urban schools in this dataset, while 22.2 per cent of teachers work in urban schools in the EMIS dataset (2012/13). Thus, it seems that the dataset utilised in the present study comes close to

approximating the national population of public primary school teachers. All figures quoted below are taken from this dataset.

Teacher Characteristics: length of service, length of service at present school, number of students per class, and highest grade attained (TPS sample) [47]

Age and length of service: Cambodia has a relatively young teaching force: the average age of all surveyed teachers was 35.6 years, while rural and female teachers were slightly younger than their urban and male counterparts respectively. The average length of service of all surveyed teachers was 15 years, but rural teachers also showed slightly less experience than urban teachers. These gaps most probably derive from the fact that nearly all new graduates of PTTCs are first assigned to rural schools, after which most request a transfer to an urban school several years later (Benveniste, Marshall & Araujo 2008).

Length of service at the present school: Surveyed teachers tended to work in the same school for many years. When asked how long they had worked at their present school, the average was 8 years: 10 years in urban schools and 7.3 years in rural schools. The average length of service at the same school in those whose careers exceed 20 years in was 14.1 years. Clearly, the longer a teaching career, the longer the length of service at the same school.

Final grade completed: Overall, the younger the teacher, the higher the final grade of compulsory schooling successfully completed before becoming a teacher. The average final completion grade for all surveyed teachers was 10.7 (grades 1–12: 10.8 in urban schools and 10.5 in rural schools. The average final grade of those who had taught for

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[47] MoEYS has been developing the Human Resource Management Information System (HRMIS). However, according to MoEYS staff, the HRMIS has not been fully updated since 2009. Thus, this study does not use data from the HRMIS as it is deemed unreliable.

less than 10 years was 11.5, while it was 9.2 for those who had taught for more than 20 years.

PRESET: On average, urban teachers had undergone slightly longer periods of PRESET, but significant disparities in geographical differences were not evident. Thus, 79.3 per cent of all surveyed teachers completed at least 1 year of PRESET training, 61.5 per cent 2 years, and 5.5 per cent had not undergone any PRESET at all.

Table 5-7. Teacher Characteristics

Average	All	Region		Gender	
		Urban	**Rural**	**Female**	**Male**
Age	35.6 yrs.	38.4 yrs.	35.1 yrs.	34.8 yrs.	36.5 yrs.
Length of service	15 yrs.	17.5 yrs.	14.2 yrs.	14.9 yrs.	14.8 yrs.
Length of service in present school	8.3 yrs.	10 yrs.	7.5 yrs.	8.5 yrs.	7.5 yrs.
Final grade (1–12)	10.7	10.8	10.5	10.8	10.4
Two-year PRESET course	61.5%	63.7%	61.0%	61.7%	61.4%

Local context: Teaching in home village, private tuition, second job, and double shift

Teaching in hometown: 25 per cent of surveyed rural teachers taught in their hometown, 22.1 per cent taught at schools in their home villages, while 10 per cent taught in urban schools. More female teachers tended to work in their home villages than male teachers (24.1 per cent and 20.4 per cent respectively).

Second jobs, private tuition, and double-shift teaching: In this study, a second job signifies non-education, paid labour conducted outside school hours. Private tuition represents charged private classes organised by the teacher. There were large differences between rural and urban teachers in this regard and they are therefore addressed separately.

A second job was common among rural and male teachers. Overall, 62.1 per cent of all teachers had a second job: 33.5 per cent urban and 69.8 per cent rural. Additionally, over 70 per cent of male teachers had a second job, while the figure was almost 50 per cent in respect of their female counterparts.

Private tuition: In contrast to the prevalence taking of a second job on the parts of rural teachers, private tuition was a more common practice amongst urban and female teachers. Thus, while 17.2 per cent of all teachers engaged in paid tuition, this figure is disambiguated as 46.8 per cent of all urban teachers versus 9.9 per cent of rural teachers, and 23.1 per cent of female teachers versus 12 per cent of male teachers.

Figure 5-1. Local Context Factors

	Teaching in home village	Conducting Paid tutorials	Having 2nd job	Doing Double-Shift
All	22.1%	17.2%	62.1%	30.3%
urban	10.7%	46.8%	33.5%	9.0%
rural	25.0%	9.9%	69.8%	35.4%
female	24.1%	23.1%	49.3%	24.5%
male	20.4%	12.0%	73.9%	35.2%
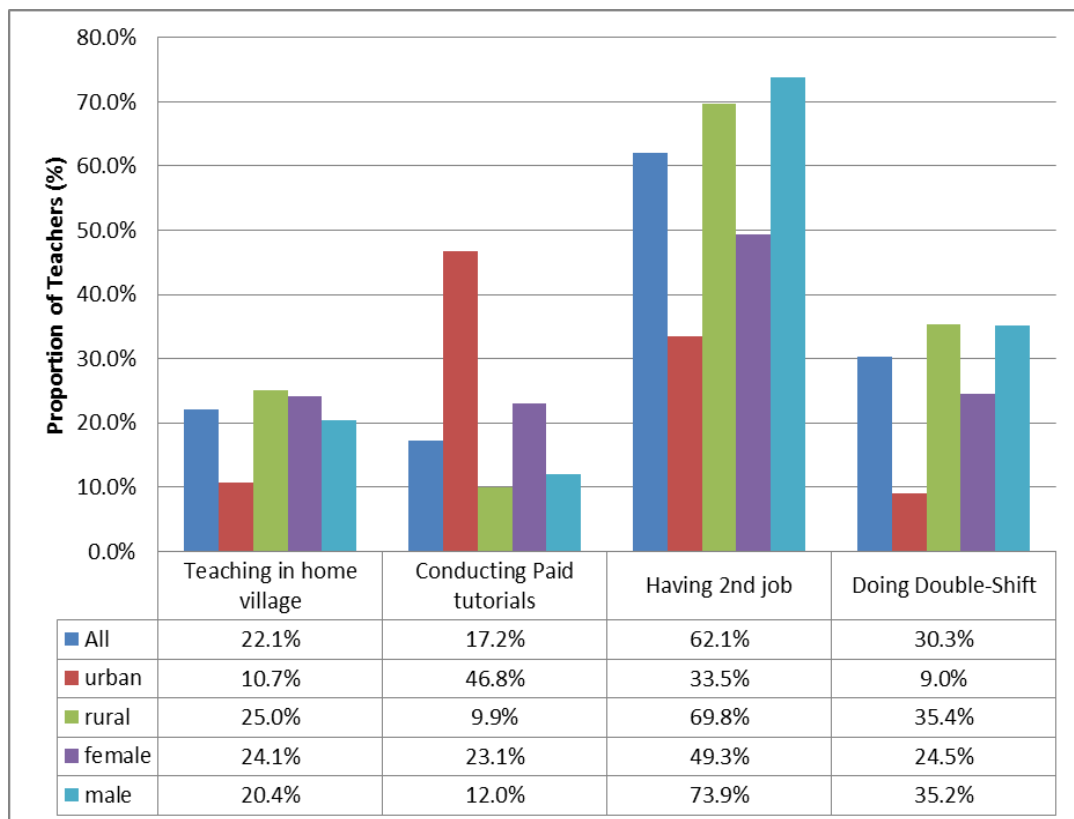
Double-shift teaching: This was another common practice amongst rural teachers. Thus, while approximately 30.3 per cent of all teachers worked a double shift, this breaks down as 35.4 per cent rural and 9 per cent urban. Additionally, a greater proportion of male teachers (35.2 per cent) worked a double shift teachers compared to their female counterparts (25 per cent).

5.4.2. Incentives

Salary

Overall the average monthly salary for the sample was USD 76.50. However, disparities were identified for different groups in relation to career length. The study did not find significant inequalities in salary scale that could be correlated with local context and/or teacher characteristics. However, understandably, those who had less than ten years of service were the lowest on the salary scale, receiving from USD 62.60 to more than USD 80.00. Therefore a disparity in terms of geographical location could be explained by the fact that most newly assigned teachers were posted to rural schools, which would lower the average salary for all rural teachers. These results demonstrate the linear, seniority-based salary structure of the public school education system in Cambodia.

Significantly, nearly 70 per cent of teachers had experienced delays in salary payment in the previous 12 months regardless of gender or geographical location.

Figure 5-2 Average Monthly Salary (USD)
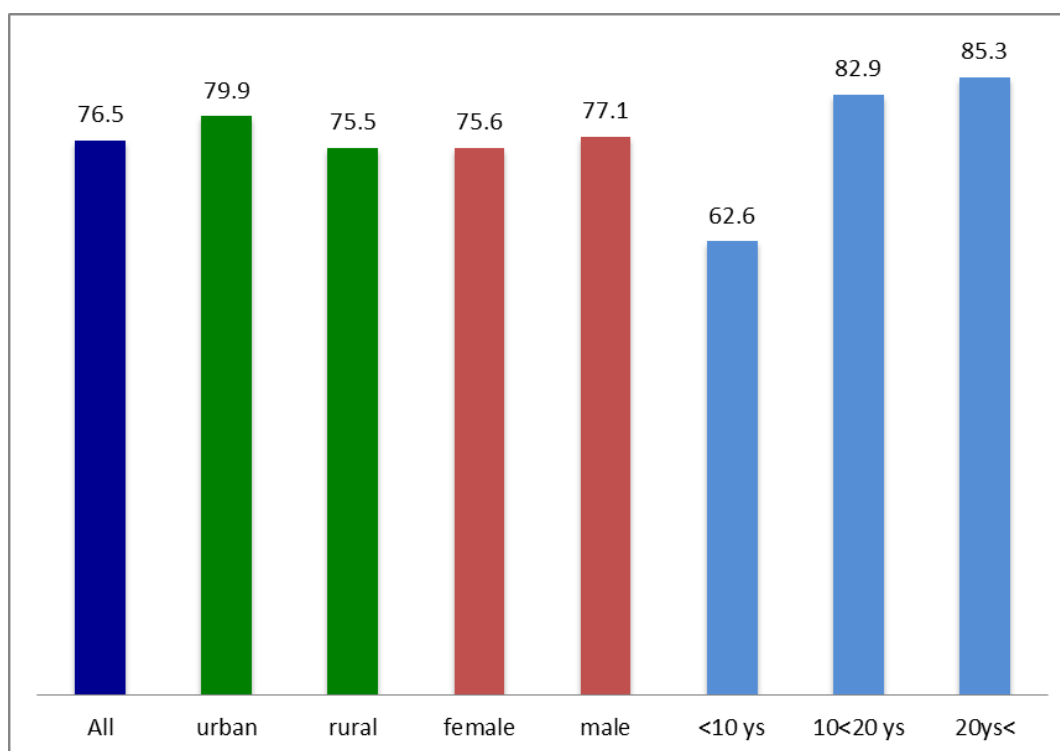
Working environment (number of students per class, commute time, and student behaviour)

This study assessed working environment based on number of students per class, teacher commute time, and student behaviour. Of these three factors, data for commute time and student behaviour suggest several general differences in the working environments of urban and rural schools.

Although it seems that urban teachers tended to live closer to school (77.6 per cent with a commute time of 15 minutes or less), the difference with respect to the proportion of

teachers who lived close to school in rural areas (77.6 per cent - 67.7 per cent) is not statistically significant (chi-square test= 0.07, p>0.05).

Additionally, urban teachers tended to consider their students' behaviour to be somewhat better than did rural teachers: while 43 per cent of urban teachers perceived student behaviour to be very good, only 36.9 per cent of rural teachers felt the same. Statistically, however, there is no significant difference between teachers based in urban areas and those in rural schools (chi-square test=0.42, p>0.05).

Beyond the present study's dataset, it has been reported that schools in rural areas generally have older facilities, are not fully equipped with adequate teaching and learning materials, and many of their teachers work double shifts (Benveniste, Marshall & Araujo 2008).

The number of students per class found by the present study also indicates similarities with existing EMIS data: the TPS dataset shows that average class size in urban schools is somewhat larger than that of rural schools (urban=36.6; rural=32.6), while EMIS (2013/14) data indicate similar findings – although the TPS suggests that such a difference is slightly larger than that indicated by EMIS data (urban=35.2; rural=34.8).

INSET, community involvement, school director, and promotion opportunities

Opportunities for INSET were slim to none the public school teachers under study: only 6.3 per cent of all teachers reported the receipt of such training over the last 12 months. Males had a slightly better chance of undertaking training than females (males=7.0 per cent; females=5.2 per cent). However, the difference is not statistically significant (chi-square test=0.26, p>0.05).

One third of all schools routinely organised meetings with community representative groups each month. More rural schools (33.1 per cent) tended to hold such meetings at

least once a week than their urban counterparts (27.0 per cent), and the difference in this case is statistically significant (chi-square test=0.00, $p<0.05$).

The vast majority of school directors (92 per cent) were generally believed to regularly attend monthly teacher technical meetings regardless of geographical location. Female teachers considered that school directors attended teachers' meetings slightly more regularly than did their male counterparts (female=95.1 per cent; male=90.1 per cent), but this difference is not statistically significant (chi-square test=0.19, $p>0.05$).

Finally, more than half of all teachers (56.8 per cent) had been promoted to the next salary step at least every two years, if not more frequently.

Figure 5-3. Incentives

	Paytiming late	Commute time (< 15 minutes: %)	Class size(pupils)	Student behaviour (very good: %)	Recent INSET experience (%)	Strong Community Involveme nt (%)	Director attendance to meeting everymont h(%)	Promotion evey 2 years or more (%)
All	70.5	69.7	33.3	38	6.3	32	92.6	56.8
urban	72	77.6	36.6	43	6.1	27	92.6	58.2
rural	70	67.7	32.6	36.9	6.3	33.1	92.6	56.4
female	67.6	67.3	34.7	37.1	5.2		95.1	54.6
male	72.9	71.7	32.3	39	7		90.1	58.7

5.4.3 Incentives and teacher behaviour

The final part of the descriptive analysis presents cross-tabulations of incentives and teacher behaviour that were treated as proxy indicators of motivation in this study. The following analysis presents the relationship between each of the indicators for teacher behaviour and each of the various incentives.

In terms of the findings represented by the data shown in tables 5-8 to 5-12, the distribution of entire sample is an average for all teachers. The larger the disparities between all sample figures and variables figures, the stronger the correlation between incentives and variables.

Satisfaction

Overall, more than half the teachers were highly satisfied with their jobs and most were satisfied. Although these findings could reflect an inherent upward bias in self-reporting, we can still detect significant linkages, as shown below. There are three incentive-related factors that show significant correlation with satisfaction level: student behaviour, number of students per class, and INSET receipt. Student behaviour was found to be strongly correlated with teacher satisfaction: 62.9 per cent of teachers who believed that their students behaved well also reported feeling highly satisfied with their jobs, while only 33.5 per cent of those who considered that their students behaved poorly were highly satisfied; and the difference in the proportion is statistically significant (chi-square test=0.00, $p < 0.05$).

It also emerged that class size was correlated with teacher satisfaction: 66.8 per cent of teachers whose classes were smaller than average were very satisfied with their jobs, whereas, only 50.6 per cent of those whose classes were larger than average were highly satisfied with their jobs. This difference is statistically significant ((F analysis of variance (ANOVA =0.03, $p < 0.05$)).

Finally, recent INSET participation was found to be correlated with teacher satisfaction: 66.8 per cent of teachers who had received INSET in the previous 12 months reported a high level of job satisfaction, while only 52.4 per cent of those who had received no INSET during the same period felt the same; and the difference in this proportion is statistically significant (chi-square test=0.02, $p < 0.05$).

Table 5-8. Cross tabulation of incentives and satisfaction

		Highly Unsatisfied	Satisfied	Highly Satisfied	Odds ratio
	Whole Sample	1.3%	45.4%	53.3%	
Timing of salary payment	Delayed during previous 12 months	1.2%	44.7%	54.1%	0.94
	Not delayed during previous 12 months	1.4%	45.0%	53.6%	
Student behaviour	Bad	0.0%	66.5%	33.5%	0.00 ***
	Okay	1.8%	50.3%	47.9%	
	Good	0.7%	36.4%	62.9%	
Commute time	<15 mins.	1.1%	45.0%	53.9%	0.81
	15–30 mins.	1.8%	43.6%	54.6%	
	>30 mins.	1.6%	53.1%	45.4%	
Class size	>= 30	1.6%	47.8%	50.6%	0.030 **
	< 30	0.0%	33.2%	66.8%	
INSET	No	1.1%	46.5%	52.4%	0.02 **
	Yes	4.2%	29.0%	66.8%	
School–community meetings	>= 6-monthly	2.7%	55.5%	41.8%	0.35
	< monthly	1.5%	44.7%	53.8%	
	<= monthly	0.8%	45.2%	54.0%	
Director's involvement in teachers' meetings	Infrequent	0.0%	100.0%	0.0%	0.3
	Frequent	2.2%	51.9%	45.9%	
	Always	1.2%	43.7%	55.0%	
Promotion	<= 4 yearly	0.7%	47.6%	51.7%	0.85
	3-yearly	2.1%	43.3%	54.6%	
	>= 2-yearly	1.1%	46.6%	52.3%	

Log-likelihood ratio (LLR)   Calculated by chi-square test for all variables except class size. Class size variable tested by ANOVA.

***<0.01, **<0.05, *<0.1.

Attendance

A strong correlation was found between school–community involvement and teacher attendance: only 5.5 per cent of teachers whose schools had relatively weak community relations responded that they had a 100 per cent attendance record, while 38.6 per cent of

those whose schools had comparatively strong community relations reported that they were absent less frequently; and the difference is statistically significant (chi-square test=0.016, p<0.05).

Table 5-9. Cross tabulation of incentive-related factors and teacher absence

		Frequent absence	Infrequent absence	100% attendance	Odds ratio
	Whole Sample	2.7%	62.2%	35.1%	
Timing of salary payment	Delayed during previous 12 months	3.1%	61.2%	35.7%	0.67
	Not delayed during previous 12 months	2.2%	64.1%	33.7%	
Student Behaviour	Bad	0.0%	71.3%	28.7%	0.53
	Okay	2.4%	64.4%	33.2%	
	Good	3.3%	57.9%	38.8%	
Commute time	<15 mins.	1.9%	61.7%	36.4%	0.2
	15–30 mins.	5.6%	61.9%	32.5%	
	>30 mins.	1.6%	66.4%	32.0%	
Class size	>= 30	3.1%	62.1%	34.8%	0.96
	<30	0.8%	62.5%	36.7%	
INSET	No	2.9%	62.5%	34.7%	0.24
	Yes	0.0%	57.6%	42.4%	
School–community meetings	>= 6-monthly	7.3%	87.3%	5.5%	0.016**
	< monthly	2.1%	62.2%	35.7%	
	<= monthly	3.1%	58.3%	38.6%	
Director's involvement in teachers' meetings	Infrequent	0.0%	28.6%	71.4%	0.14
	Frequent	6.6%	73.1%	20.3%	
	Always	2.5%	61.7%	35.9%	
Promotion	<=4-yearly	3.4%	58.4%	38.2%	0.91
	3-yearly	3.7%	61.0%	35.3%	
	>= 2-yearly	2.6%	64.4%	33.0%	
LLR	Calculated by chi-square test for all variables except class size. Class size variable tested by ANOVA. ***<0.01, **<0.05, *<0.1.				

Teacher interaction (classroom visits)

A strong correlation was identified between teachers' interaction with each other and community relations: 11.7 per cent of teachers at schools with strong community relations visited colleagues' classrooms, while only 2.7 per cent of those at schools with weaker community relations did so; and the difference is statistically significant (chi-square test=0.019, p<0.05).

Table 5-10. Cross-tabulation of incentives and teacher interaction

		No Visits	**Monthly Visits**	**Weekly Visits**	**Odds ratio**
	Whole Sample	82.4%	10.4%	7.2%	
Timing of salary payment	Delayed during previous 12 months	81.2%	11.3%	7.5%	0.49
	Not delayed during previous 12 months	86.0%	8.7%	5.3%	
Student Behaviour	Bad	90.0%	5.0%	5.0%	0.11
	Okay	85.0%	9.3%	5.7%	
	Good	77.7%	12.6%	9.7%	
Commute time	<15 mins.	83.4%	10.4%	6.2%	0.49
	15–30 mins.	81.6%	10.2%	8.2%	
	>30	76.2%	11.4%	12.4%	
Class size	>=30	81.4%	11.5%	7.1%	0.29
	<30	87.3%	5.2%	7.5%	
INSET	No	82.8%	10.0%	7.2%	0.32
	Yes	76.7%	17.0%	6.4%	
School–community meetings	>= 6-monthly	83.6%	13.6%	2.7%	0.019**
	< monthly	84.9%	9.9%	5.3%	
	<= monthly	77.3%	11.0%	11.7%	
Director's involvement in teachers' meetings	Infrequent	100.0%	0.0%	0.0%	0.8
	Frequent	84.1%	6.6%	9.3%	
	Always	81.7%	11.0%	7.3%	
Promotion	< =4-yearly	86.5%	8.5%	5.0%	0.8
	3-yearly	81.9%	11.0%	7.2%	
	>= 2-yearly	80.0%	12.2%	7.7%	
LLR	Calculated by chi-square test for all variables except class size. Class size variable tested by ANOVA. ***<0.01, **<0.05, *<0.1.				

Lesson plan preparation

A strong correlation was found between the consistent writing of lesson plans and career promotion: 50.5 per cent of teachers who had been promoted every two years or more usually wrote a lesson plan, while only 32.7 per cent and 37.4 per cent of those who had been promoted every 3 and 4 years respectively prepared lesson plans; and the difference is statistically significant (chi-square test=0.048, p<0.05).

Table 5-11. Cross tabulation of incentives and lesson plan preparation

		No Lesson Plan	Lesson Plan	Odds ratio
	Whole Sample	55.4%	44.6%	
Timing of salary payment	Delayed during previous 12 months	57.4%	42.6%	0.73
	Not delayed during previous 12 months	54.1%	45.9%	
Student Behaviour	Bad	50.0%	50.0%	
	Okay	56.1%	43.9%	0.83
	Good	54.5%	45.5%	
Commute time	<15 mins.	53.5%	46.5%	
	15–30 mins.	64.1%	35.9%	0.39
	<30 mins.	49.1%	50.9%	
Class size	>=30	54.5%	45.5%	0.15
	<30	57.1%	42.9%	
INSET	No	54.8%	45.2%	0.4
	Yes	65.4%	34.6%	
School–community meetings	>= 6-monthly	75.0%	25.0%	
	< monthly	56.9%	43.1%	0.34
	<= monthly	49.5%	50.5%	
Director's involvement in teachers' meetings	Infrequent	100.0%	0.0%	
	Frequent	45.3%	54.7%	0.36
	Always	54.9%	45.1%	
Promotion	<= 4-yearly	62.6%	37.4%	
	3-yearly	67.3%	32.7%	0.048**
	>= 2-yearly	49.5%	50.5%	
LLR	Calculated by chi-square test for all variables except class size.			
	Class size variable tested by ANOVA.			
	***<0.01, **<0.05, *<0.1.			

Classroom cleanliness

Finally, a strong correlation was found between classroom cleanliness and class size, although rational interpretation of this result is problematic, the data showing that the higher the number of students per class, the cleaner the classroom. Specifically, it emerged that 27.3 per cent of teachers whose classes comprised a relatively large number of students maintained a clean classroom, whereas, only 21.3 per cent of those whose classes were made up of a smaller number of students kept their classroom clean; and the difference is statistically significant (F=0.04, p<0.05).

Table 5-12. Cross tabulation of incentives and classroom cleanliness

		Not clean	Okay	Clean	Odds ratio
	Whole Sample	4.2%	70.7%	25.1%	
Timing of salary payment	Delayed during previous 12 months	3.8%	71.2%	25.0%	0.88
	Not delayed during previous 12 months	4.8%	70.6%	24.7%	
Student Behaviour	Bad	8.3%	83.3%	8.3%	0.21
	Okay	5.9%	67.6%	26.5%	
	Good	0.9%	74.1%	25.0%	
Commute time	<15 mins.	4.5%	71.2%	24.3%	0.98
	15–30 mins.	3.8%	71.8%	24.4%	
	>30 mins.	2.8%	66.0%	31.1%	
Class size	>=30	3.9%	68.7%	27.3%	0.04 **
	<30	4.5%	74.2%	21.3%	
INSET	No	3.7%	72.1%	24.2%	0.25
	Yes	11.5%	48.1%	40.4%	
School–community meetings	>= 6-monthly	6.3%	81.3%	12.5%	0.37
	< monthly	4.3%	66.5%	29.2%	
	<= monthly	3.6%	76.7%	19.7%	
Director's involvement in teachers' meetings	Infrequent	0.0%	50.0%	50.0%	0.74
	Frequent	0.0%	83.0%	17.0%	
	Always	3.9%	70.8%	25.3%	
Promotion	<= 4-yearly	3.9%	59.6%	36.5%	0.32
	3-yearly	7.3%	67.3%	25.5%	
	>= 2-yearly	3.3%	75.6%	21.1%	

LLR   Calculated by chi-square test for all variables except class size.

Class size variable tested by ANOVA.
***<0.01, **<0.05, *<0.1.

5.5. Regression Analysis

5.5.1. Description of empirical model

To investigate relations between incentive-related factors and teacher motivation, the study primarily utilised a logit model for binary variables, an ordered logit model for ordinal variables, and a liner regression model for continuous variables (Long 1997). The first two models – logit and ordered logit – were most commonly used as most of the variables were categorical, either binary or ordered. As the logistic function f(z) ranges between 0 and 1, probability in the logit model and ordered logit model is always a number between 0 and 1. In the present context, such a probability shows relations between teacher motivation, and context-, incentive- and characteristic-related factors. However, this paradigm does not always hold true in respect of a liner probability model, which is why the logit and ordered logit model were most commonly applied in this study.[48] In addition, the study utilises a linear regression model for one set of two continuous variables in seeking to analyse the results of classroom observations in the gauging of teacher motivation.

5.5.2. Stepwise regression

The study adopts stepwise regression in exploring the relationship between dependent and explanatory variables more rigorously, as this approach suggests a semi-automatic procedure for the choice of statistical model in cases in which there are a large number of

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[48] Although there is no substantive difference in results between logit and probit models, this study applied the logit and ordered logit models, as odds ratios was utilised for simpler interpretation of coefficients.

potential explanatory variables and no underlying theory on which to base statistical model selection (Efroymson 1960; Darper and Simith 1981; Gleaton 2014).

The study developed 19 possible explanatory variables and it is helpful to adopt a systematic procedure to the identification of the optimum model through consecutive adjustment, that is, by taking each variable in or out. The 19 explanatory variables belong to two frameworks – nine for the incentive model and another 10 for the context/characteristic model – with the variables in each category presenting different properties.

The stepwise logistic regression procedure selects subsets of parameters to test for possible elimination from the model. In general, if there is a collection of k possible explanatory variables, there are 2^k possible models to consider. Thus, as we have 19 possible incentive- context-, and characteristic-related explanatory variables, there are 524,288 possible models. It would be useful to have a model-development procedure that did not require consideration of all possible models, but, rather, made it possible to proceed in a systematic way and consider a relatively short range of probable models. Although there are some drawbacks to this approach,[49] it is an adequate means of obtaining the optimum model, as it utilises statistically significant variables that offer a more comprehensive explanation of variations in dependent variables together with an efficient procedure for identifying them.

The procedure is presented below in three steps: (i) incentive model, (ii) context/characteristic model, and (iii) integrated model. It develops a parsimonious regression model through utilisation of a logit model, ordered logit model, and linear regression model for the purposes of explaining the variation in dichotomous, ordered,

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[49] Roecker (1991) points out that this approach tends to lead to an oversimplified dataset and, consequently, analysis; and Wilkinson and Dallal (1981) also argue that the tests conducted with this approach are biased as they are all based on the same data.

and continuous dependent variables respectively, in terms of the subset of a large pool of possible explanatory variables that are either categorical or continuous (Hosmer & Lemeshow 1989).

Step 1: Incentive model

This model proposes two sets of explanatory variables, that is, X1 (incentive model) and X2 (context/characteristic model), and several dependent variables, namely, Yi (proxy variables to assess level of teacher motivation). In terms of the incentive model, firstly, I looked at the correlation between Yi and each explanatory variable X1 using a univariate regression model to test for significance. Secondly, I selected variables for the multivariate analysis. Any variable whose univariate test shows a significance at the level of ten per cent (p-value <0.1) is considered for inclusion.[50] Thirdly, once relevant variables X1 had been selected through univariate regression for X1, I could perform a multivariate regression with these selected variables in a stepwise regression. This meant regressing Yi on each of X1 explanatory variable in order of them rank by strength and significance.[51] Relevant variables X1 were thus set for the incentive framework.

Step 2: Context/characteristic model

In the context/characteristic model, I repeated the same process with the univariate regression model to determine the correlation between X2 and Yi, followed by a

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[50] Use of a p-value of 0.05 often failed to include variables known to be important, while a 0.25 value tended to include some variables of questionable importance (Mickey & Greenland 1989). The present study adopted the inclusion of scientifically relevant variables to a certain degree, and thus used a value of 0.1 as the minimum significance threshold for the univariate analysis, and a value of 0.05 for the multivariate analysis.

[51] For example, suppose we have three variables Y1. Firstly, regress X1 and top ranked Y1. Then regress X1 and top 2 ranked Y1. Finally, regress X1 and all three Y1 variables. Through this process, we can determine the strength of correlations between each variable.

multivariate regression model with selected variables. Relevant variables X2 were then selected for this model.[52]

Step 3: Integrated model

With the completion of the analysis utilising incentive and context/characteristic models, I moved to multivariate analysis with the integrated model, that is, linear logistic regression to examine the relationship between the selected X1 + X2 and Yi. These three steps were repeated for all seven dependent variables to measure the influences of context, incentives and characteristics on motivation. Full details of the stepwise analysis process are provided in Appendix II.

Figure 5-4. Stepwise model process.
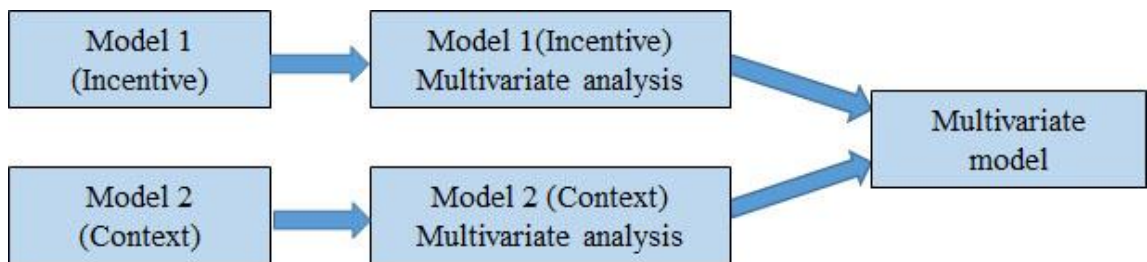
5.5.3. Identification of mediating factors

The results of the stepwise analysis can be used to answer the question of how context-, incentive-, and characteristic-related factors correlate with teacher motivation. Next, I made another stepwise analysis to determine how context- and characteristic-related factors mediated the relationship between teacher incentive factors and motivation:

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[52] The study also conducted multivariate analyses between selected incentive variables (through Step 1) and all context/characteristic variables (not through Step 2) in order to verify the robustness of the stepwise selection process.

Step 1: Select only significant X1 (variables under incentive model) for each Yi (proxy variable for teacher motivation).

Step 2: Conduct regression to examine the correlation between the selected X1, and Yi.

Step 3: Conduct regression to examine correlations between selected X1, Yi, and X2 (variables under context/characteristic model).

Step 4: Compare the X1 and Yi coefficients or parameters in steps 2 and 3. If a change of approximately eight percentage points or more is identified in the value of the parameter, relevant X2 variables are selected as potential mediators.

Step 5: Conduct a comparative statistical test of parameters to determine whether they are different from each other and to establish the significance of the mediator.[53] Full details of the analysis mediation process are given in Appendix II.

5.5.4. Regression analysis for teacher motivation (by all teachers, mid-career teachers, and newly assigned teachers)

As reviewed above, 9 incentive-related explanatory variables, 11 context- and characteristic-related explanatory variables, and 6 dependent variables were established to measure teacher motivation. The study undertook a regression analysis through the aforementioned stepwise approach, testing each dependent variable in order to answer the three questions outlined in Figure 5-5 below: 1. How are incentives and teacher motivation related? 2. Are there any context- or characteristic-related factors related to teacher motivation? 3. How do context- and characteristic-related factors mediate the relationship between incentives and teacher motivation? Summarised results of these

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[53] This study adopts with slight modification approaches to the measurement of effects of mediation utilised by Preacher and Hayes (2004) and Vandenabeele (2009).

analyses are presented here, while a more detail analytical explanation is provided in Appendix II.

The samples for these analyses were 1) all 676 surveyed teachers, and 2) the 284 observed teachers. Additionally, separate analyses are provided based on two subgroups disaggregated by career stage: 'mid-career' (10–19 years' service), and 'new' (0–5 years' service). This was done on the assumption that the historical and social conditions under which the two categories of teacher respectively entered the profession differed to such an extent that length of service emerged as a strong indicator of motivational behaviour.[54] The sample size of mid-career and newly assigned teachers was 180 and 142 respectively. A summary description of the analysis is included in the main text while all figures and tables can be found in Appendix II.

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[54] As reviewed in Chapter 3, mid-career teachers had all grown up during extremely turbulent times and had entered the profession just after MoEYS was redeveloped following the new 1993 National Constitution. At that time, the main focus of MoEYS was to create education opportunities for as many students as possible through the provision of schools and trained teachers, a policy implemented as fast as possible in an attempt to get the system up and running again. Compared with the present situation, there were few job opportunities, meaning that many unemployed and unqualified individuals became teachers. In contrast, newly assigned teachers had grown up in a rapidly developing, peaceful society marked by strong economic growth. Graduating from secondary school in 2010, for example, many would have had several possible career paths, meaning that most of the younger teachers interviewed were more likely to have elected a career in teaching through choice.

Figure 5-5. Flow of teacher motivation, incentive and context
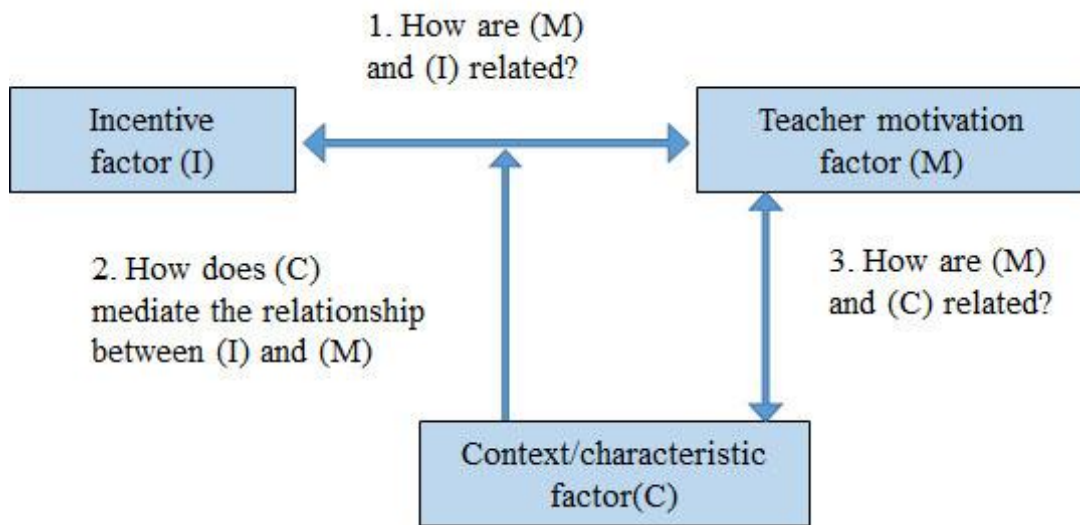
5.5.4.1. Teacher satisfaction

(i) Incentives

There are two significant incentive variables relating to teacher satisfaction: school director's support and student-to-teacher ratio. In terms of the first, it is safe to assume that if the school director actively supports his or her staff, the level of teacher satisfaction will increase. With regard to the second, the fewer students a teacher has in his or her class, the higher the level of job satisfaction.

(ii) Context and school characteristics

All surveyed teachers identified access to PRESET as a strong contextual factor that correlated with job satisfaction. However, understanding the influence of PRESET is not straightforward as some negative effects with regard to level of teacher satisfaction were also found. This may mean that those who had undergone the two-year PRESET course were less satisfied with their jobs than those who had only completed one year of training or less; or it could indicate that the former were not satisfied with their status as teachers

compared with other occupations that demanded roughly equivalent education attainment levels and aptitude. Additionally, no significant mediating factors were identified in respect of this correlation.[55]

(iii) Summary of mid-career teachers and newly assigned teachers

Findings reveal some differences if the two generations of teachers are disaggregated and analysed separately. The results suggest that mid-career teachers show a higher level of satisfaction the better the relationship with the surrounding community, as they may feel that they gain greater recognition from those living around the school. On the other hand, newly assigned teachers in particular tend to feel a higher level of satisfaction when they have a more proactive school director, perhaps because they need relatively more instructional support. In addition, new teachers tend to feel lower levels of satisfaction if they have second jobs out of school.

Table 5-13. Correlations between incentive-related factors and job satisfaction

Incentive/context	Whole sample	Odds ratio	
Satisfaction	Incentive	School director's support	4.443***
		Number of students per class	0.959***
	Context	PRESET	0.329***

***<0.01, **<0.05, *<0.1.

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[55] There are three possible factors – final secondary school grade, length of PRESET, and intrinsic motivation – that can mediate (i) the correlation between school director's support and teacher satisfaction, and (ii) that between number of students per class and teacher satisfaction. When these variables were included, the parameters of the two incentive-related factors (school director's support and number of student per class) changed more than 8 to 19 per cent, but are not statistically significant as a test of the hypothesis in question.

Figure 5-6. Flow of satisfaction-, incentive-, and context-related factors for all teachers
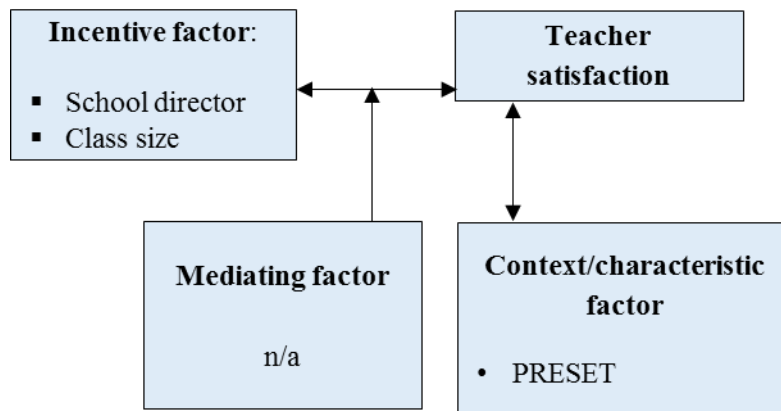
5.5.4.2. Teacher attendance

(i) Incentive-related factors

Community involvement is the only significant incentive variable among all teachers, and is also the single highest magnitude variable overall. If the school held a meeting with community representatives at least once a month, teacher school attendance tended to increase as compared with attendance at schools that held fewer meetings. This suggests that teacher attendance was enhanced by strong community involvement.

(ii) Context- and characteristic-related factors

Three context and characteristic variables show significant correlations with teacher school attendance: geographical location, private tuition, and a second job. In particular, it emerged that geographical location was a strong contextual factor: teachers working in rural and remote schools show lower rates of attendance than their urban counterparts. This suggest that there might have been particular problems associated with teaching in the countryside (e.g. natural disasters, poor infrastructure) and/or differences in lifestyle (many rurally based study participants engaged in farming as a second job and balancing this with their teaching duties might have been problematic during the harvest season)

that could not be mitigated by a good relationship with the community. Moreover, teachers in urban schools might have been under greater pressure to attend school regularly as, in general, parents in such areas tended to pay more attention to their children's education. Additionally, private tuition and a second job were identified as strong context and characteristic factors, but have different effects: private tuition was found to have a positive correlation with teacher attendance, while a second job presented a negative correlation. This is probably because private tuition is closely connected to regular teaching duties whereas a second job is not.

(iii) Mediating factors

There are three context and characteristic variables that mediate the correlation between school–community involvement and teacher attendance: geographical location of school, length of service in the same school, and a second job. When the first two were included, the parameters for community support were reduced by 10 to 16 per cent. In terms of geographical location, this is probably because the effect of such a location on teacher attendance is significantly negative regardless of any incentive-related factor (community support in this case). With regard to years of service in the same school, it suggests that the longer a teacher works in the same school, the less the effect of community involvement on teacher attendance.

On the other hand, when the second-job variable was included, the parameters for community support rose by more than eight per cent. This indicates that a second job has a positive effect on the correlation between community involvement and teacher attendance; and that, although a second job per se has a negative correlation with teacher attendance, when the community involvement variable is added, teacher attendance is enhanced if he or she has a second job (Table 5-14).

(iv) Summary of mid-career teachers and newly assigned teachers

The results of the regression analysis of mid-career teachers are, in fact, quite similar to those for the whole sample: community involvement and geographical location are significant factors. Yet, the results in terms of the regression analysis of newly assigned teachers show several significant divergences. Teachers tend to attend school more often the greater the extent of community involvement in school management, but the extent of this primary correlation lessens if the school is located in a rural or remote area in terms of analysis of the whole aggregate sample. In addition, the more years of service a teacher has in the same school, the greater the likelihood that he or she will attend regularly. However, none of these variables show similar degrees of significance in the analysis of the disaggregated younger cohort of teachers. Rather, newly assigned teachers tend to attend school when directors actively support them in their work, as well as when student behaviour is favourable.

These findings are corroborated by previous studies (Lefoka 2003; DeAngelis et al. 2013) which suggest that newly assigned teachers require support from the principal in the initial stages of their careers, while this group is also arguably the most sensitive to student behaviour.

Finally, one context and characteristic variable that mediated the correlation between student behaviour and the attendance of newly assigned teachers was found, namely, home village. In cases in which a newly assigned teacher was employed in his or her home village, the effect of student behaviour on teacher attendance was reduced by more than 17 percentage points.

Table 5-14. Correlations between incentive-related factors and teacher attendance

	Incentive/Context	**Whole Sample**	**Odds ratio**
Attendance	Incentive	Community involvement	4.906***
	Context	Geographical location	0.512***

		Private tuition	1.753**
		Second job	0.698*

***<0.01, **<0.05, *<0.1

Table 5-15. Significant mediating factors

Motivation factor	Incentive factor	Context factor	Coefficient*	Percentage of change	Test
Teacher attendance	Community involvement	None	0.363		
		Years working in the same school	0.327	-9.9%	***
		Second job	0.392	8.0%	***
		Region	0.136	-13.6%	***

***<0.01, **<0.05, *<0.1

* Coefficient figures are averaged if there are several orders.

Figure 5-7. Flow of attendance, incentive and context for all teachers
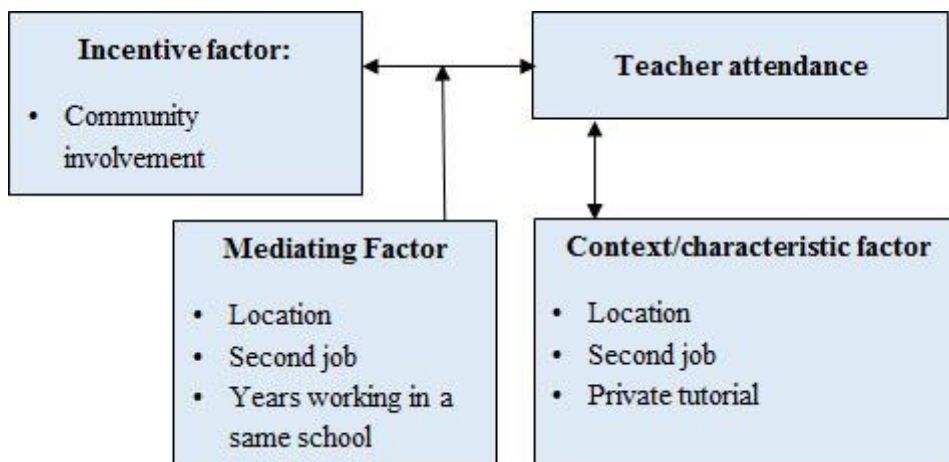
5.5.4.3. Interaction between teachers

(i) Incentive-related factors

Throughout the stepwise analysis, only one incentive variable remained significant: school director's support. Indeed, the more school directors attended teachers' meetings,

the more teachers tended to visit colleagues' classes. This finding is corroborated by previous studies which show that the school director's support is critical to the improvement of teacher behaviour (Mulkeen 2009; Darling-Hammond & Rothman 2011; World Bank Human Development Network 2012).

(ii) Context/characteristic and mediating factors

There was no context- or characteristic-related variable that was found to be significantly associated with teacher interaction. Conversely, four factors – double shift, second job, final grade, and intrinsic motivation – were identified that could potentially mediate the correlation between teacher interaction and school director's support. When these variables were included, the parameters for school director's support changed more than ten per cent. However these changes are not statistically significant as a test of the hypothesis presented.

 (iii) Summary of mid-career teachers and newly assigned teachers

Results were somewhat different for mid-career and newly assigned teachers. Mid-career teachers tended to interact with other teachers if student behaviour was good, school directors supported them, they taught in their home village, and/or their classes were comparatively small. In terms of newly assigned teachers, school director's support and good student behaviour were found to be two significant incentive-related factors, the former showing a high magnitude. Additionally, there were three significant context or characteristics variables that correlated with teacher interaction, namely, final grade, second job, and gender. This suggests that: (i) the higher the newly assigned teacher's final school grade, the more enthusiastic he or she was to engage in teacher interaction; (ii) newly assigned teachers who had a second job were unable to spend comparatively as much time in school after class, meaning that they tended not to conduct classroom visits; and (iii) newly assigned female teachers had either a higher level of motivation to learn, or tended to be more sociable towards colleagues.

Table 5-16. Correlations between teacher incentive-related factors and interaction

	Incentive/Context	All surveyed teachers	Odds ratio
Teacher interaction	Incentive	School director's support	4.301***
	Context	No significant factor	

***<0.01, **<0.05, *<0.1

Figure 5-8. Flow of interaction, context and incentives for all teachers
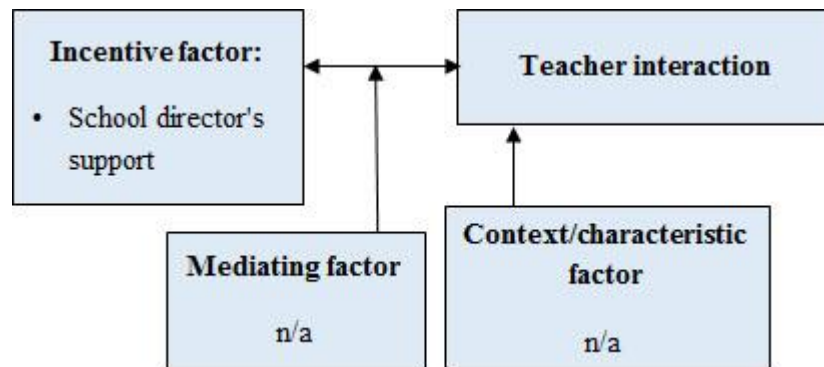
5.5.4.4. Lesson plan preparation

(i) Incentive-related factors

Two significant incentive-related variables were found for lesson planning: community involvement and promotion frequency. We have already seen the possibility of a similar principle in the correlation of community involvement with teacher school attendance, such that the closer and more efficient a school's relationship with the community, the better its teachers will behave. In this case, community involvement reveals the highest level of statistical significance: teachers at a school with a strong relationship with the

community are more likely to prepare lesson plans than those in a school with weak community relations.

The other significant incentive-related variable – promotion frequency – may suggest that if teachers are promoted (and their salary step rises accordingly) at least every two years, they tend to be more committed, as demonstrated in conscientious preparation of lesson plans. In this case, teachers who are promoted every two years or more tend to be twice as likely to prepare lesson plan as those who have been promoted less frequently. However, this indicator may contain some inherent biases: promotion can be both a cause and effect of diligence in carrying out one's duties.

(ii) Context and characteristic factors

Three significant context or characteristic variables were identified in relation to lesson plan preparation: double shift teaching, final grade completed, and gender. Firstly, teachers working a double shift tended not to prepare lesson plans as often as those who only work a single shift. This is logically intuitive as the former group often did not have sufficient time to write lesson plans. Secondly, teachers with higher final secondary school completion grades were found to be more likely to prepare lesson plans. Thirdly, male teachers were found to be less likely to prepare lesson plans than female teachers. In terms of mediating factors, no significant variables were identified in this correlation.[56]

(iii) Summary of mid-career teachers and newly assigned teachers

Results emerge as slightly different for mid-career teachers and newly assigned teachers. Among mid-career teachers, no significant incentive factors are identified. Instead, two

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[56] There are four variables – second job, private tuition, length of service, gender, and intrinsic motivation – that could mediate (i) the correlation between promotion frequency and lesson plan preparation, and (ii) the correlation between community involvement and lesson plan preparation. When these variables were included, the parameters of incentive-related factors (promotion and community involvement) changed more than ten per cent; however, these changes are not statistically significant, as the hypothesis test shows.

significant context/characteristics factors are identified: final grade completed, and PRESET (first one is discussed above). PRESET shows a higher magnitude correlation with lesson plan preparation. Among mid-career teachers, PRESET was not available to all. Here teachers who completed PRESET are much more likely to prepare lesson plans. In addition, among newly assigned teachers, no variable is identified significant.

Table 5-17. Associations between incentive factors and lesson plan preparation

	Incentive/Context	All surveyed teachers	Odds ratio
Lesson Plan Preparation	Incentive	Community involvement	9.872***
		Promotion	2.468**
	Context	Gender	0.374***
		Double shift	0.428**
		Final grade completed	1.234**

***<0.01, **<0.05, *<0.1

Figure 5-9. Flow of lesson plan, incentive and context for all teachers
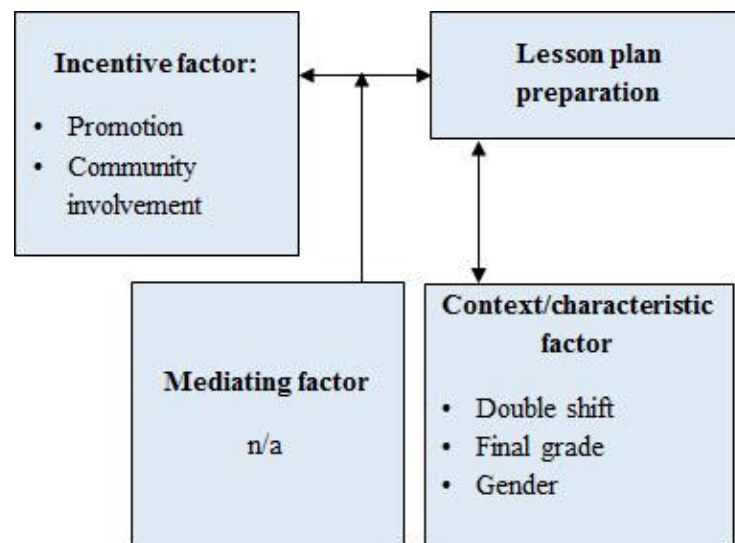
5.5.4.5. Classroom cleanliness

(i) Incentive-related factors

There were no significant incentive variables found to be correlated to classroom cleanliness for all teachers.

(ii) Context- and characteristic-related factors

Conversely, two context variables were found to be significant: geographical location and final school grade completed. This suggests that teachers in rural schools might have been less likely to maintain their classrooms than their urban counterparts. However, we should again note that there might be some inherent bias in these results: if enumerators had not been well briefed, they might have tended to rate cleanliness lower for rural and remote schools as facilities there usually tended to be older and more rundown than in urban schools. On the other hand, objectivity is more certain in the positive relationship between final grade completed and classroom cleanliness: the higher the secondary school grade attained, the more a teacher's classroom tended to be clean.

(iii) Summary of mid-career and newly assigned teachers

Results were somewhat different for the two career groups. Among mid-career teachers, school director's support was found to be a significant incentive variable, teachers tending to maintain the cleanliness of the classroom if they had such leadership. In addition, geographical location also emerged as a significant context factor among mid-career teachers (as discussed above).

Among newly assigned teachers, INSET was found to be a significant incentive variable. Perhaps this was because teachers tended to learn how to make their classrooms more attractive through INSET; or else these teachers simply tended to be more motivated by the INSET opportunities they had.

Table 5-18. Correlations between incentive-related factors and classroom cleanliness by whole sample

	Incentive or context	Odds ratio
Classroom cleanliness	Geographical location	0.322***
	Final grade completed	1.188**

**<0.01, **<0.05, *<0.1.

Figure 5-10. Flow of cleanliness, and incentive- and context-related factors by whole sample
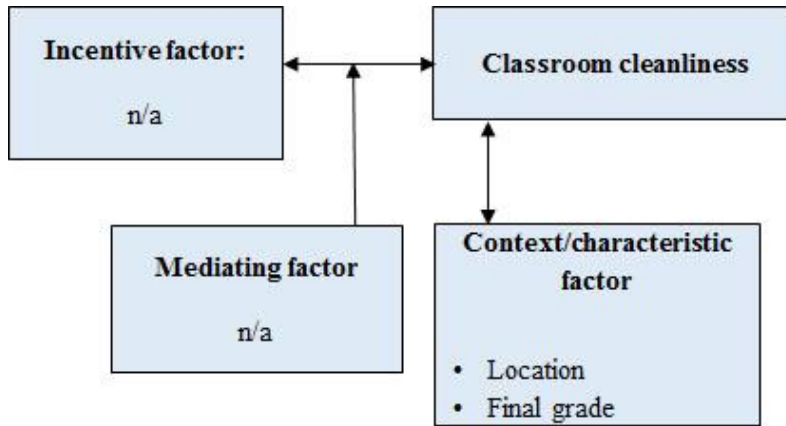
5.5.4.6. Classroom management I: active time[57]

(i) Incentive-related factors

One significant incentive variable was found, namely, school director's support: it seems that if a school director is active in supporting teachers, they are more likely to manage the classroom efficiently.

(ii) Context- and characteristic-related, and mediating factors

The PRESET variable was also found to be significant in terms of active classroom management. This suggests that teachers who under took a comparatively longer PRESET course tended to manage their classrooms more effectively.

(iii) Mediating factors

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[57] Time teachers spend on-task during a lesson.

There was one significant mediator – a second job – to the correlation between school director's support and active classroom management. This means that a second job would enhance the linkage between school director's support and effective classroom management (Table 5-20), suggesting that the effectiveness of the school director's support in terms of guidance to his or her staff in the efficient management of their classrooms was improved in cases in which a teacher had a second job.

(iv) Summary of mid-career teachers and newly assigned teachers

Results in terms of mid-career teachers and the whole sample are almost identical, but different with regard to the disaggregation of newly assigned teachers. Among mid-career teachers, school director's support and PRESET were found to be significant variables. Additionally, final school grade was also a significant characteristic variable in mid-career teachers in terms of active class management such that the higher the grade attained, the more effectively a teacher managed his or her classroom. Among newly assigned teachers, student behaviour was the only incentive variable identified as significant, which may again suggest the inexperience of newly assigned teachers in managing students who are not well behaved.

Table 5-19. Correlations between incentive-related factors and classroom management

	Incentive or context	**Whole sample**	**Coefficient**
Class Management (active)	Incentive	School director's support	0.244*
	Context	PRESET	0.091*

***<0.01, **<0.05, *<0.1

Table 5-20. Significant mediating factor

Motivation	Incentive	Context	Coefficient*	Percentage of change	Test
Efficient classroom management	School director support	None	0.208		
		Second job	0.238	14.2%	***

***<0.01, **<0.05, *<0.1

* Average coefficients where there are several.

Figure 5-11. Flow of class management, incentive and context for all teachers
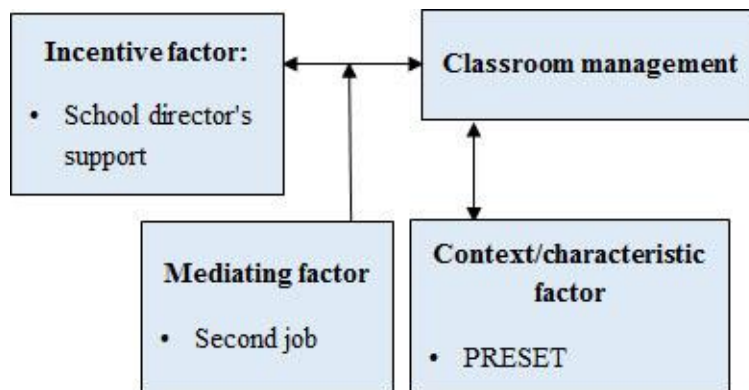
5.5.4.7. Classroom management II: Inactive time[58]

(i) Incentive-related factors

One significant incentive variable was identified that was related to the lessening of inactive time in the classroom, namely, INSET. It further emerged that recent participation in INSET could reduce such inactive time by nearly three per cent (similar to that in the case of classroom cleanliness). This may be because teachers tended to

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[58] Time teachers spend off-task during a lesson.

develop more effective pedagogical and management skills through INSET, or it could be simply because they were inspired to make a greater effort by such input.

(ii) Context and characteristic factors

Geographical location was found to be a significant context variable, it emerging that teachers in rural and remote schools had nearly three per cent more inactive time in the classroom compared with their urban counterparts. It is difficult to determine a single reason for this, but it highlights one of many aspects of the rural–urban divide in Cambodian education. Finally, there was no significant mediating factor found in respect of this correlation.[59]

(iii) Summary of mid-career teachers and newly assigned teachers

The study found similar results for the whole sample, be it mid-career or newly assigned teachers. As with the whole sample, INSET emerged as a significant incentive variable in terms of mid-career teachers. This suggests that INSET might also have provided useful input in classroom management techniques with regard to this group. Additionally, private tuition was found to be a significant context- or characteristic-related factor in respect of the mid-career teachers, suggesting that those who engaged in private tuition tended to manage their classroom more efficiently.

Among newly assigned teachers, there two significant incentive variables emerged, namely, INSET and school director's support. This suggests that the active participation of the school director in teachers' technical meetings as well as their recent participation in INSET can reduce the inactive time of newly assigned teachers in the classroom.

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[59] There are two factors – length of service in the same school, and private tuition – that could mediate the relationship between in-service training and classroom management. When these variables were included, parameters of incentive factors (in-service training and private tuition) changed more than ten per cent; however, these changes are not statistically significant, as the hypothesis test shows.

Finally, one context or characteristic variable, that is, double-shift teaching, was found to mediate the correlation between classroom management and INSET; which indicates that the impact of INSET on effective classroom management was reduced in cases in which newly assigned teachers worked two shifts.

Table 5-21. Correlations between incentive-related factors and classroom management

	Incentive or context	Whole sample	Coefficient
Classroom management (in-active)	Incentive	INSET	-0.030**
	Context	Geographical location	0.330***

***<0.01, **<0.05, *<0.1

Figure 5-12. Flow of class management, incentive and context for all teachers
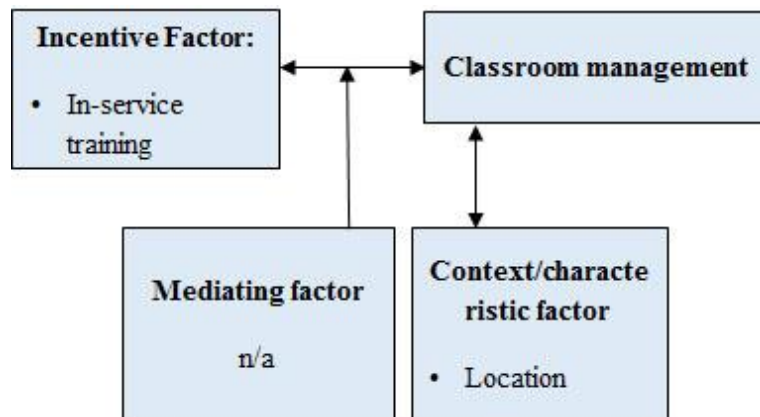
5.6. Overall Review of the Analysis

5.6.1. Statistical review

In the previous section, six integrated models were developed to analyse (i) correlations within and between incentive-related factors and teacher motivation; (ii) correlations between context and/or characteristics, and teacher motivation; and (iii) how context and characteristics mediate such linkages. At least one significant (p<0.01) incentive variable

was found for each model in the analysis; however, overall, these regression results show low R-squared levels (approximately 5–10 percentage points). This can be interpreted as a low degree of model robustness, that is, the extent to which the outcome is explained; but could also be due to a small number of valid observations (particularly in the case of classroom observations) and/or the limited number of variables selected by the stepwise approach.

5.6.2. Application of findings to theoretical framework

The results of the quantitative analyses both corroborate and contradict the study's overarching framework, reproduced below:

Table 5-22. Linking to theory

Maslow (1943)		Herzberg (1968)	Deci (1975)	Incentive-related factors	Other Factors
Hierarchical Needs Theory		Motivation Hygiene Theory	Intrinsic Theory		
5	**Self-actualisation** (morality, creativity, problem solving, lack of prejudice, acceptance of facts, etc.)	**Motivators** challenging work, recognition, responsibility, promotion, growth, etc.	Intrinsic components	Instructional supervision	Local Context, socio-economic context, school, colleagues, etc.
4	**Self-Esteem** (confidence, achievement, respect for others, respect by others, etc.)			Community support, training, promotion	
3	**Social/Love and belongings** (friendship, family, sexual intimacy)	**Satisfaction factors** status, work, remuneration, job security, working conditions, supervision, , etc.	Extrinsic components	Working environment	
2	**Safety needs** (security, employment, resources, morality, health, etc.)			Working environment	
1	**Psychological needs** (breathing, food, water, sex, sleep, etc.)			Remuneration	

Source: The author based on Maslow (1943), Herzberg (1968), and Deci (1975).

5.6.2.1. Responding to the framework

The results clearly show that only non-financial incentives present significant correlations with teacher motivation variables. This is most likely because the existing salary was too low to motivate teachers and there was no large disparity in the salaries of public primary school teachers with different qualifications and experience (as reviewed in the descriptive analysis above). Nevertheless, the lack of any performance-based payment system for teachers in Cambodia makes it impossible for this study to more deeply analyse the linkage between remuneration and motivation.

Six of nine incentive-related variables were found to be significant in the stepwise regression analysis presented above. It emerged that the school director's support was the single most significant incentive-related variable with regard to the whole sample, mid-career teachers as well as newly assigned teachers. Community involvement was found to be the second most significant incentive variable among these groups. However, this variable was not found to be significant in terms of newly assigned teachers, for whom, rather, INSET and working environment-related factors – student-to-teacher ratio and student behaviour – showed a strong correlation with teacher motivation, second only to the school director's support.

With regard to context and characteristic factors, geographical location was found to be the most significant in terms of the whole sample, followed by PRESET and final secondary school grade completed. However, no significant context or characteristic factors were identified more than once in respect of newly assigned teachers.

Additionally, a second job was found to be the most significant mediating factors to the correlation between incentive-related factors and teacher motivation (job satisfaction and effective classroom management) in terms of the whole sample. These two variables increased the magnitude of the original correlation between community involvement and school director's support. Finally, it emerged that intrinsic motivation to become a teacher

was a significant mediating variable among mid-career teachers, enhancing the correlation between INSET and classroom management.

We might interpret these findings in terms of Maslow (1943), Herzberg (1968), and Deci's (1975) theories, as follows: although primary basic human needs are not fulfilled in Cambodia, intervention at higher levels of administration and support, such as teacher training and school director's support, and community involvement, may still function effectively in some instances. Admittedly, although it is difficult to determine whether these higher level interventions effectively motivate teachers or not, some higher-level interventions were found to have strong correlations with some motivation factors even though basic needs remained unmet – that is, a living salary and good working environment have yet to be provided.

Lastly, intrinsic motivation was only found to be a significant factor in the specific case of mediating the correlation between INSET and classroom management among mid-career teachers.

The next section undertakes a more detailed analysis of major incentive variables.

5.6.3. Key incentive-related factors

Remuneration

The regression analysis failed to detect any significance in the remuneration variable. This is probably simply because levels of remuneration were too low and insufficiently varied to reveal any significant statistical correlation. If it is the case that levels of remuneration for Cambodian teachers are too low to have any effect on motivation, it is a particular feature of this context.

Payment of salary on time did not significantly correlate with teacher motivation either. However, such delays have consistently been raised as a major complaint by Cambodian

teachers (Tandon & Fukao 2015), which suggests that that timing of remuneration is a matter of strong concern but does not actually change teacher behaviour.

Working environment

One variable – commute time – was not found to be significant, although two other variables in this group – student-to-teacher ratio and student behaviour – emerged as significant with regard to certain motivation factors (student-to-teacher ratio and job satisfaction; student behaviour and interaction among mid-career teachers; student behaviour and attendance; and classroom management among newly assigned teachers).

In particular, the strong negative relationship between student-to-teacher ratio and teacher job satisfaction indicates that the lower the number of students per class, the higher the level of job satisfaction. However, the student-to-teacher ratio variable is not significant for most other teacher motivation factors. This may lend further support to Herzberg's (1968) insight: fulfilment of basic needs cannot motivate the employee, but, rather, can only reduce job dissatisfaction.

On the other hand, student behaviour presented strong correlations with interaction amongst mid-career teachers; teacher school attendance; teacher interaction; and classroom management amongst newly assigned teachers. Accordingly, can we say that working environment factors motivate teachers? The answer is both yes and no. Although good student behaviour is most likely to change teacher behaviour, the former in itself is insufficient to motivate teachers; rather, it can only pave the way for activities indicative of motivation such as visiting colleagues' classrooms and effective classroom management. One distinctive feature of newly recruited teachers is that their motivation was found to be comparatively more heavily influenced by student behaviour and/or student-to-teacher ratio (these findings are further discussed in synthesis in Chapter 7).

In-service Teacher Training

The recent INSET participation variable was found to be significant in relation to classroom management (across the whole sample) and classroom cleanliness (in newly assigned teachers). In particular, it bears a strong negative correlation with inactive classroom time for the whole sample. This indicates that INSET has a positive correlation with effective classroom management. This is the sole significant incentive variable over the three groups (whole sample, mid-career teachers, and newly assigned teachers).

Community involvement

The community involvement variable shows a comparatively strong correlation with three motivation variables: teacher attendance, lesson plan preparation (strongly significant), and job satisfaction (mid-career teachers). This variable is particularly significant in terms of mid-career teachers, in that community involvement correlates strongly with teacher satisfaction and attendance. Interestingly, among newly assigned teachers, no teacher motivation variable was found to be significant in relation to community involvement. This suggests that mid-career teachers may place more importance on community involvement and relationships compared with their younger colleagues.

School director's support

The variable of school director's attendance at teachers' technical meetings presents the strongest overall factor in the analysis of this section, and is the most significant variable across all three groups. Specifically, it was found to have strong positive correlations with (i) classroom management (all three groups); (ii) job satisfaction (whole sample, newly assigned teachers); (iii) teacher interaction (whole sample, newly assigned teachers); (iv) school attendance (newly assigned teachers); and (v) classroom cleanliness (mid-career teachers). Interestingly, only lesson plan preparation was not found to have any strong correlations with this variable – although school director's instructions would appear to

be initially very important in terms of the planning of lessons (these findings are further discussed in synthesis in Chapter 7).

Finally, the second-job variable was found to frequently mediate the correlation between school director's support and teacher motivation positively. This suggests that the effectiveness of the school director's support in terms of motivating his or her staff may be enhanced in cases in which a teacher has a second job.

Promotion

The promotion variable was found to have a strong positive correlation with lesson plan preparation in respect of the whole sample as well as newly assigned teachers in particular. This suggests that regular promotion every two years encouraged teachers to prepare lesson plans, although the possibility of inherent biases in this finding was highlighted as well.

5.6.4. Key context and characteristic factors

Eight of ten context and characteristic variables were found to mediate the correlation between incentive factors and teacher motivation factors. This is particularly true of seven key variables, namely, second job, geographical location of school, final school grade completed, PRESET, gender, double-shift teaching, and private tuition. These variables are also significant in the multivariate analysis of the integrated model.

Geographical location

The geographical location variable was generally found to have the strongest and most significant correlation with motivation factors in terms of the whole sample. Specifically, geographical location was found to be significant to teacher attendance, classroom cleanliness (whole sample, mid-career teachers), and classroom management (whole sample). This suggests that there remained large disparities between urban and rural

schools across a range of indicators. However, no motivation factors were found to have a strong correlation with geographical location with regard to newly assigned teachers. This may be explained by the fact that most newly assigned teachers were posted to rural and remote schools.

Final school grade completed

Final grade completed was found to be another strong mediator of several correlations between incentive-related factors and motivation. It also had a positive correlation with lesson plan preparation (whole sample, mid-career teachers), classroom cleanliness (whole sample), teacher interaction (newly assigned teachers), and classroom management (mid-career teachers). Although most newly assigned teachers had completed upper secondary school – other than those recruited through the local recruitment scheme – this variable remained strong in terms of mid-career teachers.

PRESET

PRESET was found to be a significant variable in mediating several correlations between incentive-related factors and motivation, namely, job satisfaction (whole sample), classroom management (whole sample), and lesson plan preparation (mid-career teachers). Job satisfaction showed a negative correlation with PRESET, meaning that those teachers who had undertaken the two-year teacher training course were less satisfied with their jobs than those who had received less preparation in terms of PRESET. However, such a negative correlation with job satisfaction notwithstanding, a longer PRESET course emerged as a strong positive mediator of the motivation factors classroom management and lesson planning. Finally, no significant variable emerged with regard to newly assigned teachers, as most individuals in this group had undertaken the full two-year PRESET course.

Gender

The gender variable was found to be significant in mediating the correlation between motivation and two incentive-related factors (school director's support and promotion). It also emerged as significant in terms of two motivation factors: lesson plan preparation (whole sample) and teacher interaction (newly assigned teachers). In respect of both motivation variables, female teachers were found to be more likely to present positive results than their male counterparts.

Double-shift teaching

The double-Shift variable was found to be significant in terms of the mediation of lesson plan preparation in correlations between teacher motivation factors and the two incentive-related factors community involvement and promotion. The double-shift variable emerged as having a strong negative correlation with lesson plan preparation. The former also emerged as having a negatively significant correlation with classroom management with regard to newly assigned teachers.

Second job and private tuition

The second job and private tuition variables were similar in that they both concerned teachers working out of school hours to earn an additional income; however, differences between were also found. Firstly, the second-job variable had a strong negative correlation with teacher interaction in terms of newly assigned teachers. This suggests that a second job was usually performed during a teacher's free time, and, as such, was thought to negatively affect teaching performance. On the other hand, private tuition was found to be significant with regard to teacher attendance at school across the whole sample. Thus, private tuition had a positive correlation with teacher attendance, while second job exhibited a negative correlation. This is most likely to be because private tuition was deeply connected with official teaching duties and, in some cases, was conducted on school premises.

Additionally, the second-job variable was found to mediate the correlation between community involvement and teacher school attendance, and that between school director's support and classroom management. In such cases, the second-job variable increased the magnitude of the original correlation. Thus, in cases in which a teacher had a second job, the effectiveness of the school director's support and/or community support in terms of motivation was enhanced.

Table 5-23. All significant correlations between incentive-related factors, context, and characteristics

		Whole sample	**Odds ratio**
Satisfaction	Incentive	School director's support	4.443***
		student-to-teacher ratio	0.959***
	Context	PRESET	0.329***
Attendance	Incentive	Community involvement	4.906***
	Context	Geographical location	0.512***
		Private tuition	1.753**
		Second job	0.698*
Teacher interaction	Incentive	School director's support	4.301***
	Context		
Lesson plan preparation	Incentive	Community involvement	9.872***
		Promotion	2.468**
	Context	Gender	0.374***
		Double shift	0.428**
		Final school grade completed	1.234**
Classroom cleanliness	Incentive		
	Context	Geographical location	0.322***
		Final school grade completed	1.188**
			Co-efficient
Classroom management (active time)	Incentive	School director's support	0.244*
	Context	PRESET	0.091*
Classroom management (inactive time)	Incentive	INSET	-.030***
	Context	Geographical location	0.330***

***<0.01, **<0.05, *<0.1

5.7. Conclusion

This chapter has analysed survey and observation datasets in terms of teachers, school directors, and community representatives. It sought to understand (i) correlations between teacher incentive-related factors and motivation; (ii) how teacher and school characteristics, and context factors mediate the correlations between teacher incentive-related factors and motivation; and (iii) correlations between teacher and school characteristics, as well as context factors and teacher motivation.

The chapter first explained how the TPS was conducted. This was followed by a description of all the independent and explanatory variables used in the study. It then developed a descriptive analysis to understand the variables and correlations between independent variables and some key demographic factors such as region and gender. It also conducted a cross-tabulation of incentive-related factors and teacher behaviour.

The chapter then proceed to describe the regression analysis to investigate correlations between teacher incentive-related factors and motivation with the application of a regression model through a stepwise approach. Accordingly, the chapter identified each of the three aforementioned types of correlation for six dependent variables (job satisfaction, school attendance, teacher interaction, lesson plan preparation, classroom cleanliness, and classroom management) in three groups: (i) whole sample, (ii) mid-career teachers, and (iii) newly recruited teachers.

Next, the chapter reviewed the overall results and reflected on the significance of the study's theoretical framework. It was found that of nine incentive-related factors, school director's support was the single most significant in terms of the whole sample; while school geographical location was identified as the most significant context variable related to teacher motivation factors. Additionally, second job and private tuition were identified as the most frequent meditators of correlations between incentive-related factors and teacher motivation. Referring to the theoretical framework, it was observed

that some higher-level factors presented strong correlations with some teacher motivation factors without necessarily fulfilling basic needs.

The next chapter now moves on to report and analyse interview results in terms of both newly assigned and mid-career teachers. The aim is to understand more deeply the correlations between context, teacher and school characteristics, incentive-related factors, and degree of teacher motivation.

CHAPTER 6.   Case Study on Teacher Motivation

6.1. Introduction

This chapter provides a complementary perspective on the issues around aspects of teacher motivation addressed in the thesis thus far, drawing on qualitative data obtained through interviews with teachers, school directors, and DEO officers. Section 6.2 introduces the general approach and specific methods utilised in conducting the interviews, namely, objectives, sampling process, interview protocol, and main, semi-structured questions used. Section 6.3 introduces several perspectives on existing levels of teacher motivation and summarises the contents of each interview. Section 6.4 describes several emergent themes arising from the interview data. Section 6.5 then reviews the analysis to identify key factors. Finally, Section 6.6 concludes by explicitly linking back to the study's overarching theoretical framework, and discussing the significance of the findings in light of the RQs.

6.2. General Approach and Specific Methods

6.2.1. My positioning within the research context

My positionality in respect of this research project must be acknowledged at the very outset: throughout the duration of this study, I was employed by the World Bank, Cambodia. Naturally, the status differences inherent in this position could have increased the risk of bias whilst conducting interviews. As all interviewed teachers had been exposed to the same wider survey and their classes observed, and MoEYS (not the World Bank) had sent letters to each school notifying them that a research team would visit in order to follow up the former activities, I believe that I was regarded as a researcher rather than World Bank staff member.

Before beginning each interview, I reassured the participant that my presence did not constitute official supervision, a school visit, or evaluation exercise, but was to conduct a study in collaboration with MoEYS aimed at generating future policy proposals. Most interviews were conducted in a private room in the school, except in the cases of two teachers who worked at remote schools that were too far to be reached within the limited time. In the latter cases, interviews were conducted at the DEO and in a cafe in the centre of the village respectively.

Only the interviewee, a translator, and I were present at each interview. Each semi-structured interview lasted approximately one and a half hours, and was conducted in English with a simultaneous Khmer translation. Each interview was audio recorded, but only after gaining prior participant permission (one teacher declined this and the interview was therefore not recorded).

6.2.2. Interviews with teachers

The study obtained data from a total of 284 teachers who answered the survey questionnaire and whose classes were observed. Of these, 18 (11 mid-career and 7 newly assigned)[60] were identified for the purpose of conducting further in-depth, one-to-one interviews. These 18 teachers were purposefully selected as representative – at least to some degree – based on the results of the quantitative analysis. They were assumed to be generally representative of the larger sample in at least three respects: (i) level of motivation as assessed by a set of key variables; (ii) education and geographical background; and (iii) general personal characteristics such as gender, education level, and career length.

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[60] The balance between mid-career and new teachers was determined by seeking to roughly match the same distribution as the questionnaire sample.

Specifically, among the selected mid-career teachers, all 11 had a Grade 12 school certificate, had successfully completed a minimum of a one-year TTC PRESET course, and had been teaching for between 10 and 19 years. Five of the mid-career teachers had shown a positive 'sign'[61] in terms of motivation level in the quantitative data, six were female, and six worked in rural schools.

Of the seven newly assigned teachers, all had undergone a two-year TTC PRESET course, had been teaching for less than 3 years, and had completed Grade 12 at the time of the administration of the quantitative survey.[62] Three showed positive signs for motivation in the quantitative data, three were female, and all of them worked in rural or remote schools[63] (see Table 6.1).

In addition to these 18 teachers, interviews with school directors and DEO officers were also conducted to respectively determine the extent to which school leadership had impacted on teacher behaviour and motivation, and the DEO functioned effectively (as discussed below).

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[61] Scoring in this regard was only 'positive or negative' based on answers to key survey questions, observation variables, teacher attendance, and lesson plan preparation. It should be noted that this sign is not the same as the score presented in Chapter 7.

[62] Quantitative survey data were collected between December 2012 and February 2013, while interviews were held between April for 11 mid-career teachers and 11 school directors and August 2014 for 7 newly assigned teachers and 10 DEO officers.

[63] In Cambodia, nearly all newly recruited teachers are allocated to rural or remote schools as part of the general government deployment policy. These teachers normally work there from three to five years (five years is the official minimum assignment to rural or remote area), then apply for a transfer to an urban school (Benveniste, Marshall & Araujo 2008).

Table 6-1. Mid-career teachers selected for interview[64]

Pseudonym[65]	Motivation Sign	Age	Gender	Length of service	Location	Final grade	PRESET
Ms Ravy	Positive	39	Female	19	Urban	12	2
Mr Sambath	Negative	40	Male	14	Urban	12	2
Mr Sodeth	Positive	34	Male	13	Rural	12	1
Mr Sitha	Positive	38	Male	18	Rural	12	2
Mr Sophea	Positive	37	Male	16	Rural	12	2
Ms Rotha	Positive	31	Female	11	Rural	12	2
Ms Rany	Negative	31	Female	10	Rural	12	2
Ms Rita	Positive	29	Female	10	Urban	12	2
Ms Romdul	Negative	36	Female	14	Urban	12	2
Ms Rotana	Negative	38	Female	18	Urban	12	2
Mr Sengtha	Negative	34	Male	13	Rural	12	2

Table 6-2. Newly assigned teachers selected for interview

Pseudonym	Motivation Sign	Age	Gender	Length of service	Location	Final grade	PRESET
Mr Chanthol	Negative	22	Male	2	Rural	12	2
Ms Phalin	Negative	23	Female	2	Rural	12	2
Mr Cheng	Negative	22	Male	1	Rural	12	2
Mr Chetra	Positive	21	Male	1	Rural	12	2
Mr Chinna	Positive	22	Male	2	Rural	12	2
Ms Phanna	Negative	24	Female	3	Rural	12	2
Ms Pheavy	Positive	23	Female	3	Rural	12	2

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[64] The tables are also presented in Chapter 5, but are reproduced here with one additional piece of information, that is, interviewee pseudonyms added for the convenience of the reader.

[65] For the reader's convenience, all mid-career male teachers' pseudonyms begin with the letter S and all mid-career female teachers' pseudonyms begin with the letter R. Likewise, all new male teachers' pseudonyms begin with the letter C and all new female teachers' pseudonyms begin with the letter P.

The primary objectives of individual teacher interviews were (i) to identify linkages between teacher incentives and motivation, (ii) to better understand the complexities of the interwoven processes that generate motivation in institutional, social, and historical contexts, and (iii) to determine if there were any linkages between these contextual and characteristic factors, and teacher motivation. For the first part of the semi-structured interview, a life history (Goodson 1985) methodology was employed that aimed to highlight the uniqueness of personal trajectories into a somewhat more uniform institutional context. The interview also aimed to illuminate subjective teacher experiences, and motivation for entering and remaining in the profession in richer social and historical contextual detail.

The main areas the interview focused on comprised: (i) reasons for becoming a teacher; (ii) changes in level of motivation since becoming a teacher; (iii) investment of time in the preparation of lessons, peer learning, following up slow learners, and other class administrative work; (iv) current level of motivation to work hard; and (v) plans over the next ten years in terms of remaining in the profession or not. In addition, at the end of each interview, each interviewee was explicitly asked to nominate two key incentive factors for increasing their motivation.

Through exploration of these areas, the study sought to analyse the trend in terms of the individual's motivation from the decision to become a teacher in the first place up to the present time. The aim was two-fold: firstly, I sought to identify current levels of motivation through proxy measures; and secondly, I wanted to understand what incentive factors could potentially increase these motivation levels.

6.2.3. Interviews with school directors and DEO officers

As in many countries, Cambodian public primary school education is managed by a line of management cascading down to school level: central Ministry, PEO, DEO, school

cluster and, finally, the school director. At school level, the director manages administration and teachers, and liaises with the community.

All school directors mentioned that although the central ministry defined the official duties of teachers through legal ministerial orders,[66] and outlining and promoting the Teacher Standards, actual day-to-day workloads were mostly determined and negotiated at school level. This means that individual teachers' duties had been determined by each local context and were likely to vary from school to school and teacher to teacher. It is thus clear that the school director and other school management bodies such as the DEO could and often did play a crucial role in managing teachers' quantity and mode of work, and level of autonomy. Given this situation, this study also conducted shorter, one-to-one interviews with 11 school directors and 10 DEO officers.[67].

Interviews with school directors aimed at: (i) understanding their duties and practices related to school management issues; (ii) comparing and cross referencing what directors and teachers said about motivation; (iii) understanding the difference between those who were motivated and those who were not; and (iv) understanding the degree to which school directors worked with their staff and negotiated the extent of teaching duties.

Main areas explored with DEO officers included: (i) school directors' methods of supervising and monitoring teacher behaviours such as attendance, classroom management, and lesson plan preparation; (ii) opinions on levels of and reasons for trends in teacher motivation in the district over the past five years; and (iii) methods of increasing teacher motivation.

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[66] For example, teachers are were legally obligated to work for 8 eight hours a per day, while in practice nearly all teachers work only 4 hours per day unless they are arranged as double-shit teaching.

[67] 11 school directors are selected from the same schools that interviewed mid-career teachers work. 10 DOE staff members are selected from district offices, supervising schools which interviewed new teachers work.

Through interviews with school directors and DEO officers, the study aimed to understand from a school management perspective the overall status of teacher motivation, its most important drivers, and related concerns. It also sought to determine how education policy interventions were implemented at district level via the existing central MoEYS administrative structure.

6.3. Current Levels of Teacher Motivation

6.3.1. Estimating levels of teacher motivation

This study sought to determine the individual teacher's motivation level through one-to-one interviews in three particular domains. Firstly, primary motivation for becoming a teacher was addressed by exploring life history, specifically, motivation for entering the profession, and asking each individual to outline his or her reasons for applying and pathway to a TTC, in order to determine whether this was through proactive choice.

Secondly, interviews attempted to understand motivation to remain in the profession over the long term. This was indicated by individual career goals, as well as responses to a direct question about each teacher's level of commitment to remain in the profession for at least ten years.

Thirdly, understanding was sought with regard to current level of motivation mainly though asking about three proxy indictors: (i) hours spent working on lesson plan preparation outside official working hours, (ii) degree of individual student support and follow-up offered to slow learners, and (iii) frequency of peer learning with other teachers[68] and overall desire for self-improvement. Interviews also explored teacher understanding in terms of the scope of their duties.

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[68] Although classroom visits could be seen as specific to the individual's leadership style, such visits are actually specified as required practice in the national, officially approved Teacher Standards (MoEYS 2014a) .

While it is possible that interviewed teachers might have distorted answers (purposefully or not) to questions on their behaviour and/or practices, the study attempted to ensure the robustness of linguistic data by triangulating it with supplementary data, including that gathered from school directors and classroom observations.

6.3.2. Overall findings on level of teacher motivation

Overall, most teachers interviewed felt that public primary school teachers were not well paid, worked under less than ideal conditions, and were not recognised as high status professionals in society (particularly in terms of male teachers). However, work motivation had of late been subject to an upward trend across all those interviewed. The reason appears to be the recent salary increase and overall fast pace of socio-economic development in the country. Yet, the vast majority of interviewed teachers (16/18) also indicated that further regular salary increases represented a key factor in keeping them motivated.

On the other hand, clear differences between teachers in terms of motivation patterns were apparent according to three criteria, namely, length of service, school location, and gender. With regard to length of service, motivation also varied between the two groups, namely, mid-career and newly assigned teachers. Specifically, (i) newly assigned teachers generally seemed to have had greater intrinsic motivation to join the profession compared with the mid-career counterparts; (ii) urban teachers tended to have greater day-today work motivation; and (iii) female teachers seemed to have higher levels of job satisfaction, while male mid-career teachers expressed greater levels of dissatisfaction with regard to their status (these points are further discussed in Section 6.6).

6.3.3. School director and DEO perceptions of teacher motivation

School director perceptions of teacher motivation

Most school directors (9/11) thought that levels of teacher motivation had gradually improved over time. The main reasons for this were (i) salary increase and (ii) increased support from the existing system of school monitoring (school director, school cluster, DEO).

However, less than half of interviewed school directors (5/11) mentioned a higher salary as the key to teacher motivation, while four asserted that teacher recognition was equally important. Three also contended that enhancing the working environment and fostering closer community support also served as important motivators.

DEO perceptions of teacher motivation

More than half of interviewed DEO officers (7/10) believed that increasing of teacher motivation was the dominant trend, while the other three suggested that levels of teacher motivation had decreased due to an insufficient salary. These three district officers were based either close to urban area or the Thai border: although most officers believed that teachers are not well paid compared with other professions, this perception was strongest amongst the former group, perhaps because such areas had a greater abundance of higher paying jobs. It seems that they based their perception of teachers' salaries in relation to those of other jobs rather than actual previous teacher salary levels, which have been steadily rising for the past five years (MoEYS 2015a).

6.4. Case Study Introduction

Aside from the wider contextually differing circumstances under which mid-career and newly assigned teachers entered the profession, each teacher had a unique background and his or her own reasons for becoming a teacher in the first place. Below, I offer short descriptions of the histories of 11 teachers (6 mid-career, 5 newly assigned), who were selected because they presented the clearest indications of commonalities and differences found across all 18 of the interviewed teachers. The aim was to establish a clearer picture

of the range of motivational drivers to be found in the teaching force. This is important in terms of the concluding discussion that links back to the theoretical framework guiding the study Appendix I includes full details of all teachers interviewed).

6.4.1. Six cases of mid-career teachers

Ms Ravy: Poor background, former recipient of Good Teacher Award

Ms Ravy (40 years old/unmarried/18 years' teaching experience) came from a poor household in a remote village in a predominantly rural province. At the time of the interview, she taught at a primary school in one of the many industrial districts of Phnom Penh. She held a second job on the school premises selling snacks and supported her parents financially.

When she was in Grade 7, she had to abandon her studies because her family needed her support both financially and in terms of taking care of the family. When her grandparents passed away, she was finally free to pursue a career of her choice. She had hoped to become a teacher from her childhood as her village had very few literate residents and teachers were highly respected by the villagers. She passed the TTC entrance examination on the second attempt. After graduation and becoming a public school teacher, she attended weekend courses and successfully obtained a Grade 12 certificate.

In 2012, after 17 years in the profession, Ms Ravy was officially selected by the PEO for the Good Teacher Award. This made her extremely pleased and boosted her motivation. She proudly declared, "*It is very important that teachers who work hard be recognised and highly evaluated by the school director, colleagues and parents in this way.*" She was convinced that she would still be a teacher in ten years' time.

The three main incentives for increasing teacher motivation Ms Ravy cited were a higher salary, better working conditions (facility and materials), and greater recognition. Being

from a poor family herself, she was particularly passionate about supporting children from deprived households.

Ms Rotha: Effective teacher from a family of teachers

Ms Rotha (33 years old/married/12 years' teaching experience) was from a family of teachers. Her father was the director of another school in the same district. He had been a strong influence on her career choice and, since childhood, she had always envisaged becoming a primary school teacher. She recalled, "*I applied only for Provincial TTC and did not explore any other career options as I just wanted to be a public primary school teacher after completing Grade 12.*" After two years at a remote primary school, she had been in her current posting, a rural school, for ten years.

She considered teaching to be an ideal profession, particularly for female teachers, because (i) it provided a stable additional household income in addition to that of any male spouse or other family member; (ii) it was fulfilling to see student growth; and (iii) it did not require long working hours, thus enabling her to spend more time with her family. Dissatisfaction with the low salary notwithstanding, she believed that she would remain in the profession until she retired.

She had been strongly motivated to become a teacher and still enjoyed a high level of job satisfaction. During the interview, she gave a strong impression of being very diligent and hard working. Furthermore, her level of commitment in activities associated with motivation (e.g. lesson plan preparation, follow-up with slow learners, and participation in peer-learning activities) was the highest of all the mid-career teachers interviewed for this study. Her conscientious efforts in elaborate lesson plan preparation particularly stood out (although these were self-reported, they were verified by the school director). This case suggests that the intrinsic motivation to become a teacher may derive from origins found deep within the teacher's family background, childhood, and/or adolescence.

According to Ms Rotha, the two main incentives for improving teacher motivation were greater recognition and a higher salary. Her answers approximated the most common responses among all mid-career teachers interviewed.

Ms Rany: Remote village background, later transferred to a school with a better working environment

Originally from a poor agricultural family in a remote village, Ms Rany (33 years old /married/11 years' teaching experience) went to an upper secondary school that was two hours away by bicycle. She had not imagined herself as becoming a teacher when she was at school, but joining the profession enabled her to escape the poverty and instability of subsistence farming. She studied hard and became the first literate person in her family. Moreover, she was the only student to graduate from upper secondary school in the whole village. Although teaching had not been her first choice of career, she wanted to study at the post-secondary level and TTC proved to be the only affordable opportunity of doing so.[69]

On graduating from TTC, she was first assigned to a school in a remote village. The working environment was extremely harsh, including factors such as low parental interest in education, low academic capacity of children (they often quickly forgot what they had learnt and lacked reinforcement), salary delays, shortage of teaching and learning materials, and the significant cost of commuting to school. Although her husband suggested that she leave the job due to the working environment, she persisted, not wanting to give it up as she felt that her efforts would have otherwise been wasted. And so Ms Rany continued to work there for another seven years, and noted that this was a particularly difficult period of her life.

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[69] All Cambodian TTCs offer tuition free of charge and provide a small stipend to all students, while there is no university that provides such benefits (MoEYS 2015a).

However, Ms Rany finally gained a transfer to her current school, which was in the urban area in which her husband worked: "*It surprised me that everything was completely different from my previous school,*" she recalled, "*community members were very supportive of the school, parents were very enthusiastic about education for their children, and there were sufficient teaching and learning materials!*" These factors led to a sudden increase in motivation, and I sensed that she was now even more committed to her teaching. She was certain that she would still be in the profession in ten years' time.

Although Ms Rany asserted that the two main incentives that would motivate teachers were a higher salary and more INSET, in her case, a better working environment seems to have been the decisive factor.

Ms Rita: Mid-career teacher working under a proactive school director

Ms Rita (31 years old/married/12 years' teaching experience) was assigned to a remote school as a newly assigned teacher, working there for four years. She then secured a transfer to an urban school and had been working there for eight years at the time of the interview. Ms Rita taught in the morning and then conducted private tuition with various students in the afternoon. Her motivation level appeared to be particularly high for two reasons. The first factor was an effective school director, who was widely recognised for his leadership skills. Ms Rita commented:

> Our school director has outstanding leadership skills and has built very tight relationships with parents of students. He has improved the school in many ways including provision of sufficient teaching and learning materials, deep involvement of parents in school management, raising a high amount of community funds to cover [the cost of] new school buildings and school buses, and encouragement of university study for all teachers.

Due to his strong leadership, teachers at this school had gained the trust of students' parents, and were keen to work hard. Ms Rita suggested that, as a result, most teachers at the school were like her in terms of motivation.

The second motivating factor was the improvement in her working environment when she had got her transfer. Like Ms Rany, she had experienced many difficulties in a remote school, including a shortage of teaching and learning materials, high student-to-teacher ratio, and lack of interest and hence support from parents. When Ms Rita was assigned to her current urban school, her motivation rose automatically as the working environment was better and most teachers at that school worked harder.

She became a primary school teacher because her first career choices of NGO officer or working in a hotel were difficult to attain due to her poor English, and because she had failed the secondary school teacher training entry test after she had got her Grade 12 certificate. This suggests that her initial motivation to become a teacher was not very strong when she completed her secondary education. However, she now really enjoyed her work and was satisfied with the steady income from MoEYS that was supplemented by private tuition.

Ms Rita's case is a good example of how strong school leadership can motivate teachers, as well as how demotivating it can be to struggle to teach in remote areas. Her interview highlights the positive effects of strong leadership, but the situation she enjoyed under her present school director might not last if the director left or she moved to another school.

However, although such leadership proved to be the decisive factor in her case, Ms Rita argued that the two main incentives that would motivate teachers were a higher salary and a better working environment.

Mr Sophea: Hard-working male, teaching in a rural school with good supervision

Mr Sophea's (39 years old/married/17 years' teaching experience) dream was to become a doctor, having spent three years attempting to enter medical school after he had graduated from upper secondary school. After he had given up trying to become a doctor,

he took up farming, as well as vehicle mechanics and part-time work as an electrician, but none of these jobs lasted very long. Although he was doubtful about becoming a teacher, his family recommended that he apply to TTC. He was accepted and so began his teaching career.

Mr Sophea reported that he liked teaching as it gave him a stable income and would provide a pension in future. He was unhappy about several aspects of the job, including the low salary, heavy workload, and low status, but believed he was nevertheless likely to remain in the profession for at least another ten years – although only because there were no other local job opportunities. Indeed, he admitted that, "*My life goal is not to be a teacher, but to support my family business and become successful in the business.*" As such, he seems to have a different central focus and his work as a teacher comes second.

Mr Sophea's wife had been a factory worker, but started a small business some time ago. Nevertheless, he worked hard at several jobs, namely, teaching a double shift at school, conducting private tuition in the evenings, and working as a motor cycle taxi driver during school long holidays.

Although on the surface Mr Sophea seemed too busy to do much in the way of lesson plan preparation, according to the school director, he was always well prepared for class. When asked directly, he was able to produce specimen lesson plans on the day of the interview.

Mr Sophea did not appear passionate about teaching and seemed to lack confidence. However, his commitment and motivation were among the highest for all interviewed mid-career teachers. One reason for this might be that his director was very experienced and provided substantial supervision. According to the latter, the DEO monitored the school frequently, checking teachers' work closely. This may indicate that school management and district monitoring can improve the effectiveness of teachers, even when they do not have a strong personal focus on their work.

According to Mr Sophea, the two principle incentives for improving teacher motivation were greater recognition and a higher salary.

Mr Sengtha: Mid-career male teacher motivated through positive relationship with his surrounding community

Mr Sengtha (35 years old/married/15 years' teaching experience) failed the Grade 12 final examination, leaving him with limited career opportunities after leaving school. He started work as a car mechanic repairing vehicles. However, his parents pushed him to find more stable employment, eventually recommending that he attend the nearest TTC. Although he did not consider teaching to be an ideal job, he believed that it was the only possible route to a job in the civil service.

Mr Sengtha had worked at his current school since 2005 and, at the time of the interview, worked, although did not teach, a double shift, meaning that he taught in the morning and did administrative work in the afternoon[70]. On top of this, he also farms on the weekends. He now likes his teaching work and describes himself as highly motivated. From the interview, I could feel that he seemed to be a responsible, committed educator. He is willing to continue as a teacher over the next 10 years. He recalled:

> When I was assigned to this school nine years ago, the teachers were not motivated at all. I think the former school director had some issues with community representatives and could not build a good relationship with the surrounding community. After the current school director was assigned, however, I observed that the relationship between the school and community greatly improved due to the director's strong leadership.

Mr Sengtha therefore believed that recognition from the community was the main factor in the improvement of teacher motivation, although he also thought salary and INSET

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[70] According to Mr Sengtha, officially double-shifted teachers teach for both morning and afternoon shifts, while this teacher teaches one shift only and does administrative work for another shift.

were major factors. However, in this regard, he did not foresee any major salary increase and felt that training would always be limited.

6.4.2. Five cases of newly assigned teachers

Mr Chinna: Strongly motivated to contribute to his hometown

Mr Chinna (24 years old/married/3 years' teaching experience) was accepted by the TTC as part of the preferential local recruitment scheme – the so-called '9+2 system' – when he was still in Grade 12. He had wanted to be a teacher since he had been about ten years old, even gaining some experience by teaching at a local temple when he was in Grade 10. This strengthened his desire to become a teacher, and he believed that teaching would be an avenue for enhancing his skills and experience.

At the time of the interview, he was in his third year as a teacher at a remote primary school. Overall, Mr Chinna enjoyed teaching and was highly motivated. He was also studying at the university at the weekends in order that he might become a secondary school teacher in the near future. Nevertheless, he was unhappy with his low salary and high workload. He also reported various difficulties at school, including a shortage of teaching and learning materials, lack of a culture of punctuality, and criticism from other teachers when he had attempted to use new teaching methodologies.

Although he reported that neither the school director nor DEO officers monitored his work frequently, he seemed to be self-disciplined and self-motivated. This seemed to be based on his strong desire to contribute to the development of his hometown and district: "*My long term goal is to be a secondary school teacher for my home district. Our secondary school is always short of mathematics teachers and students have problems in understanding the subjects.*" Another positive factor might have been timing: he had recently married, transferred to a school that his wife also worked at, and they were expecting a baby in the near future.

Mr Chinna was one of the two teachers who did not cite a higher salary as a key incentive to motivate teachers. For him, the two main incentives were a good working environment – including a manageable teacher-to-student ratio, and sufficient teaching and learning materials – and good community support. In his former school, collective community involvement had made a great impact on teacher effectiveness.

Mr Chetra: Newly assigned teacher with good supervision by the school director

Mr Chetra (23 years old/unmarried/3 years' teaching experience) was from a poor farming family and currently a teacher in a remote school. When he was still in Grade 10, he had applied to the TTC through the 9+2 local recruitment scheme. He decided to become a teacher relatively early in his life because (i) he had wanted to be a teacher since childhood, and (ii) he was worried that his family might not be able to support his schooling up to Grade 12. He explained that lack of money meant that he had a very difficult time at TTC, but he still enjoyed his studies, making a lot of friends.

Once he had graduated from the TTC, Mr Chetra was assigned to his current school, which was located in a remote area. At the time of the interview he had been there for three years. He taught a single shift only and had no second job. Although his salary was low and the school very remote, overall he enjoyed the job and seemed to be working hard. He explained, "*My school director is so supportive that he visits my class around three times per week, although he is very busy as he is also a school cluster director for six schools in the district. He also provides helpful advice not only on general administrative issues, but also practical teaching methods*."

Mr Chetra showed a high level of commitment: he seemed to prepare well for his lessons, learned from other teachers, and looked for any opportunity to study further. The latter was possibly not only due to his personal motivation, but also the dedicated support of his school director. He therefore cited the school director's support as a major factor in the improvement of teacher motivation, as well as a living salary.

Mr Chetra's experience as a newly assigned male teacher compares interestingly with that of Mr Cheng, described below. Specifically, Mr Chetra had sufficient monitoring and other support from his school director, while Mr Cheng was not monitored or supported either by the school director or DEO.

Mr Cheng: Newly assigned teacher motivated, but unmonitored

Mr Cheng (24 years old/married/3 years' teaching experience) had wanted to be a teacher since he was about ten years old, and asserted that he had not even considered any other career. Although he had wanted to complete Grade 12, he applied to the TTC local recruitment scheme when he was still in Grade 11 as he thought this would be his best chance of fulfilling his ambition.[71]

On graduation from TTC and assignment to a remote school, the realities he faced were far more difficult than expected. The worst obstacle was absenteeism among the students: anywhere between eight and ten children in a class of 40 did attend school regularly because they had to work on the family farm or else found outside agricultural work along the Thai border, where working conditions and wages were much better. Mr Cheng was also unhappy with the low salary, and had to engage in farming himself in the afternoons to make ends meet.

Mr Cheng seemed to work hard at school and was also studying in the hope of becoming a secondary school teacher in the near future, which he was confident of achieving within ten years. However, he also lamented, "*I don't have much support from my director or senior colleagues. My class is rarely monitored – maybe only a few times a year – by my school director and I have almost never had any instructional feedback on my pedagogical skills.*"

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[71] He passed the Grade 12 certificate examination after he had enrolled in TTC.

He also complained that his attendance was not monitored and nobody cared even if he was late due to bad weather. Given such a state of affairs, his improvement as a teacher had been achieved mostly through self-study rather than with any help from colleagues. As a result, he appeared proactive but rather overly self-assured. That is, in the absence of any feedback or support, he seemed to have grown in confidence on account of his own learning, even though he had no real idea of the quality of his work compared with other teachers in general or colleagues at his school in particular. In short, he seemed to have been highly motivated to teach, but lacked sufficient supervisory or instructional support.

According to Mr Cheng, The main incentives for improving teacher motivation were a higher salary and better working environment. These were the most common answers among newly assigned teachers, but his case also highlights the importance of the close supervision of this group.

Ms Pheavy: Young teacher with strong instructional support

As a young teacher, Ms Pheavy (25 years old/married/4 years' teaching experience) was from a family of teachers and her mother taught in the same district. She became a teacher after she had graduated from Grade 12 primarily because she had wanted to take up the profession for as long as she could remember. However, two additional contributory factors, that is, her mother's occupation and the family's economic condition, left her with little choice.

Ms Pheavy had been working at the same school for four years, teaching both morning and afternoon shifts. In the interview, she revealed a certain level of motivation to teach, even setting out her long term career goal of becoming a secondary school teacher. She explained that she naturally enjoyed taking care of children. Although she was too busy to write a lesson plan every day due to her heavy teaching load, she prepared for all the following term's classes during the holidays. She also followed up with slow learners.

She further noted, "*I get the most useful instructional support from district officers every two to three months. The school director and school cluster directors also visit me, but provide more administrative support.*"

Ms Pheavy contrasted her own high motivation with the many teachers she knew who were demotivated due to the comparatively low level of remuneration in that district.[72] Thus, the incentive most likely to motivate teachers according to her was a salary increase, together with an improved working environment, particularly in terms of lowering the student-to-teacher ratio.

Ms Pheavy's experience as a newly assigned female teacher compares interestingly with that of Ms Phanna (below). Specifically, Ms Pheavy seemed to feel that teaching was her calling, while Ms Phanna thought of it more pragmatically as a good choice for a professional career.

Ms Phanna: Ambitious young teacher engaging in private tuition and weekend study

Ms Phanna (26 years old/married/4 years' teaching experience) started to seriously consider teaching as a future career on encountering a particularly memorable and inspirational teacher when she was in Grade 12. She thus applied to TTC after graduating from upper secondary school. Just after completion of TTC, she was assigned to a school in disadvantaged area. It was difficult time for her as she could not commute easily or regularly due to recurrent flooding. However, after three years, she was transferred to her current posting, a rural school in a village not far from Phnom Penh.

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[72] The DEO officer in charge of Ms Pheavy's school also confirmed that teacher motivation in the district had been subject to overall decline.

Ms Phanna thought that general teacher motivation in her school had risen because student and parental commitment to education had improved, most students now aspiring to secondary school entrance. Ms Phanna also worked hard and enjoyed it very much. She taught the morning shift at school and conducted private English tuition in the afternoons. In addition to her teaching load, she was a part-time university student, and took care of the family and supported her husband, who worked in a parliamentary office in Phnom Penh. Nevertheless, she was determined to upgrade to a secondary school teacher within two years, and her long-term goal was to be a school director.

When I asked Ms Phanna if she found the time to prepare lesson plans, visit colleagues' classes, and follow up with slow learners, she answered, "*I am too busy to do all those tasks. I spend a few hours each week preparing lesson plans, but have no time to observe other teachers' classes or give additional support to slow learners. Everyone in my school is too busy to support, collaborate, and learn from one another.*"

Ms Phanna thought that the two incentives teachers would be most motivated by were a salary increase and improvement in the working environment. She particularly complained about being overloaded with work.

The case of Ms Phanna exemplifies the proactivity of young teachers working in schools close to urban areas as well as the pressure on their time. Although she appeared to be very industrious, given the pressures of family life and private tuition, she had no time to fulfil all the duties normally associated with motivated teachers such as follow-up with slow learners and engagement in peer-learning activities. Too many competing demands on her time meant that she was unable to demonstrate the kind of workload management skills usually associated with high motivation.

6.5. Key Themes Emerging from Interviews

I now seek to synthesise the linguistic data outlined above, focusing on emerging themes related to motivation. Specifically, I examine common incentive-, context- and characteristic-related factors (most of which are then reviewed and analysed again utilising the quantitative data in Chapter 7).

6.5.1. Incentive-related factors

6.5.1.1. Salary

Teacher's salary here is compared with that of other professions which demand similar qualifications.

As the above discussion repeatedly highlights, virtually all the teachers interviewed (16/18) cited a salary increase as the key to teacher motivation. When asked if they believed that salaries had improved much recently (in fact, in absolute terms, teachers' salaries have increased by ten per cent annually over the past five years)(World Bank 2011), most stated that they did not feel there had been any substantial increase as the cost of living had also risen at roughly the same rate.

Those who worked near Phnom Penh or close to the Thai border in particular emphasised the comparative dimension of their salaries: compared with other occupations, teachers' remuneration simply remained too low to motivate them. Those who worked in and around the capital repeatedly mentioned that there were many other jobs which commanded higher salaries, and those working in districts near the Thai border reported that even part-time agricultural workers who migrated to Thailand could earn three times the salary of a teacher.

Of the 18 teachers interviewed, two just taught a single-shift only without a second job or private tuition to augment their salaries. One was the female mid-career teacher, Ms

Rany, whose husband was a civil servant and, as they had small children, needed time for childcare, and her husband's salary was higher than hers. The other was a newly assigned young male teacher in a remote school who not do any additional work simply because there was nothing available. These results suggest that most teachers needed additional income. Although some second jobs comprised contribution to a family business, and double shifts were undertaken at the request of school director, most of this work is clearly a reflection of the low salary.

This seemed to be a particularly serious issue for mid-career male teachers who were typically household breadwinners. All male mid-career teachers interviewed had second jobs or conducted private tuition and three also taught a double shift. In contrast, all the female teachers interviewed, with one exception, only had one additional job: double shift, second job, or private tuition. As a Cambodian man is customarily expected to command a higher income (as in most developing countries), mid-career male teachers had no choice but to take on additional work on top of their regular teaching load.

Many teachers, school directors, and district officers interviewed agreed that the recent increases in teachers' salaries had motivated them substantially. However, several of those from the latter two groups also mentioned that a regular salary increase did not necessarily motivate all teachers equally: such an award could not differentiate between high- and low-performing teachers. Thus, a living salary level was important to teachers, but on the part of managers, the mechanism that provided pay increases was also an important aspect of teacher motivation.

When mid-career teachers were asked what their ideal salary was, several suggested USD 250.00. When asked the reason for this figure, they explained that it was tied to the national elections and opposition party manifesto: during the September 2013 poll, the opposition had cited this amount as a minimum. At the time, it was less than USD 100.00. After the election, in which the ruling party was re-elected, the average teacher salary was

increased to approximately USD 120.00(MoEYS 2015a). Yet, many teachers in the present study still seemed disappointed and expected it to eventually rise to USD 250.00.

On the other hand, second-job job income varied considerably. In the case of farming, some teachers cited an annual profit of just USD 200.00 to USD 300.00. Conversely, private tuition in urban areas seemed to generate substantially more, a few teachers reporting that they earned 150 to 250 per cent of their monthly salary (approximately USD 150.00 to USD 250.00) in this way. As private tuition was now endemic in urban areas and could provide a higher income than a teacher's regular salary, it might well have distorted motivation in localities with a strong demand for the service (this point is discussed further in Chapter 7).

6.5.1.2. Working environment

Working environment here encompasses the quality of school facilities, student-to-teacher ratio, availability of teaching and learning materials, student behaviour, and parental support for education.

A better working environment emerged as another key factor in increased teacher motivation. This was raised by many teachers regardless of age or gender, although nearly half of newly assigned teachers highlighted the issue of a large student-to- teacher ratio as well as poor school facilities (4/7).

In Cambodia, the public school teacher's working environment is often linked to the location of the school. As reviewed above, four mid-career teachers who transferred from remote areas to urban or less remote rural localities noted a significant increase in motivation as a result of the general improvement in working environment. conditions in remote schools usually have common features: low-quality or deteriorating infrastructure, a shortage of teaching and learning materials, a high student-to-teacher ratio, low

academic capacity of children, low level of parental interest and support, and poor living conditions (no provision of teacher housing, isolation from family and friends, etc.).

For example, Ms Rany explained that higher student capacity and parental support made all the difference in elevating her motivation after she had moved to an urban school. She noted that in the remote school, most students had not been able to retain learning and seemed to forget everything completely during in the holidays. She described this situation as the biggest contributor to stress and principle demotivating factor.

Three female teachers, Ms Ravy, Ms Rany, and Ms Rita, all of whom used to work in a remote school, also noted that poor quality school facilities lowered teacher motivation. They reported old school buildings which were typically dark inside, and equipped with low quality chairs and desks, no functioning toilets, and minimum teaching and learning materials. The working environment for both teachers and students was recognised as impoverished and demotivating.

Three of seven young teachers shared the same difficulty of high students-to-teacher ratio (45–50 children per class). In such conditions, they found it impossible to use the communicative teaching methodologies they had learned in TTC because there were too many basic classroom management issues.

In addition, seven teachers raised the issue of insufficient teaching and learning materials as a key factor in low teacher motivation. They pointed out not only the shortage of textbooks, but also the lack of materials for making teaching aids; and, of course, the dearth was most acute in rural and remote schools. One of the interviewed male teachers, Mr Sambath, complained that he would like to conduct the science experiments he had learned on a recent INSET course, but he could not due to the severe shortage of materials and scientific apparatus.

6.5.1.3. Recognition

Recognition here includes both official (e.g. the Good Teacher Award) and social (e.g. respect from the community and social status).

Official recognition

In terms of official recognition, there were distinct differences in perception between mid-career and newly recruited teachers. Among the former, recognition was regarded as the second most important motivating factor following a higher salary. Conversely, no newly appointed teachers rated recognition as highly.

For example, Ms Ravy, a mid-career teacher, asserted that ensuring fairness in recognition of hard work ranked as one of the most important support services a school director could provide for his or her staff: when she herself had received a Good Teacher Award, her motivation rose accordingly. Additionally, another mid-career teacher, Ms Rotana (see Appendix I), voiced her desire for more recognition from others, feeling that her work went unrecognised by colleagues, her school director, and the DEO. She also complained about lack of transparency in the Good Teacher Award selection process, as well as that for promotion.

Other teachers also mentioned that the selection criteria for the Good Teacher Award were not open or clearly defined. Interestingly, some district officers presented specific guidelines for teaching awards, although interviews with teachers and school directors suggested that they were unaware of such official criteria.

Although the Good Teacher Award selection process should be conducted in a more transparent manner, it does seem an effective way of motivating mid-career teachers.

Social recognition

As mentioned previously, mid-career male teachers generally believed that they received less recognition from society than other groups of teachers. For example, three male teachers complained that their demographic generally experienced difficulty in finding marriage partners due to the association of teaching with a low salary and social status.

In schools located in urban areas, there appeared to be a greater responsiveness of parents to teachers. This was because more teachers conducted private tuition after school hours in these localities and parents paid them directly for the service. In one sense, teachers gained a degree of respect if they performed well as parents in these areas were generally more involved in their children's education. However, here, there was a wider range of professions against which to compare the status of the public primary school teacher and his or her comparatively low salary.

By contrast, in rural and remote areas, relationships between parents and teachers solely depended on a teacher's standing in the community. If he or she was not from the community and/or did not live in it, such relationships were marked by very formal, institution-based interaction such as that at the school support committee (SSC). Clearly, if teachers were from or lived in the community, they had more opportunities to meet parents and students, informally as well as formally. Nevertheless, several interviewed teachers asserted that the school director was the main player in building a positive relationship with community representatives and parents.

Ms Rany pointed out that teachers could only gain recognition in places where they found a good existing school–community relationship: in the past, her school had a poor relationship with the community and so teachers not gained recognition from the community at that time. Currently however, under a new school director, the school–community relationship was much improved.

Mr Sitha mentioned that having transferred from a remote to a rural locality, in his experience, different schools offered different opportunities for recognition. In his

previous posting, he had not liked his work particularly because of the low level of respect that community members gave to teachers. He noted that the school had been surrounded by a rubber plantation and most children were from poor households. The community had not valued education, which had led to the low status of teachers. Moving to the rural school had changed his situation, and he thus argued that community recognition was key to teacher motivation.

These examples demonstrate that rural schools tended to command less recognition from the community, but that the school director could play a key role in building good relations (this theme is elaborated in the following section).

6.5.1.4. School director and school management system

Here, the school management system refers to the overall structure governing public primary education. In Cambodia, the DEO supervises primary education at the sub-national level while the school director manages the school at the grassroots level. Sometimes, the school cluster, which functions as an 'umbrella' covering schools in a given region, also support the monitoring system under the direction of the DEO. With the school management system as our starting point, I firstly explore the role of the school director, followed by that of the district officer.

The school Director in the management system

Many school directors contended that although they had limited influence on macro-policy issues (e.g. teachers' salaries, the wider working environment, student-to-teacher ratio, availability of teaching and learning materials, and the quality of school facilities), they were still in the best position to provide direct input on teacher motivation by (i) monitoring classes frequently and providing instructional advice; (ii) evaluating teaching performance in a transparent and objective manner; (iii) providing autonomy to teachers; and (iv) giving recognition and awards appropriately.

In terms of teachers' views on school directors, 8 of the 18 interviewed reported frequent supervision (i.e. at least one visit each week), while 7 teachers reported less frequent supervision (once a month or less). The sole teacher who believed that the school director's instructional support was key also reported very frequent supervision (three times a week). This suggests that the role of the school director was important and those who followed the existing guidelines on interaction and support made a definite impact on teacher behaviour and motivation. However, it is also clear that not all school directors were able to fulfil their duties properly because most of them were heavily overloaded with administrative as well as general school management responsibilities.

The director managed the school together with community representatives who formed the SSC. In general, the school and SSC conducted regular meetings to discuss management issues including school planning and financing. In this regard, the school director was also a key determinant of a good school–community relationship. Mr Sengtha in particular emphasised the key role of the school director in building a good relationship with the community.

With regard to the position of the DEO, most of its officers, (8/10) believed that of those with management responsibilities (i.e. school director, school cluster leader, DEO, POE and central ministry), the school director was the most influential in terms of teacher motivation. However, with only one exception, none of the teachers interviewed suggested that better support from the school director was a key motivational factor.[73] This apparent contradiction may suggest a substantial gap in the perception of the school director between DEO officers and teachers. Specifically, teachers wanted basic incentives such as a higher salary and recognition, while DEO officers believed that the school director could be more influential in raising the motivation of teachers even without these additional financial inputs.

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[73] Although several raised lack of supervision as a demotivator, I do not take this up here.

District officers in the school management system

More than half of DEO officers interviewed thought that the school director played the most important role in motivating teachers as they were in the best position to give instructional support, recognition to teachers, and also build a good relationship with the community. However, two DEO officers mentioned that they themselves were key as they provided the main support to the school director the implementation macro policies at the sub-national level. In addition, three DEO officers contended that Central MoEYS staff played a key role through the provision of teacher remuneration, teaching and learning materials, and teacher training, policy on all of which was designed at the central level.

DEO officers not only supported school directors, but also provide regular instructional support to teachers. Interviews with teachers and DEO officers revealed that some DEOs provided substantial technical input to teachers. However, monitoring practices differed amongst DEOs and their capacity to provide technical support varied widely.

Ms Pheavy mentioned that instructional supervision from the DEO was the most beneficial input to the improvement of teaching methodologies – the fact that DEO officers only visited her school once or twice each year notwithstanding. This contrasted with the more frequent but apparently less effective supervision of the school director, who provided more administrative advice.

Interviews with both Mr Sophea and his school director suggest that strong monitoring from the DEO increased teacher effectiveness. Mr Sophea did not give the overall impression of being a highly motivated teacher in the interview, but he showed above-average teacher effectiveness scores compared with other interviewed teachers. His school director emphasised that the DEO monitored the school and checked teachers' work very closely.

Both Ms Pheavy and Mr Sophea's schools were located in the same province, although in different districts. As such, although the guidelines for the DEO school monitoring system were consistent nationwide, we can conclude that degrees of implementation probably varied according to district. Interviews across different DEOs also suggest that there were significant gaps in teacher monitoring in the same province.[74] Nevertheless, such supervision was still useful: it is clear that the school management and district monitoring systems could improve the effectiveness of teachers even when they were undermotivated and worked in a relatively poor environment.

Overall school management system

In terms of the overall management system, the school director played a critical role in managing teachers, as well as building a relationship with the community. Simultaneously, the DEO provided management support to the school director and, in some cases, effective pedagogical support. Three DEO officers (of ten interviewed) also pointed out that it was the central ministry that took the lead when it came to determining macro policy such as teacher salary rises, improvements to the working environment, promotion of school-based management, and teacher recruitment and deployment; while DEOs and school directors implemented these policies at the sub-national level. Although each layer of the education system played its role in   enhancing teacher motivation, it was likely that the school director was the most influential actor in this regard.

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[74] The author also conducted interviews with other teachers in different districts of the same province, and their perceptions on DEO monitoring were found to differ, corroborating the finding that there was little consistency in DEO engagement.

6.5.1.5. INSET

INSET here refers to technical and management training opportunities for serving public school teachers. In Cambodia, there is no regular INSET system for teachers, unlike the firmly established state-run PRESET system (MoEYS 2015b).

INSET emerged as a key factor in the motivation of teachers, six interviewees suggesting that it was one of two key factors in this regard. This was corroborated by four (of ten) DEO officers. However, most of those from both groups noted that opportunities for INSET were currently provided on an ad hoc basis and usually concentrated more frequently on geographical areas of high exposure and easy access on the parts of international donors – particularly Phnom Penh and Siem Reap: the country's two most developed and easily accessible cities.

INSET was particularly favoured by younger teachers: three of the seven interviewed voluntarily attended university or English classes at weekends, while two others expressed a strong desire to go to university but had had to give up the idea due to geographical restrictions. However, such newly assigned teachers tended to show both a somewhat stronger desire for professional development – perhaps because they had greater ambition to move up the teaching ladder (e.g. become a secondary school teacher) – and had more free time to study and/or felt in need of additional training in order to meet the challenges of teaching.

Although not echoed as strongly by mid-career teachers, INSET was nevertheless the third most frequent incentive-related factor cited by this group in terms of increasing motivation (after a salary rise and recognition). Mr Sengtha stated that his motivation to work always increased after he had been on an INSET course as he had no other opportunities for professional development. In addition, all four mid-career teachers who nominated INSET as a key factor said that they would like to learn new teaching methodologies to improve their current teaching practice. Although none of the mid-

career teachers interviewed were currently attending university or any other further education institute (although two had completed degrees after becoming a teacher), they still showed a strong desire for more professional development opportunities.

6.5.1.6. Promotion

Promotion here means advancement within the category of civil servant. In the Cambodian civil service, there are four major ranks, three sub-ranks within each rank, and a maximum of 14 steps to each sub-rank. This system is applied universally to all civil servants, including teachers (Council for Administrative Reform 2010) In theory, teachers can be promoted one step every two years.

Only two teachers (1/11 mid-career; 1/7 newly assigned), two DEO officers (of 10) and one school director (of 10) suggested that promotion was one of the two main factors with regard to teacher motivation. Thus, it was actually the second least popular incentive factor cited by teachers themselves.

One female mid-career teacher asserted that promotion met two key demands of teachers, namely, recognition and increased remuneration. However, several school directors argued that promotion per se would not motivate teachers very much because an advance of one step in the ranking meant only a small salary increase. Other school directors noted that promotion was significantly linked with length of service and most teachers were promoted every two years regardless of performance. In addition, some teachers complained that the promotion criteria were not clear and the entire procedure is neither transparent nor fair. In general, interviews revealed that promotion was not a favourable policy amongst school management, as it was seniority based and regularisation of implementation was in need of improvement.

6.5.2. Context and characteristic-related factors

This section focuses on how school context- and teacher characteristic-related factors were broadly linked to teacher motivation and incentive-related factors, including (i) the nature of the linkage between these factors and teacher motivation, and (ii) how context and characteristics mediated the relationship between incentive-related factors and teacher motivation.

6.5.2.1. Career length

Overall, newly assigned teachers seemed to have higher motivation than mid-career teachers in terms of the intrinsic drive to upgrade their skills and comparatively poor working environments (all newly assigned teachers were assigned to rural or remote areas, while some mid-career teachers had secured postings in urban areas).

Among those interviewed, more newly assigned than mid-career teachers also seem to have had the intrinsic motivation to join the profession. The majority of the former (5/7) had wanted to be a teacher since childhood and had not considered other careers before applying to TTC. In contrast, only 3 of 11 interviewed mid-career teachers had wanted to join the profession since childhood and not considered other options. While on the one hand, this is hardly surprising given that younger teachers tended to be more intrinsically motivated, having chosen teaching from a more diverse range of careers than their older counterparts, on the other hand, this finding is somewhat unexpected given that it would be logical to assume that mid-career teachers were more intrinsically motivated as only those with such an inner drive would be expected to remain in the profession for more than a decade.

However, from yet another vantage point, mid-career teachers might have tended to remain in the profession not necessarily because of higher motivation levels, but owing to the absence of a better alternative, or high levels of job satisfaction among lower

performers (comparatively short working hours, a stable income, no rigorous monitoring system, etc.).

Moreover, five out of seven newly assigned teachers expressed the desire to advance to the position of secondary school teacher in the near future. Conversely, only 2 out of 11 mid-career teachers expressed the same ambition. Likewise, three newly assigned teachers had taken the initiative to enrol in a private education institution as a means of facilitating career advancement.

Given that, as previously noted, most new graduates of TTCs were initially deployed to rural and/or remote schools, the higher level of motivation found amongst newly assigned teachers is noteworthy, particularly in view of the fact that all interviewed newly assigned teachers were currently serving in remote or rural schools that were invariably characterised by comparatively inferior facilities and support. By comparison, nearly half of mid-career teachers interviewed worked in urban schools at the time of interview.

Clearly, perceptions of key motivating factors differed. As reviewed above, all mid-career teachers cited a higher salary as the key motivator, while five of the seven newly assigned teachers cited the same factor. Although this difference is small, it may suggest that newly assigned teachers had an optimistic view of future salary increases as they had experienced annual increases since becoming a teacher.

There was a more striking difference in terms of recognition as a motivating factor: higher recognition was the second most popular key incentive-related factor among mid-career teachers (6/11), whereas no newly assigned teachers mentioned it. This finding suggests that mid-career teachers might have generally placed greater emphasis on contribution to others as well as recognition from others, as compared with their younger counterparts.

6.5.2.2. Geographical location

Overall mid-career urban teachers tended to have higher motivation levels than mid-career rural or remote teachers. Among the overall group, four reported an increase in level of motivation after transferring from a remote to an urban school. They ascribed this positive influence on motivation to (i) higher quality of school facilities; (ii) lower overall teacher-to-student ratio; (iii) stronger parental involvement in school activities and cooperation with teachers; (iv) higher esteem accorded to teachers by the community; (v) stronger management by the school director; (vi) harder working colleagues; and (vii) a higher level of support from district and provincial authorities.

Conversely, many newly recruited teachers described the rural or remote school in opposing terms with respect to the above contextual factors.

6.5.2.3. Gender

As noted in Chapter 2, for the purposes of this study, job satisfaction and work motivation are addressed separately. In terms of the former, gender-related differences emerged through the interviews that tended to accord with length of service: male mid-career teachers expressed greater levels of dissatisfaction as compared with their female counterparts with regard to their status as public primary school teachers. In many cases, this dissatisfaction seemed to impede primary work motivation. None of the five mid-career male teachers interviewed selected the teaching profession as their first choice of career and only two stated they envisaged themselves still in the profession a decade into the future. Three emphasised how male primary school teachers faced particular difficulty in finding a marriage partner as generally, people did not want their daughters to marry them due to their low income and/or status.

By contrast, overall high levels of job satisfaction were evident among mid-career female teachers, three of whom asserted that public primary school teaching was an ideal

profession for mothers who needed to take care of their families because of the short official working day (single shift), long summer holiday, and small but stable income. This observation hints at the popular image of the public primary school teacher as being particularly suited to middle-aged females.

The fact that these gender-related differences correlate with length of service becomes even more apparent when male teachers' views are disaggregated by this criterion: the initial finding that male primary school teachers were subject to a low social status does not hold true for newly assigned teachers, none of the four young males interviewed expressing dissatisfaction with their status. Even more strikingly, most of them expressed pride in passing the competitive TTC entrance examination. Recent salary increases and focus on education policy in the wider public and political discourse may have improved the image of the teaching profession amongst this younger generation.

6.5.2.4. Additional work

As reviewed, 9 of 11 mid-career teachers took on additional work in the form of either a second job, private tuition, and/or double-shift teaching. Those who carried a double-shift teaching load, a demanding second job or extensive private tuition seemed to have a lower level of motivation to teach.

Mr Sophea, Mr Sengtha, and Ms Rotana all complained about the heavy workload they faced because of double-shift teaching. They explained that their workload could sometimes literally double if they prepared for, taught, and fully followed up on all their classes in both shifts. Ms Phanna also complained of her heavy workload as she conducted private tuition every afternoon and needed to prepare for all the associated activities. However, there were some teachers who were highly motivated when conducting private tuition – that is, in spite of all the additional work this involved. For example, Ms Rita had a positive attitude towards the private tuition arranged by the school and community leadership. Thus, the impact of additional work on teacher motivation

does not represent a simple cause-and-effect dynamic: a point that is further developed in the next chapter.

6.5.2.5. Intrinsic motivation to become a teacher

One finding of the present study that does not feature in the existing literature on teacher motivation research in developing countries is that those who had aspired to becoming a teacher from childhood and went directly to TTC on leaving secondary school seemed to have a higher commitment to their current and future teaching. In other words, those for whom teaching was a calling had somewhat different motivation from those who had selected the profession when they were older and after careful consideration of other careers.

Accordingly, interviews revealed two distinctly different pathways into teaching, particularly within the group of mid-career teachers: (a) those with intrinsic motivation to become a teacher, and (b) those without intrinsic motivation to become a teacher.

Mid-career teachers with intrinsic motivation to become a teacher

Three mid-career interviewees expressed initial instinctive motivation to become a teacher: one male who taught double-shifts and two females, one of whom had a second job (Mr Sitha, Ms Ravy, and Ms Rany). The interviews made it clear – an understanding derived from a subjective sense that the subject was motivated which was gleaned from a cooperative, open attitude and the answering of my questions with confidence – that these teachers really enjoyed teaching and working with children.

These three commonly asserted that they had had the desire to become a teacher from childhood where all others interviewees cited different reasons. One teacher from a poor village, Ms Ravy, had really wanted to join the profession because teachers were highly respected in her village and her parents encouraged her in this ambition. Another

interviewee (Ms Rany) who had been born into a family of teachers had wanted to do likewise for as far back as she could remember. The last of the three (Mr Sitha) had also wanted to be a teacher from Childhood and had gained some experience of teaching in a temple when he was still only in Grade 7: experience that further inspired him to fulfil his ambition. This group also reported the highest levels of commitment to additional effort in terms of (i) lesson plan preparation and administrative work outside school hours; (ii) following up with slow learners; and (iii) conducting peer learning with colleagues.

However, there were some other mid-career teachers who appeared to be without intrinsic motivation but were nevertheless now highly committed. Therefore, high commitment to additional effort cannot be a singular and sufficient criterion for intrinsic motivation. In addition, all three teachers who had experienced intrinsic motivation to become a teacher answered that they still enjoyed their work and all planned to remain in the profession until retirement.

Mid-career teachers without intrinsic motivation

The remaining eight mid-career teachers (four males and four females) did not convey the same sense of intrinsic motivation to become a teacher in interview, but reported that they had chosen a career in teaching when they were about to leave secondary school or directly afterwards. However, this does not mean that they were not motivated or did not really want to work as a teacher. Rather, it simply means that they were different from the three aforementioned teachers in terms of initial intrinsic motivation.

Of the four male teachers in this group, two taught double shifts, one had a second job (farming for four hours a day), and the other engaged in private tuition after school. In terms of career path, only one had enrolled in TTC directly after leaving secondary school, while the other three had taken other jobs for between two and six years beforehand. With regard to additional effort, they tended to report comparatively short preparation

time and did not strive to engage in peer learning. In terms of career plan, the feelings of these four were evenly split: two were not sure if they would still be teaching in ten years' time while the other two did think so.

On the other hand, among the four female teachers, one taught a double shift and another conducted private tuition. In terms of career path, three went to TTC immediately after leaving secondary school and the remaining one was a contract teacher in her village after which she entered TTC. These four tended to make more additional effort than the males in this group: one reported the level of commitment associated with intrinsic motivation to become a teacher. With regard to career plan, all four presently enjoyed teaching and believed they would still be in the profession in ten years' time.

Thus, gender differences with respect to motivation are apparent in this group and females reveal comparatively high job satisfaction levels even though they do not show intrinsic motivation to become a teacher.

Younger teachers and intrinsic motivation to join the profession

As mentioned above, intrinsic motivation to become a teacher has been clearly identified, particularly in interviews with mid-career teachers. Three mid-career teachers presented much higher intrinsic motivation levels than others in this group, while nearly all younger teachers showed high levels of intrinsic motivation to become a teacher. In other words, the gap between those who were likely to have intrinsic motivation and those who were unlikely to have it are much smaller among newly assigned teachers than is revealed by a similar comparison of such a gap among mid-career teachers.

There are several possible reasons for this: (i) with comparatively more years of service, mid-career teachers were more aware as to whether they remained in the profession because it was a vocation or simply because it remained the most favourable occupation; (ii) TTC entrance was much more relaxed and attracted a larger diversity of individuals

in the late 1990s to early 2000s as teachers were in chronically short supply; and/or (iii) newly assigned teachers had already been screened by the TTC entrance examination from a pool of candidates all of whom actively aspired to a job as a teacher.

Nevertheless, there were five newly assigned teachers identified in interview as likely to have initial intrinsic motivation: three males (Mr Chinna, Mr Chetra, and Mr Cheng) and two females (Ms Pheavy and Ms Phalin). It is hard to explain exactly why these five were intrinsically motivated to join the profession. The most objective commonality among them, however, is identical to that in the case of mid-career teachers: they had wanted to be a teacher from childhood, albeit for different reasons.

For example, Mr Chetra, who came from a poor household, had wanted to be a teacher since he had been in primary school because he ardently desired a white-collar job, as opposed to traditional agricultural work, and teachers were highly respected in his village. The other male teacher, Mr Chinna, had also wanted to be a teacher since he was in Grade 4 or 5 and had taught in a temple when he was in Grade 10. He learned that teaching derived from lived experience and therefore waited until he was in Grade 12 before applying for a public teaching job. The other male teacher, Mr Cheng, had wanted to be a teacher since he had been in Grade 5 or so, and had not considered any other occupation. Currently, he seemed to be facing difficulties because although apparently highly motivated, he got little support from his school director or colleagues.

In terms of the females in this group, Ms Pheavy was from a teaching background and had naturally wanted to be a teacher since she was eight or nine years old. Ms Phalin (Appendix I) had also experienced a strong desire to become a teacher when she had been 15 years old and did not think about any other options when she completed Grade 12. She even attempted and passed the RTTC secondary teacher entrance examination the following year, although further advancement was subsequently not approved by MoEYS.

These five teachers also showed high levels of motivation with regard to proxy measures of additional effort (lesson plan preparation, follow-up with slow learners, and peer learning). In addition, all of them asserted that they currently enjoyed their work and planned to remain in the profession for at least a further ten years.

In addition to these five, two more newly assigned teachers were interviewed, one female and one male. Ms Phanna was a hard worker and really liked teaching, but this was not the job she had most aspired to in childhood: it seems that she chose teaching as a career option when she completed her secondary education. Mr Chanthol (Appendix I) had been a double-shift teacher for three years, but now seemed restless: he had aspired to a job with an NGO or in the field of tourism when he left school, but passed the TTC entrance test when he applied along with his friends. Thus, he was currently searching for other job opportunities as teaching was not his ideal career. One critical difference between this group and that with intrinsic motivation is that these two teachers did not show a high degree of devotion to their work. In other words, they seemed to work hard, but not to the extending of sacrificing their free time. However, the gap in level of intrinsic motivation between this group and the former is not large.

In summary, intrinsic motivation to become a teacher emerged as a strong influence on current teacher behaviour. Additionally, interviewees' accounts suggest that (i) intrinsic motivation is formed out of experiences or other factors that are not replicable, and therefore cannot be consciously generated or controlled; (ii) teachers with intrinsic motivation tend to behave much more effectively in the long term, (iii) the difference between those who are intrinsically motivated and those who are not is likely to be smaller amongst newly assigned teachers compared with mid-career teachers.

This finding is critical to the present study's analysis of teacher motivation, particularly in responding to its overall theoretical framework and RQs. At the same time, it is important to note that less than half of mid-career teachers interviewed were found to be

likely to possess intrinsic motivation, while more than half of newly assigned teachers were found to be likely to have such motivation. Given that the former group are clearly in need of greater input and support in order to improve their motivation levels, this suggests that education policy should perhaps target certain groups segmented by length of service.

6.6. Revisiting the Theoretical Framework

I now move on to discuss findings in terms of motivation factors emerging from teachers interviews in relation to the overall theoretical framework of the study.

Data clearly show that financial incentives are strongly and positively correlated with motivation, as explicitly indicated by 16 of 18 interviewed teachers. In particular, all 11 mid-career teachers stressed the importance of raising the salary. Additionally eight interviewees asserted that improving the working environment was a core factor in increased motivation. These findings suggest that basic needs were not yet met as far as these individuals were concerned.

Basic needs notwithstanding, many teachers cited advanced factors, specifically recognition and INSET. One third of all interviewed teachers (6/18) argued that either one or both of these factors were core motivators. However, will recognition emerged as an important factor amongst mid-career teachers (6/11), this finding contrasts starkly with that in terms of newly assigned teachers, none of whom highlighted recognition as a motivator.

We might interpret these findings in terms of Maslow (1943) and Herzberg's (1968) theories as follows: Given that public school teachers' primary needs have yet to be met in Cambodia, intervention at a higher level in the form INSET and/or official recognition may be effective in some instances. It is difficult to assess whether such higher level intervention motivates teachers to the desired level or not (as discussed in Chapter 5);

however, it can be concluded that some higher-level interventions are strongly correlated with some motivation factors without fulfilling basic needs. Although such a finding is not corroborated by Maslow's (1943) Basic Needs Hierarchy Theory, it does accord with Herzberg's (1968) Motivation-Hygiene Theory.

Moreover, intrinsic motivation to join the profession shows some clear influences on current classroom behaviour, particularly amongst mid-career teachers. This indicates that such intrinsic motivation is a strong teacher characteristic that mediates the relationship between incentive-related factors and motivation. Furthermore, intrinsic motivation is itself strongly linked with day-to-day teacher motivation – a finding that is corroborated by the intrinsic motivation conceptualisations developed by Deci (1975).

6.7. Conclusion

This chapter has reviewed the study's interviews with mid-career teachers, newly recruited teachers, school directors, and DEO officers to understand (i) the nature of relationships between teacher incentive-related factors and motivation; (ii) how context-related factors, and teacher and school characteristics mediate the relationships between teacher incentive-related factors and motivation; and (iii) relationships between teacher and school characteristics, as well as context factors and teacher motivation.

The chapter first outlined the general approach of the case study on teacher motivation, which conducted follow-up interviews with 18 of the original sample of teachers who had been surveyed and observed. It also discussed interviews with school directors and district officers, which were utilised to triangulate and refine these findings.

Details of 11 teachers' cases were then given in brief, including background, a short account of how each entered the teaching profession, current status of work and motivation level, preferred incentives, and other factors potentially related to motivation.

Thereafter, the chapter moved on to review key incentive-, context-, and characteristic-related factors that were found to influence teacher motivation. It was found that basic needs such as salary and an adequate working environment had not yet been met. However, INSET, and official and community recognition were likely to have a strong linkage with teacher motivation. In addition, the analysis identified how school management factors affected teacher motivation: There were legally ratified Teacher Standards, but each teacher's duties were largely determined by the school context, which might also be influenced at least in part by the teacher's intrinsic motivation level. The school director's role was seen as critical to the management of teachers; nevertheless, those who were interviewed did not raise the school director's support as one of two key incentive-related factors. Moreover, there emerged certain gaps between the accounts and opinions of school-level management (DEO officers and school directors) and teachers themselves with regard to the nature of the linkage between the school director's support and teacher motivation.

The analysis also identified a more complex relationship between teacher incentive-related factors and motivation around a diversity of variables such as career stage, geographical location, and gender. Among these: (i) newly assigned teachers tended to have higher levels of motivation; (ii) mid-career teachers required greater recognition in order to motivated them; (iii) rural schools required greater levels of basic support such as better facilities, more teaching and learning materials, and more teachers; and (iv) female teachers enjoyed higher levels of job satisfaction than their male mid-career counterparts. Lastly, it also emerged that intrinsic motivation to become a teacher was likely to be a strong characteristic that mediated relationships between teacher incentive-related factors and motivation.

The next chapter now synthesises the findings of chapters 5 and 6, and seeks to identify from different angles the relationships between incentive-related factors and teacher

behaviour that are most relevant to this study. In so doing, I continue to engage closely with the theoretical framework in more fully addressing the overarching RQs.

CHAPTER 7. Discussion: To What Extent Can Incentives Change Teacher Behaviour?

7.1. Introduction

This chapter synthesises the results of the qualitative and quantitative analyses in relation to several key themes, an intermediate step before explicitly answering the RQs in the concluding chapter. Section 7.2 elaborates on the justification for the mixed methods approach adopted in this study. This is followed by a conceptual discussion in Section 7.3 which focuses on several key incentive-, context-, and characteristic-related factors. Section 7.4 then moves on to develop four distinct patterns of teacher motivation, and, in so doing, interrelates external incentive-related factors and intrinsic motivation to become a teacher in one unified framework. Section 7.5 then returns to the overarching theoretical framework to understand how the empirical findings relate to the theoretical dimensions of the study. Finally, Section 7.6 summarises the key findings that emerged in the chapter.

7.2. Justification for Mixed Methods

As previously reviewed in Chapter 4, this study adopted a mixed methods approach. In so doing, it sought firstly to reveal macro patterns of correlation between teacher incentive-related factors and motivation by analysing quantitative datasets, and then secondly to move towards a deeper understanding of such linkages. The underpinning assumption was that teacher motivation is an individual psychological process that functions in a specific social context. Among several variations on mixed methods design, the study applied a sequential explanatory strategy (Creswell 2003), as detailed in Chapter 4.3.

7.3. Results Synthesis

This section focuses the discussion on the relationship between key incentive-related factors and teacher motivation by synthesising the results in respect of key context and

characteristic-related factors – i.e. length of service, gender, and geographical location of school – and incentive-related factors – i.e. salary level, additional work, working environment, social recognition, school management, and intrinsic motivation to become a teacher.

Each part of the discussion also aims to answer RQs 1 to 4 as follows:

RQ1: What is the nature of the relationship, if any, between teacher incentive-related factors and motivation in the context of Cambodia?

RQ2: What is the nature of the relationship, if any, between school context, teacher characteristics, and motivation?

RQ3: To what extent is the relationship between teacher incentive-related factors and motivation mediated by a variety of demographic, teacher and school characteristics?

RQ4: What are the implications of the links between teacher incentive-related factors and motivation for policy and practice?

7.3.1. Teacher incentive-related factors and motivation

7.3.1.1. Salary

As extensively reviewed in Chapter 2, as an incentive-related factor, salary must be central to any discussion on teacher motivation. Although there is an on-going debate around the possibility of incorporating a performance-based bonus element in Cambodian civil service salary calculations (CDC 2010), to date, a concrete policy has yet to be enacted. However, a teacher reform study in Indonesia (Chang et al. 2014) concludes that there are insurmountable difficulties associated with the implementation of performance-based payment schemes in developing countries. Therefore, the present study does not

discuss bonuses or other allowances that are directly linked with performance,[75] but, rather, focuses on teachers' overall remuneration.

The quantitative analysis based on the TPS dataset did not identify any strongly significant correlation between salary and increased teacher motivation – the salary level in all samples is quite flat. Additionally, no significant motivation variables were found to respond to salary level. However, interviews presented a strikingly different picture of this relationship. It is clear from interviewed teachers' responses that salary was considered to be the most important key incentive (16/18). In particular, all mid-career teachers (11/11) and all female teachers (9/9) explicitly raised the issue of salary. One concern is that only approximately half of school directors (5/11) raised a teacher salary increase as a key motivation factor. This suggests that there is a significant difference in perspective and perhaps opinion between school directors and teachers as to the most crucial teacher motivator. As such, the survey analysis and case studies yielded different pictures of the relationships between teacher motivation and their salary level: no significant relationship was identified in the survey analysis, even though most teacher raised it as the key incentive factor in the interviews (case studies). It is not clear that the higher salary would increase their motivation, but it is clear that teachers feel the salary level is currently too low.

In fact, the Cambodian public teacher salary level not only compares unfavourably with the domestic labour market – teachers are paid less than those in comparable occupations – but also neighbouring countries, as shown in Table 7-1 below (Tandon & Fukao 2015). Due to such a poor salary level, many teachers were forced to find other sources of income outside official working hours (discussed in the next section). Unsurprisingly, most

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[75] However, remote allowance is discussed in respect of the school's geographical location in Section 7.3.2.2.

teachers mentioned in interview that a salary rise would help reduce or eliminate the amount of such time-consuming and distracting additional work.

Figure 7-1. Monthly income of teachers as a percentage of income of other professionals, Cambodia, Vietnam, and Thailand, 2007/11
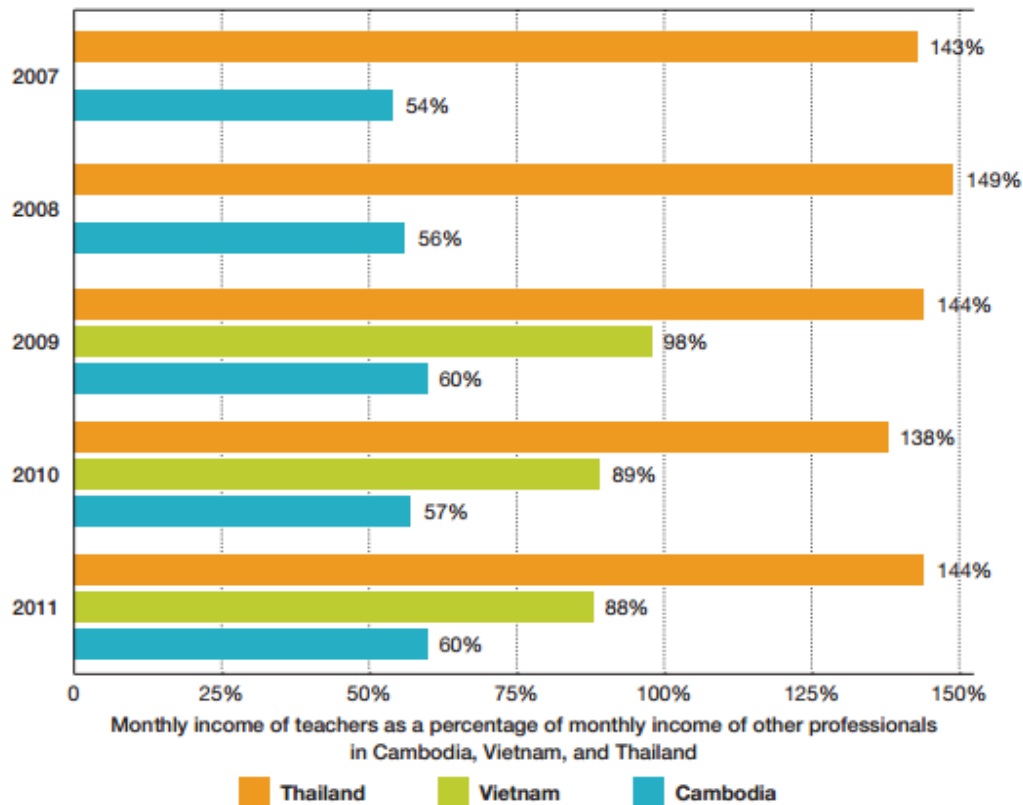
Source: Tandon & Fukao 2015

Existing salary levels were generally found to be too low to meet even the basic needs of teachers, let alone contribute to fulfil their basic needs. In this regard, it is notable that school directors seem to have failed to recognise how important this issue was to teachers, only 5 of the 11 interviewed citing a living salary as a key factor. Based on teacher interviews, an increase that brought a public primary school teacher's salary to the level of other similarly skilled work would definitely constitute a key incentive that would lead to increased teacher motivation in the Cambodian context, though it cannot guarantee sustained motivation.

However, we must also note that recent studies have found that salary rises have not led to improved teacher performance. For example Chang et al. (2014) adopt an experimental approach to their impact evaluation of the automatic salary rise upon teacher certification in Indonesia to show that an unconditional increase in remuneration did not lead to any significant improvement in teacher performance; rather, teachers responded to their new-found wealth by merely refusing to take on additional work and being less prone to financial difficulty. Such a salary rise also led to the increased popularity of the teaching profession among young secondary school graduates. Thus, teachers' welfare, well-being, and the attractiveness of the teaching profession improved, but not the actual performance of the current teaching force (Chang et al. 2014).

In Zambia, teachers have also experienced a rapid salary increase in recent years, but there has been no substantial improvement in the teaching performance monitoring system. Teachers now receive a higher salary, but the World Bank (2015) found no evidence of commensurately higher motivation or performance, as measured by the proxies of teacher attendance and student learning assessment. Accordingly, it claims that although a salary rise is effective in terms of changing the out-of-school behaviour of teachers and increased attractiveness of the teaching profession, increased remuneration alone does not directly translate into high motivation or high performance (World Bank 2015).

Additionally, the studies from both Indonesia and Zambia suggest that any salary increase should be coupled with an accountable performance appraisal mechanism to ensure a measurable gain in quality (i.e. teaching performance).

Overall, it can be concluded that this study may take the results from both survey analysis and case studies into consideration. This would mean that salary increase alone cannot be a sustainable motivator as backed up by the survey analysis and confirmed by examples from Indonesia and Zambia present, while the current level of teacher salary for

Cambodian teachers should be increased to fulfil the basic needs and provide some motivation increase as its case studies present and the regional comparison (Figure 7-1) backs up.

7.3.1.2. Working environment

As reviewed in Chapter 5, working environment influences teacher motivation, particularly in terms of class size and student behaviour: class size shows a significantly negative correlation with job satisfaction levels in respect of the whole teacher sample, and student behaviour shows a strong linkage with peer learning among mid-career teachers. The latter also shows a strong positive correlation with attendance, interaction and classroom management among newly assigned teachers. This indicates that teachers tended to experience job satisfaction when there were comparatively low numbers of students in classes. It also suggests that if student behaviour was considered acceptable, mid-career teachers tended to visit colleagues' classes to learn from them, and newly assigned teachers tended to attend school and remain on task in their own classes to a greater degree. This may be interpreted as indicating that good student behaviour does not necessarily motivate teachers, but it physically gives them time to visit colleagues' classrooms, as well as remain on task in their teaching.

The most distinctive finding in terms of working environment to emerge in Chapter 6 is the enormous difference between urban and rural or remote schools. Three mid-career female teachers noted that their motivation levels had quickly increased after securing a transfer from a remote or rural school to a more urban locality. They specifically mentioned the old infrastructure, fewer teaching and learning materials, less support from parents, less motivated colleagues, and relatively low academic levels of students that were pervasive in rural and remote schools. Additionally, three newly assigned teachers (3/7) pointed out the difficulty of managing high student-to-teacher ratios in rural and remote schools. Seven teachers (7/18) raised the issue of an acute lack of teaching and

learning materials. Lastly, four teachers (three of whom taught a double shift) complained about the heavy workload.

Findings from survey data presented in Chapter 5 also reveal strong correlations between school environment, and both teacher motivation and job satisfaction. Specifically, survey data pointed to a significant linkage between job satisfaction and teacher-to-student ratio. On the other hand, although interviews revealed a strong relationship between school environment and teacher motivation, the geographical location of the school in turn was found to be a very strong influence on working environment. Overall, the results of both study elements show that a poor working environment represents a significant obstacle to the motivation of teachers to work hard, and that geographical location is a strong determinant of working environment.

Furthermore, newly assigned teachers showed a greater sensitivity to larger class sizes as well as student behaviour, compared to their mid-career counterparts – as shown in the results presented in chapters 5 and 6. This is probably because the former were not experienced teachers, as well as a result of the inevitable gap between what they had learned in TTC and the realities they actually faced in the classroom. This trend appears to obtain in both developing and developed countries: Bennel and Akyeampong (2007) found that many teachers in sub-Saharan African countries lost motivation in their first postings if they had little or no induction and/or adequate professional development. Newly qualified teachers have also been found to face a range of other problems, particularly those related to classroom management, meaning that it is important to link PRESET, workplace induction, and continuing support (Lefoka 2003; DeAngelis et al. 2013). Finally, it has been pointed out that additional support for newly assigned teachers is effective in reducing stress and increasing motivation (Guarino et al. 2006). The results of the present study corroborate these earlier findings.

7.3.1.3. Recognition by school and community

I initially sought to understand how community involvement – engagement with school management issues in particular – relates to teacher motivation. However, findings from a report by a national NGO (NEP 2011), and later confirmed by the present study's interviews, indicate that school management in Cambodia is not yet fully integrated with the community, but is rather in the process of transition towards greater involvement. Therefore, as outlined in Chapter 5, the present study set the variable 'community involvement' with regard to the question, 'how often is a school management committee meeting organised between school and community representatives'. In interviews, it was commonly asserted that the frequency of meetings between the school and community largely reflected the state of their relationship, including the level of community recognition of teachers. That is, the more frequent the meetings the more likely it is that teachers feel being recognised by the community.

In Chapter 5, community involvement was presented as the second most significant incentive variable after the school director's support in respect of all observed teachers. This variable showed a strong positive correlation with school attendance (mid-career teachers), job satisfaction (mid-career teachers) and lesson plan preparation (all observed teachers).

However, the interviews presented in Chapter 6 indicate that the narrow concept of recognition initially utilised in this study should be broadened from 'community recognition' to 'recognition from both community and colleagues'. The results of the analysis in Chapter 6 also show strong positive relationships between motivation, and recognition from community and colleagues. Six teachers (6/18), four school directors (4/11) and four DEO officers (4/10) supported the proposal that teacher recognition is one of two key incentive-related factors in increased teacher motivation.

Across all groups (teachers, school directors, and DEO officers) recognition ranked as the second most popular incentive after a higher salary.[76] However, a distinct generation gap was identified within this overall trend: recognition was cited by more than half of mid-career teachers (6/11), while it was not nominated by any of the newly assigned teachers (0/7).

Thus, both quantitative and qualitative findings are in agreement: recognition from community and colleagues is a key incentive-related factor, but this is particularly so for mid-career teachers. This also raises the issue of differences in perception of recognition with regard to mid-career and newly assigned teachers, that is, any given teacher's age was closely linked to the resonance of recognition as a motivating force. Overall, it appears that incentives that are focused on improving the sense of recognition from community and colleagues are most likely to be effective in terms of mid-career teachers – so, then, how do mid-career teachers gain such a sense of recognition?

As reviewed in Chapter 6, there were both official and unofficial modes of teacher recognition. The official kind was in the provision of the Good Teacher Award. As discussed, many teachers supported this scheme, but, at the same time, argued that the current system was in need of improvement. They emphasised that the selection mechanism should be more transparent and accountable, echoing arguments made in the wider literature on motivation and similar issues (Bennel & Akyeampong 2007, NEP 2012; Tandon & Fukao 2015).

The unofficial form of recognition came from teachers' colleagues and the community. Both were school management matters in one sense or another, and which the school director had some degree of control over. In other words, the school director could promote a culture of respect among school staff as well as building a strong, supportive

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[76] Although the author states in Chapter 5 that, "School directors seem to have failed to recognise how important this issue is to teachers," a higher salary was still reported as the most popular incentive-related factor among school directors (5/11 school directors highlighted the issue).

relationship with the community. A school management study in the US (Chapman 1984) corroborates this finding in its conclusion that positive recognition from colleagues is a critical factor in teacher job satisfaction.

The present study also found that community recognition was a significant non-monetary incentive-related factor which impacted positively on teacher motivation. However, improvement of the monetary incentive – salary, and other financial allowances and benefits – remains critical because it is closely linked to recognition. That is, if teachers are not going to be regularly absent from school owing to farming or other second jobs, it is necessary to pay them a higher salary. If they get it, there is strong evidence that they will be more dedicated to their jobs and thus enjoy greater respect from society in general (NEP 2012).

7.3.1.4. School director and school management system

It was suggested in Chapter 5 that the school director's support was the most significant variable, particularly by newly recruited teachers (see Table 5.5). This analysis found strong positive correlations between school director's support, and teacher classroom management, job satisfaction, peer learning, school attendance, and classroom cleanliness. Chapter 6 also identified the school director's support as a key factor in increasing motivation in terms of both newly assigned and mid-career teachers; primarily through supervision – including job description management, setting parameters of responsibility and autonomy, and provision of instructional support – and school–community relationship building.

As noted in the literature review, there is growing consensus on the importance of the school director's role in school management, both in developed and developing countries (Mulkeen 2009; Darling-Hammond & Rothman 2011; World Bank HDN 2012). Other common issues around the position of school director that mainly arise in developing countries are an inconsistent appointment system, and irregular training for school

directors. In the present study's interviews, DEO officers asserted that MoEYS had recently initiated a transparent recruitment system for management staff, including school directors and officers at sub-national offices. Following trends in international aid funding, MoEYS has also strategically prioritised investment in the training of school directors (MoEYS 2014a). Thus, MoEYS has recognised, at least nominally, the importance of the role of the director in school management and is addressing these issues.

In addition to the school director's support, DEO monitoring was also identified as most useful to some teachers in helping to improve instruction skills and motivating them. When high performing mid-career teachers were studied, I noted that in most cases, they either enjoyed strong support from the school director, frequent DEO monitoring, or both; the only exceptions were those who had the intrinsic motivation to become a teacher. Therefore, instructional support on the part of the school director and/or DEO functions as a strong motivator in Cambodia.

However, the limitation of current management emerging from interviews was that there were significant deficiencies in supervisory practices. Teachers indicated that the frequency of monitoring visits to their classrooms by school directors and DEO officers varied considerably from school to school. This significant gap in the support and monitoring structure might have been related to the different perspectives of management and teachers on the school director's role, as discussed below.

As reviewed in Chapter 6, a difference in perspective was identified between management staff and teachers with regard to motivation. Most DEO officers (8/10) argued that the school director was the most influential driver of teacher motivation at any school management level (school director, school cluster director, DEO, POE, central ministry). However, only one teacher (1/18) raised school director's support as a key incentive-related factor in terms of increasing motivation. Even though there were many more

teachers who stated that school directors motivated teachers, they all cited a higher salary and better working environment as the two principal motivators.

The quantitative analysis in Chapter 5 corroborates the qualitative analysis suggestion that the school director's support has the strongest correlation with teacher motivation. Therefore, some credibility is given to the perception of DEO officers. However, management, including school directors and district officers, tended to underestimate the extent to which teachers perceived a higher salary as a basic need and thus a strong motivator.[77]

7.3.1.5. INSET

Opportunities for teacher INSET are limited in Cambodia: at the time of the fieldwork, only 6.3 per cent of teachers surveyed had had the chance to participate in some form of training during the previous 12 months. In the stepwise analysis, INSET showed a significantly positive correlation with classroom management. This suggests that the provision of such training has a strongly positive correlation with reduction of time spent off task in the classroom across all teachers.

Moreover, in terms of motivation, analysis of teacher interviews shows that INSET is the third most cited incentive-related factor among all surveyed teachers and the second most popular next to a higher salary among newly assigned teachers. Indeed, many teachers – newly assigned individuals in particular – possessed a strong desire for continuous learning and some used their own financial resources to attended higher education institutes for the purpose of professional development. However, some teachers

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[77] This conclusion is corroborated by the finding that less than half of school directors (5/11) nominated a higher salary as a principal incentive in terms of increased motivation, while the vast majority of teachers (16/18) cited it.

complained about the limited opportunities for INSET and a non-transparent selection process.

Several studies on developed countries stress the importance of providing learning opportunities for younger teachers to increase their motivation. In their generational comparative study of work motivation on civil servants, Jurkiewicz and Brown (1998) found that there was not much clear difference between cohorts.[78] One of several significant outcomes of the present study is the finding that additional learning is particularly effective in motivating the so-called Generation Y, the youngest cohort in this study. Another generational work motivation study in the US (Kanfer & Ackerman 2004) also found that new learning opportunities and/or training were more effective for younger workers.

Overall, INSET seems to be a useful incentive policy to increase motivation among younger teachers in particular, but not a very promising policy tool in respect of Cambodian school managers as INSET opportunities are limited with regard to this group.

7.3.1.6. Promotion

The analysis of survey data in Chapter 5 identified a significant positive correlation between promotion frequency and lesson plan preparation, while only two teachers (2/18) raised it as key factor in the case studies. As noted earlier, the metric in the survey data may have inherent biases that skew any clear cause-and-effect dynamic: is a teacher frequently promoted owing to his or her performance? Or does the teacher show good performance due to higher motivation as a result of his or her frequent promotion? The case studies found that promotion is not a favourable incentive policy amongst school

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[78] Although there are some differences in the literature, there is also some agreement with regard to terms applied those born in given years; thus: Baby Boomers (1946, 1960), 'Generation X' (1961–80), and 'Generation Y' (1981–2000) (Jurkiewicz & Brown 1998; Wong et al. 2008; Twenge et al. 2010; Cennamo & Gardner 2011).

management, as it is strongly linked to seniority and length of service rather than actual performance.

As reviewed in Chapter 2, an individual's teaching career is characterised by difficulty with professional advancement, and in both developed and developing countries, teachers often face limited promotion opportunities (Dörnyei & Ushioda 2010). This obstacle seems to be equally applicable in the Cambodian context as there is no clearly defined career ladder. However, in early 2015, MoEYS finally approved its Teacher Policy Action Plan, which includes a framework for a public teachers' career structure, including provision to make it more diverse and attractive to prospective trainees (MoEYS 2015b).

In terms of promotion, MoEYS has prioritised teacher evaluation and built a nationwide system for its implementation. In fact, 80 per cent of teachers in the present study were found to be familiar with the official evaluation format and 75 per cent were aware of the existence of the evaluation system, as identified through the TPS. However, it also emerged that the effectiveness of the evaluation system was constrained and its assessment of teachers as civil servants had little to do with teacher performance or the Teacher Standards.

The current evaluation system was not developed for teachers, and evaluation criteria are largely disconnected from expected teacher performance or teaching standards. Moreover, school directors have little control over teachers' promotion under the current system, meaning that it is not an effective management tool at the school level (Tandon & Fukao 2015).

Overall, it can be concluded that this study privileged the case study results in understanding the relationship between teacher motivation and promotion. It means that promotion cannot be a motivator in Cambodia as the case studies suggests and the above analysis on Cambodia's policy status underscores. Although survey analysis suggests significant relationships, the metric may have inherent biases (as already described).

7.3.2. Local context, teacher and school characteristics, and teacher motivation

Thus far, the analysis has focused on relationships between teacher incentive-related factors and motivation. In contrast, this section reviews relationships between local context, and teacher and school characteristics.

The survey data discussed in Chapter 5 identified several significant variables from among local context factors, and teacher and school characteristics. Specifically, these include second job, geographical location of school, final school grade completed, PRESET history, gender, double-shift teaching, and private tuition. The linguistic data addressed in Chapter 6 also generated a list of strong factors, including length of service, geographical location, double-shift teaching, private tuition, and intrinsic motivation to become a teacher.

The key factors are discussed in the following analysis. However, two variables must be excluded from the discussion: teachers' final school grade completed and PRESET history. This is because most interviewed teachers had undertaken a two-year PRESET course and held a Grade 12 certificate.[79]

7.3.2.1. Length of service

As previously stated, this study organised the whole teacher sample into two groups based on career length: mid-career and newly assigned, the justification for this division being due to Cambodia's historical and social context. As a quick review, the key point was that many unqualified teachers were recruited due to the quick expansion of basic education opportunities in the 1980s and 1990s, whilst all new teachers have gone through

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[79] This does not mean that these two variables are not significant. In fact, both are strong mediators of the correlation between incentive-related factors motivation, particularly in respect of mid-career and senior teachers. However, the main targets of the interviews were younger, newly assigned and mid-career teachers.

a competitive entrance examination to get into Teacher Training Centres from 1991 forward (MoEYS 2015a).

Qualitative and quantitative analyses reveal clear differences between these groups. Analysis of quantitative data identified key incentive-related variables that motivated mid-career teachers in particular to be the school–community relationship and school director's support. Similarly, the most important incentive-related factor in terms of newly recruited teachers was found to be the school director's support; however, this was followed by other factors such as INSET, student behaviour, and (the absence of a) second job.

The qualitative analysis found that although most teachers cited a higher salary and better working environment as the two most important incentive-related factors that would increase motivation, when disaggregated, newly assigned teachers tended to be more sensitive to classroom dynamics (student behaviour, high student-to-teacher ratio, shortage of materials), require greater school director support, and demand more INSET opportunities. Conversely, all mid-career teachers highlighted the importance of a higher salary and greater recognition. A particularly striking difference between the two groups was the varying extent to which they respectively regarded teacher recognition to be a motivator: over half of mid-career teachers prioritised it but no newly assigned teachers had the same perception.

As there is little existing literature on the relationships between length of service and work motivation from developing countries (Glass 2007), some management studies from developed countries are useful in further developing the discussion. Common views on motivation and length of service drivers suggest that younger and more recently recruited staff tend to be motivated by salary, status, and career achievement and advancement (Wong et al. 2008; Twenge et al. 2010; Cennamo & Gardner 2011), while older and mid-

career staff place more emphasis on contribution to others and recognition by their colleagues or managers (Twenge et al. 2010; Glass 2007).

Trends in the present study show broadly similar characteristics, with the exception of the low salary issue, which was found to be common across all teachers at any stage of career. It emerged that mid-career teachers tended to be motivated by higher recognition, while newly assigned teachers placed greater emphasis on career advancement and status. This is evident from the fact that more than half of interviewed newly assigned teachers paid to attend a private higher education institute after working hours in order that they might advance to the position of secondary school teacher.

Although the general socio-economic context of the present study differed from that of developed countries, these findings appear similar (with the aforementioned exception). In short, the extremely low salary level of the teachers under study was the most critical issue no matter what the length of service.

7.3.2.2. Geographical location of school

As previously discussed, the geographical location of the school was found to be another highly significant factor in terms of teacher motivation. The significant (and growing) urban and rural divide has been identified as early as the French colonisation regime and exacerbated by a national development strategy that prioritised urban development leading to current inequalities.

Survey data revealed three variables that showed significant correlations with geographical location: teacher school attendance, classroom cleanliness, and classroom management – all of which show positive signs for urban schools, and negative signs for rural and remote schools. Furthermore, interview data presented in Chapter 6 confirmed that teacher motivation was significantly affected by many aspects of rural and remote area underdevelopment (including old infrastructure, few teaching and learning materials,

little parental support, undermotivated colleagues, low academic achievement of students, and poor living conditions). More significantly, some teachers emphasised that they grew more highly motivated once they had transferred from a rural or remote school to an urban location. In short, this variable is clearly strongly significant in terms of motivation. Therefore, one obvious incentive policy would be, before anything else, to balance the significant resource gap between urban and rural schools.

A significant geographical gap in terms of living and working conditions, including work motivation, is a prevalent and pressing issue in many developing countries. Much of the teacher motivation literature on such countries cites this gap as a significant teacher motivation/demotivation factor, and cause of teacher shortages in rural and remote areas worldwide (e.g. Ramachandran et al. 2005; Kadzamira 2006; Bennel & Akyeampong 2007; Benveniste, Marshall & Araujo 2008; Salifu & Agvenyega 2008).

A financial incentive for working in a remote area has also been set in many countries to correct imbalances in teacher allocation and motivation. However, as reviewed, the global evidence presents a record of mixed success and failure of such a policy (Hanushek et al. 1999; Hanushek et al. 2004; Liu et al. 2004; Urquiola & Vegas 2005; Clotfelter et al. 2006; Steele et al. 2009). The research shows that developing countries in particular face difficulty in making a major impact through this policy when education ministries cannot afford to offer sufficient incentives (Bennel & Akyeampong 2007). Cambodia's case appears to be very similar (Tandon & Fukao 2015).

Lastly, teaching in one's 'home village' also emerged in the present study as a significant variable in both quantitative and qualitative analyses. In Chapter 5, the 'home village' variable was identified to mediate the relationship between attendance and school environment in respect of new teachers. In the interviews discussed in Chapter 6 as well, two teachers based in their home villages emphasised that they were highly motivated to contribute to local development. Thus, it seems that local recruitment schemes are

effective because they exploit a teacher's desire to contribute to his or her home village or local community.

However, such schemes, even when combined with remote postings incentives, are surely inadequate to fully rectify the larger urban–rural gap nationwide, a disparity that is reflected in major variations in teacher motivation level.

7.3.2.3. Gender

The survey data presented in Chapter 5 highlighted two significant gender-related correlations: those with (i) lesson plan preparation among mid-career teachers, and (ii) peer learning among newly recruited teachers. Female teachers tended to show more significantly positive correlations in terms of these variables than their male counterparts. Additionally the interview results discussed in Chapter 6 showed two clear gender disparities, some of which correlated with length of service: (i) mid-career male teachers tended to show poor job satisfaction levels (e.g. difficulty in finding a marriage partner due perceived low job status); and (ii) female teachers in general tended to high job satisfaction level (those with husbands and families in particular). Overall, these findings suggest the female teachers tend to have higher job satisfaction and motivation levels than their male counterparts.

The literature from developed countries generally recognises gender differences in teacher motivation: female teachers tend to be more intrinsically motivated to join and remain in the profession, as well more highly committed to their day-to-day work; while male teachers are more likely to show higher levels of extrinsic motivation in response to incentives (Johnston et al. 1998; Jones 1990; Scott et al. 1998). The present study did not find a significant gender gap in respect of intrinsic motivation, but it did emerge that female teachers tended to have generally higher levels of job satisfaction and motivation.

7.3.2.4. Additional Work

As reviewed in previous chapters, many teachers took on additional work to supplement their low salaries. The majority (62.1 per cent) of all surveyed teachers held a second job, while 46.8 per cent of those in urban schools conducted private tuition. Several significant negative correlations between second job satisfaction and teacher motivation were identified by the quantitative survey. While private tuition did not show either a positive or negative significant correlation with teacher behaviour, a second job had a negative correlation with several indicators, for example, teacher attendance (all surveyed teachers), job satisfaction (newly assigned teachers) and peer learning (newly assigned teachers). A second job other than teaching was also identified as a significant mediator of correlations between teacher motivation and certain incentive-related factors.

Although double-shift teaching was an officially recognised school practice, it remained a significant increase to the conventional half-day teaching load. Of the whole teacher sample, 30.3 per cent taught a double shift. Through stepwise analysis, two significant negative correlations – with (i) lesson plan preparation (whole sample), and (ii) classroom management (newly assigned teachers) – were identified. This finding is corroborated by linguistic data whereby several teachers were found to excuse the non-preparation of lesson plans by suggesting they were too busy in view of double-shift teaching loads. However, a positive correlation was identified between private tuition and teacher attendance. This shows that the characteristics of double-shift teaching and private tuition differed markedly, an issue examined more closely below.

The nationwide practice of teachers taking two or more jobs simultaneously was confirmed through interviews: of 18 teachers, only 3 (2 female/1 male) taught a single shift and had no other job or conducted private tuition. One of the females was a mid-career teacher who did not undertake additional work because she required time for childcare and the household had sufficient income from her husband's job. The other

female was also a mid-career teacher who had a chronic condition, meaning that she could not take on any additional work. The male was a newly assigned young teacher in a remote school who did not do any additional work simply because there were no such opportunities available.

This suggests that the common practice was to take other work in addition to a regular half-day shift in order to make ends meet. In terms of the qualitative study, such additional work – a second job and double-shift teaching in particular – was observed to have a tendency to cause deterioration in desired teacher behaviour. However, a negative correlation between private tuition and teacher behaviour was not found in the quantitative analysis.

In interviews, teachers in urban schools reported that private tuition generated a lot more than their monthly salary and allowances from regular teaching: in some cases, they could earn twice as much as their regular income in this way. This situation might have resulted in the distorted motivation of teachers, prompting them to intentionally slow the pace of regular classes in order to induce parents to enrol their children in private tuition (Brehm and Silova 2014). It also decreased education opportunities for children from poor households simply because their parents could not afford the price of private tuition.

The issue of private tuition in this region has been discussed in the literature in this region since the 1990s (Bray 1999; Dawson 2010; Brehm & Silova 2014). In the Cambodian context, it has been linked with teacher corruption (Dawson 2010) and the notion of 'shadow education' (Bray 1999). In coining the latter term, Bray (1999) argues that Cambodian private tuition echoes the characteristics of the country's shadow economy, in that both are unregulated and avoid the conventions of official policy, monitoring and taxation. Bray (1999) also contends that government cuts to the social sector have led to greater household expenditure in the attempt to compensate for shortcomings in public education. Similarly, Dawson (2009) argues that private tuition is a symptom of an

education system forced into corrupt practices due at least in part to the low salaries of civil servants. Accordingly, schools extort informal fees from parents and teachers are forced to find sources of supplementary income.

Moreover, Brehm and Silova (2014: 104) recently concluded that private tuition in Cambodia "serve[s] as a mechanism to provide both supplementary salaries to teachers and additional hours of instructional time to adequately meet the demands of [the] national curriculum."

Such a situation has emerged as a result of the country's post-colonial legacy, a political desire to conform to international norms, economic austerity, and social dynamics around hierarchy and the power. In short, the convention of private tuition in Cambodia has been established as a result of multi-dimensional dynamics deeply rooted in both the country's history and its present socioeconomic context (Brehm and Silova 2014). In terms of the negative effects of teaching a double shift combined with holding a second job in particular, additional work inevitably impacts on teacher motivation. It is thus clear that a significant increase in teachers' salary is necessary.

Yet, a simple salary increase may not be sufficient to deter the practice of private tuition as it now seems to be deeply rooted in society, as the aforementioned commentators point out. Indeed, parents are now forced to pay even more for private tuition at secondary level as the number of subjects has increased and national tests are mandatory on completion of grades 9 and 12 (World Bank 2011). This leads to the conclusion that the higher the education level, the stronger the impact of private tuition on equity and probably teacher motivation as well. Although the present study identified a positive relationship between private tuition and teacher attendance, those between private tuition and teacher motivation at both the primary and secondary levels should be further examined.

7.3.2.5. Intrinsic motivation to become a teacher

Interviews revealed that intrinsic motivation to join the profession was significant in terms of the practicing teacher's behaviour. A variable was set as an item on the interview schedule to indicate that the interviewee was intrinsically motivated if, in response to the question of why he or she had wanted to become a teacher, the answer was because of a liking for teaching. In the subsequent interviews, a commonality was found in that initial motivation to join the profession emerged as a strong influence on teacher motivation over the long term. However, no corresponding significant correlation was identified with regard to the motivation variable in the stepwise multi-regression analysis. In fact, the former qualitative finding could be criticised on the grounds that subjective judgment was involved in the analysis, and its unreliability corroborated by the fact that no significant association was identified in the multi-regression analysis.[80]

Therefore, in this section I closely consider the qualitative findings discussed in Chapter 6 and survey data highlighted in Chapter 5 in seeking to minimise the subjectivity in the analysis. Accordingly, I re-examine the evidence as to whether teachers who possess intrinsic motivation to join the profession are likely to behave more positively than colleagues who do not have such initial intrinsic motivation. In this regard, some additional literature is reviewed to support the findings.

As presented previously, four main activities found to be linked to teacher motivation – peer learning, follow-up with slow learners, regular lesson plan preparation, and effective classroom behaviour – were recorded for all interviewed teachers. Data were drawn from interview findings as well as observation results, as shown in tables 7-1 and 7-2. A

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[80] This result is largely due to the fact that the study was subject to an unreliable variable in the identification of intrinsic motivation in the TPS. Thus, one significant finding of the qualitative analysis was the irregularity of this variable.

maximum of two points was allocated for each answer. Findings from Chapter 6 that are related to intrinsic motivation are presented at the bottom of tables 7-1 and 7-2.

Of the mid-career teachers sampled (Table 7-2), those likely to possess intrinsic motivation (Mr Sitha, Ms Ravy, and Ms Rotha) scored higher than most of the others. The most striking exception is Mr Sodeth, who presented the third highest score of this group, but was identified through interview as lacking intrinsic motivation. As the summary of his interview (Appendix I) shows, he was a most diligent and hard-working teacher with a good level of instructional support, but had no job satisfaction. He explained that he had not wanted to join the profession when he was young and was now unsure as to whether he would still be a teacher in ten years' time. Therefore, it is unsurprising that he shows a high score for teacher behaviour but no additional sign of intrinsic motivation to become a teacher.

Mr Sophea also gained a high score, but had been without intrinsic motivation to become a teacher. As the summary of his interview presented above indicates, he worked hard and was monitored by an effective school director. Yet, the former also noted that he had not thought of becoming a teacher when he had been a student and was currently unsatisfied with his job; neither did he regard teaching to be the central focus of his life in the long term.

Table 7-1. Teacher behaviour and intrinsic motivation: mid-career

Career stage		Mid-career									
	Gender and name	Ms Ravy	Mr Sambath	Mr Sodeth	Mr Sitha	Mr Sophea	Ms Rotha	Ms Rany	Ms Rita	Ms Romdul	Ms Rotana	Mr Sengtha
Interview results	Peer learning	1	1	1	1	1	1	0	1	1	0	0
	Slow learner follow-up	2	1	1	1	1	1	1	1	1	1	1
Observation results	Lesson plan preparation	2	0	2	2	2	2	0	2	0	0	0
	Time-on-task	1.2	1.0	1.5	1.7	1.1	1.2	1.1	0.5	0.7	0.4	1.0
Total (interview + observation)		**6.2**	**3.0**	**5.5**	**5.7**	**5.1**	**5.2**	**2.1**	**4.5**	**2.7**	**1.4**	**2.0**
Intrinsic motivation identified in interview		**Yes**			**Yes**		**Yes**					

2 = full achievement
1 = partial achievement
0 = no achievement

Four of five newly assigned teachers with intrinsic motivation presented the four highest scores (Table 7-2). This suggests a positive relationship between intrinsic motivation to become a teacher at an early stage, and sustained motivation as a practicing teacher over the long term. Although Mr Cheng seems to have possessed intrinsic motivation, he was now at a remote school, observed only infrequently by his school director and colleagues, and too busy with a second job to concentrate fully on his teaching. Therefore, his current level of motivation was not found to be as high as that of other teachers who were believed to have possessed an intrinsic drive to join the profession.

The data presented in these tables corroborate the findings of the qualitative analysis in two ways: firstly, intrinsic motivation to join the profession is higher among newly assigned teachers than among mid-career teachers; and secondly, the gap between those newly assigned teachers who are likely to have had such intrinsic motivation and those who are unlikely to have had it is smaller than the corresponding gap in respect of mid-career teachers. Indeed, no newly assigned teacher scores less than 3.0, while 4 of 11 mid-career teachers score less than 3.0.

Table 7-2. Teacher behaviour and intrinsic motivation: newly assigned

	Gender and name	Mr Chanthol	Ms Phalin	Mr Cheng	Mr Chetra	Mr Chinna	Ms Phanna	Ms Pheavy
Interview results	Peer learning	2	2	2	2	0	0	1
	Slow Learner follow-up	1	1	0	1	1	1	1
Observation results	Lesson plan Preparation	0	0	0	2	2	0	2
	Time-on-task	0.7	1.3	1.1	1.9	1.8	2.0	1.2
Total (interview + observation)		**3.7**	**4.3**	**3.1**	**6.9**	**4.8**	**3.0**	**5.2**
Intrinsic motivation identified in interview			**Yes**	**Yes**	**Yes**	**Yes**		**Yes**

2 = full achievement
1 = partial achievement
0 = no achievement

However, some limitations to this analysis should be noted. Firstly, some teacher behaviour, for example, peer learning through the practice of visiting colleagues' classes,

was not commonly promoted nationwide. Therefore, some of the teachers under study might have wanted to engage in it, but did not do so as it was not the custom at a given school. Secondly, the term 'intrinsic motivation to become a teacher' has not been clearly defined. The study assumed it to refer to those who had a strong interest in joining the profession in the initial stages of their lives and had had a long-term desire to work as a teacher, which seemed to be critical conditions. However, the key phrase 'initial stages of life' remains somewhat ambiguous, although the study assumed it to mean childhood up to the conventional entrance age for higher education or the labour market, that is 15 or 16 years of age. Accordingly, such intrinsic motivation should be studied further and understood in the context of a larger sample of teachers and wider generalisation.

Nevertheless, several existing studies also highlight the potential linkage between intrinsic motivation to become a teacher and practicing teacher motivation. For example, Sinclair, Dowson and McInerney (2006) conducted a psychometric study on the motivation of teachers that underscored the importance of attracting trainee teachers with the 'right motives.' According to Sinclair et al. (2006: 1133), trainees with such motives "engage deeply in their pre-service preparation and their subsequent professional lives."

These findings are corroborated by Bruinsma and Jansen (2010) who conducted a motivation study on 198 PRESET participants in the Netherlands. They looked closely at motivation to become a teacher and discuss it in terms of intrinsic and extrinsic drive. They conclude that those who possess intrinsic motivation are more likely have deep and lasting commitment to their work, as compared with the superficial engagement of those who are on the whole extrinsically motivated (Bruinsma & Jansen 2010).

Moreover, a recent teacher reform study from Indonesia stresses that:

> Even comprehensive, expensive reforms concerning teacher management and development will not work if teachers don't have the intrinsic motivation to be a teacher (Chang et al. 2014: 190).

These findings are consistent with several studies on the relationship between the initial commitment of trainee teachers and teacher retention. For example, although it does not aim to measure teacher motivation, a 7-year US longitudinal retention study on 551 teachers concludes that the variables "initial degree of assurance about becoming a teacher" and "time at which the candidates had first decided to become teachers" are significant in terms of the likelihood of successfully completing teacher training and, once posted, remaining in the profession (Marso & Pigge 1997: 251-252). Such an assurance about joining the profession is also utilised as a predictor of teacher retention by Chapman and Green (1986).

Therefore, it seems that intrinsic motivation is best predicted through the utilisation of a combination of both individual and social factors (Seifriz et al. 1992, cited in Ferrer-Caja & Weiss 2000: 269; Biddle et al. 1995; Kavussanu & Roberts 1996).

In the present study, of 18 interviewed teachers, three had immediate family members who were in the profession; and two of these study participants were found to be likely to possess intrinsic motivation to become a teacher. Due to its small sample size, my study was unable to positively identify ways in which such a social dynamic affected motivation in another family member, but the aforementioned study by Marso and Pigge (1997) concludes that it influences entrance to teacher training, but is unrelated to teacher retention. The present study seems to generally corroborate this earlier research.

From this brief review, I conclude that intrinsic motivation to join the profession is a powerful factor in the measurement of teacher motivation. The wider literature also stresses that, in comparison to extrinsic motivation, intrinsic motivation impacts strongly on a wide range of human behaviours such as responsibility and sustainability (Deci & Flaste 1996; Sinclair et al. 2006; Bruinsma & Jansen 2010).

7.4. Four Motivation Types and Associated Policy Implications

This section now turns to develop four patterns of motivation to become a teacher by integrating and interrelating external incentive- and intrinsic motivation-related factors. This helps make more explicit the policy implications of this study. Firstly, I arrange all interviewed teachers in four groups according to motivation pattern. Then, I develop a matrix of effective incentive-related factors for each group, which is intersected by details of intrinsic motivation to become a teacher and length of service.

7.4.1. Structure of teacher motivation

The analysis has thus far found that intrinsic motivation to become a teacher is quite powerful, and it supposes that this phenomenon has a powerful effect on any subsequent incentive-related factors. The literature on work motivation also discusses how extrinsic incentives can only lead to a significant increase in workers' effort if employees already have high levels of intrinsic motivation, show pride in their work, and find it interesting (Kreps 1997). The present study also assumes that the same incentive-related factors can have different effects on teacher motivation depending on whether they possess intrinsic motivation to become a teacher or not.

Tables 7-3 (a) and (b) categorise teachers into roughly four groups by 'intrinsic motivation to become a teacher' and 'impact of external factors' (policy incentives and local context factors). The study also assumes that intrinsic motivation arises through social experience in childhood. Accordingly, teachers categorised in Group B cannot somehow migrate to Group A, or vice versa. However, education and school policies can facilitate migration from A2 or B2 towards A1 and B1 respectively.

Table 7-3(a). Incentive motivation structure

		External Effects		
		Positive		**Negative**
Intrinsic motivation	with	A1 (motivated)	←→	A2 (unmotivated)
to become a teacher	without	B1 (motivated)	←→	B2 (unmotivated)

There follows a second version of Table 7-3 with the specific names of teachers to clarify the conceptualisation and classification utilised in the thesis.

Table 7-3 (b). Incentive motivation structure

		External Factors Effects		
		Positive		**Negative**
Intrinsic motivation to become a teacher	with (Group A)	Ms Ravy, Ms Rotha, Mr Sitha, Mr Chinna, Mr Chetra, Ms Pheavy	←→	Mr Cheng, Ms Phalin
	without (Group B)	Mr Sodeth, Mr Sophea, Ms Rita, Ms Romdul	←→	Mr Sambath, Ms Rany, Ms Rotana, Mr Sengtha Mr Chanthol, Ms Phanna

Group A represents those teachers who were likely to have already possessed intrinsic motivation. There is no clear boundary between A1 and A2, but teachers positioned

around A1 were further motivated by positive external factors and those positioned around A2 were not motivated by external factors.[81]

There were eight interviewed teachers found to be likely to possess intrinsic motivation most of whom can be positioned around A1. Exceptions to this pattern are Mr Cheng and Ms Phalin, who were subject to external demotivators such as lack of supervision from the school director and/or DEO, and a demanding second job (Mr Cheng) or double shift (Ms Phalin).

Conversely, Group B represents those teachers who were unlikely to have possessed intrinsic motivation. There is no clear boundary between B1 and B2, but some teachers positioned around B1 were motivated by positive external factors and others positioned around B2 were demotivated by external factors (as with Group A).

There were ten interviewed teachers found to be unlikely to possess intrinsic motivation. Typically, these were a mix of those who were not satisfied with their present job but had no other available options, and others who were driven by altruism and/or extrinsic motivation. Most of those found to exhibit this pattern can be positioned around B2, which included those subject to demotivators such as a demanding second job or double shift, sickness, and/or adverse working environment. Exceptions to this pattern are Mr Sodeth, Mr Sophea, and Ms Rita, whose situations were mitigated by strong instructional support from the school director and/or DEO; a pattern that situates them in B1, a more highly motivated group than B2.

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[81] Certain external factors negatively impact on work motivation such that it remains low in spite of the presence of intrinsic motivation.

7.4.2. Effective incentives for four groups of teachers

This section describes the key incentive-related factors to which those teachers in groups A and B were respectively subject, in light of length of service. Table 7-4 below categorises teachers into four groups by 'intrinsic motivation to become a teacher' and 'length of service'. It should be noted that a salary raise was key incentive factor for all groups as reviewed in this study. Additionally, most of the teachers under study were posted in rural and /or remote areas, urban posts being limited. Therefore, transferring large numbers of teachers to urban areas was excluded from the outset as a viable policy option. The incentive policies suggested below therefore do not include a salary rise or mass transfer to urban schools.

Table 7-4. Four groupings for effective incentive policy formulations

		Career length	
		Mid-career	**Newly assigned**
Intrinsic motivation	with	A-Mid	A-New
to become a teacher	without	B-Mid	B-New

Effective incentives for teachers with intrinsic motivation (Group A)

There is no large difference between A1 and A2 in terms of this group, as the work motivation of all its members was of a high level. Typically, management was not required to maintain the close monitoring of these teachers as they were already highly motivated regardless of institutional arrangements or conditions (see Handy (1993) for similar findings).

The most important incentive factor among mid-career teachers with intrinsic motivation (A-Mid) was recognition from the community and school. Independence from the school

director was also an important incentive factor, particularly for those who were likely to have strong intrinsic motivation to become a teacher.

The most important factor among newly recruited teachers with intrinsic motivation (A-New) was initial support from the school director, DEO, and/or senior colleagues. Initial support was related to the teacher induction scheme, and without which teachers in this group would have been unlikely to perform well and fall into category A2. However, independence could also be important for these newly assigned teachers if coupled with the right amount of support from the school director. This group also exhibits a high demand for learning opportunities, which did not need to mean formal MoEYS INSET programmes, but could be more flexible opportunities for young teachers to upgrade their skills. Significantly, for this group, double-shift teaching could be a demotivating factor as they seemed more highly motivated when permitted to concentrate on one class of students.

Effective incentives for teachers lacking intrinsic motivation (Group B)

This group represents the majority of all the teachers under study and education policy should thus target it first. In particular, education authorities should aim to move teachers from B2 to B1 (generate motivation) and retain those in B1 (maintain motivation). Unlike Group A teachers, in general, school management should maintain close monitoring and control over those in Group B (see Handy (1993) for similar findings).

Among mid-career teachers without intrinsic motivation (B-Mid), support from the school director and DEO was a powerful motivating factor, as evidenced in several cases in this study. Recognition from the community and school was also important for those in this group, many of whom raised it as a key motivator; conversely, some teachers also reported they were unmotivated due to low recognition. INSET was popular among this group. Unlike newly assigned teachers, the reason for desiring training was not that they might advance their careers, but to keep up to date with developments in education and

new policies. Finally, double-shift teaching was found to consistently and negatively correlate with motivation in this group. However, there might have been exceptions, in that some male teachers with families and posted to rural schools in particular actively sought to teach a double shift in order to make ends meet.

In terms of newly assigned teachers without intrinsic motivation (B-New), support from the school director and DEO is likely to enhance motivation. All newly assigned teachers who showed low motivation reported that they lacked sufficient technical support. Those in this group are particularly in need of induction on employment at a specific school. As with Group A-New, learning opportunities were also in high demand in respect of Group B-New as a means of enhancing their status. Finally, additional work was a strong demotivating factor for those in this group as they required comparatively more time to plan and manage their work.

7.5. Relating Empirical Evidence to Theoretical Framing

In this penultimate section of the chapter, the discussion on the empirical findings of teacher motivation in Cambodia is shown to be in broad accordance with the major teacher motivation theories adopted by the study's theoretical framework. The above discussion (sections 7.3–7.4) will comprises a critical addition into these theories. It also contributes to the explicit answering of this study's RQs, a task that is addressed in the next and final chapter.

Herzberg's (1968) theory holds that improvement to the individual's living conditions in terms of basic needs such as an acceptable salary and working environment only reduces his or her level of dissatisfaction (i.e. the meeting of basic needs does increase motivation). Several of the context-, characteristic-, and incentive-related factors found to be significant by the present study accord with this theory, but not all of them. Thus, improvements in salary level and working environment in a rural and/or remote area in the Cambodian context might not fully accord with Herzberg's (1968) theory.

As reviewed above, the regression analysis failed to detect any significant correlation between salary level and teacher motivation. The probable explanation for this is that the current Cambodian teacher's salary is simply too low to be reflected in the results of the survey data analysis discussed in Chapter 5. Although analysis of the linguistic data presented in Chapter 6 revealed that a salary rise was the most popular incentive policy in terms of increasing teacher motivation, the recent cases in Indonesia and Zambia reviewed above suggest that such a rise does not lead to improved teacher performance and/or motivation.

The present study found that teacher salary levels in the Cambodian context were markedly low compared with other occupations (Figure 7-1). It was therefore perhaps unsurprising to find that most teachers cited a higher salary as the principle incentive for an increase in motivation given that the starting point was already below the regional average. These findings notwithstanding, there is, however, no evidence that the proposed further salary increase will lead to improved teacher performance and/or motivation – even if and when the salary level of teachers meets that of other comparable occupations.

Moreover, we learned from the case of Indonesia that a salary increase is significant in terms of reducing the need for teachers to take on additional work; and is likely to attract more talented secondary school graduates, which would also lead to the improved social status of teachers in the long term. Thus, a salary increase might perhaps reduce the overall unsatisfactory level of teacher performance in the short term, and might even increase motivation levels in the mid to long term – albeit indirectly via improved social status, in turn, leading to more highly qualified trainee teachers.

The present study also identified another basic need, an acceptable working environment, as a strong motivator, in terms of those teaching in rural and/or remote areas in particular. It also found that the school's geographical location is the most powerful factor in determining working environment, which, in turn, influences teacher motivation. Chapter

6 identified that several teachers had personal experience of an increase in motivation following reallocation from a rural and/or remote school to a posting closer to an urban area.

The quantitative analysis of the whole teacher sample in Chapter 5 also identified the geographical location of the school as the most significant context and characteristic correlation with teacher motivation. Thus, the school environment variable seems to motivate teachers in the rural Cambodian context and, therefore, may not be corroborated by Herzberg's (1968) theory.[82]

On the other hand Maslow (1943) emphasises the proper ordering of a set of hierarchical needs and sets basic needs as the first priority. The findings of the present study are in one sense mostly in accordance with this hierarchical needs theory: in Cambodia, most workers' basic needs have not yet been met, and most interviewed teachers raised basic factors as key to raising motivation levels – for example, a higher salary and better working environment. However, the study identified some contradictions and caveats to this theory when applied to teacher motivation.

Firstly, according to Maslow (1943), the meeting of advanced needs such as recognition from other people should constitute a strong motivator only once basic needs have been met. However, the empirical findings presented in the present thesis do not accord with this hypothesis: for example, recognition manifested a strong relationship with motivation even in cases in which basic needs had not been met. Such a finding is also cited by Smith (1969, cited in Deci 1975: 84), who contends that people whose basic-order needs have not been fulfilled are still concerned with the promotion of self-esteem.

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[82] Other school environment variables do seem to be corroborated by Herzberg's (1968) theory. For example, student-to-teacher ratio was found by both quantitative and qualitative analyses to have a strongly positive correlation with teacher job satisfaction, and a heavy workload and shortage of teaching and learning materials was found to be likely to have negative correlation with job satisfaction. All such corroborations seem to be associated with teacher dissatisfaction, which also seems to be corroborated by Herzberg's (1968) theory.

Secondly, the needs hierarchy does not consider the intrinsic motivation development process at its lower level. As discussed in this thesis, intrinsic motivation to become a teacher seems to be developed by some combination of individual and social experiences in childhood, which, as such, should evolve in parallel to the fulfilment of basic needs. Although the present study's conceptualisation is somewhat contradictory, I still maintain that Maslow's theory is generally relevant in the Cambodian context. In this regard, the present study identified a living salary and acceptable working environment as the factors in greatest demand among teachers, and they are in accordance with Maslow (1943), as a psychological and safety need respectively.

Lastly, the empirical evidence collected by this study is also in accordance with Deci's (1975) intrinsic motivation theory, particularly in terms of the difference between intrinsic and extrinsic motivation (Yong 1995; Deci & Flaste 1996).

The present study also supports the notion that prominent intrinsic motivation is a relatively unique feature among teachers as compared with other occupations (Dörnyei Ushioda 2010). Furthermore, and most importantly, the empirical evidence of the present study fully supports the hypothesis that initial motivation to become a teacher is a strong factor in making a sustainable positive impact on the work commitment of the individual (Sinclair et al. 2006; Bruinsma and Jansen 2010). This single factor presents the strongest relationship with teacher motivation revealed by the mixed method analysis of the present study.

7.6. Conclusion

This chapter synthesised results from both qualitative and quantitative analyses. It constructed its discussion on key incentives with regard to teacher motivation with reference to a new conceptual matrix, and then confirmed and challenged respectively several aspects of existing motivation theory.

Firstly, this chapter confirmed that a higher salary is an important factor in the reduction of teacher dissatisfaction in the short term, and perhaps in increasing teacher motivation in the mid to long term (through the attraction of young people who more highly qualified due to the enhanced social status of existing teachers). It also found that better an acceptable working environment is a necessary basic need for the enhancement of teacher motivation, particularly in rural and/or remote areas. Finally, it emerged that recognition from community and colleagues is significant for mid-career teachers in particular, and instructional support from the school director is a key factor for newly assigned teachers.

The chapter then reviewed local context-, and teacher- and school-related characteristics from both datasets, and identified several strongly significant variables, including length of service, geographical location, additional work, and intrinsic motivation to become a teacher. This section focused on the strength of intrinsic motivation to become a teacher in respect of all interviewed teachers. This theory is not unique to teacher motivation alone, and similar cases were also identified from general work motivation theory. However, teaching is more closely associated with intrinsic motivation than many other behavioural domains (Dinham & Scott 2000; Dörnyei & Ushioda 2010).

At this point, a table of four teacher groups for effective incentive policy formulation was introduced and all interviewed teachers were located in it to help highlight the most effective external factors with regard to each sub-group. This was then followed by the further analysis of incentive-related factors with regard to the four teacher groups by 'intrinsic motivation to become a teacher' and 'career length'. The analysis identified specific key incentive policies for each main group: (i) recognition and autonomy for mid-career teachers with intrinsic motivation to become a teacher; (ii) instructional support and recognition for other mid-career teachers; and (iii) instructional support and INSET opportunities for newly assigned teachers.

Furthermore, it was important to realize that the qualitative case study backed by an interpretivist view deepens understanding of the relationships between teacher motivation and incentives. Specifically, it underscores the gaps between survey analyses and case studies in 'higher salary', 'promotion' and 'intrinsic motivation to become a teacher'.

Finally, it was considered how this empirical evidence related to existing teacher motivation theory. Although, the empirical evidence poses some minor challenges to the theories of Maslow (1943) and Herzberg (1968), overall, it supports most aspects of their respective conceptualisations. The study found that teacher-specific intrinsic motivation can be a powerful driver, providing a particularly strong confirmation of this phenomenon in the Cambodian context that is corroborated by recent teacher motivation research globally.

CHAPTER 8.   Conclusion

8.1. Introduction

This chapter presents the major finding of the study, seeks to explicitly answer the study's RQs, and considers policy implications drawn from them. It also highlights areas for potentially useful future research.

Based on a survey questionnaire of 676 teachers, classroom observation of 284 teachers, and in-depth follow-up interviews with 18 teachers, this study sought to examine the relationship between context, teacher and school characteristics, and teacher incentive-related factors, in order to understand whether incentive-related factors related to motivation, and, if so, in what ways. It adopted a mixed methods approach in terms of data collection, and qualitative and quantitative regression analyses were employed to understand relationships more fully.

The study sought to uncover larger patterns of association between teacher incentive-related factors and motivation with a positivist approach to the quantitative analysis in Chapter 5, and then went a step further with an interpretivist approach to the qualitative analysis of linguistic data in Chapter 6. In Chapter 7, the two datasets were analysed in tandem and compared to similar cases from other countries in the attempt to develop patterns of association in respect of given groups.

As the study progressed, I noticed that my stance naturally shifted from a relatively positivistic position to a more interpretivist one, particularly when I conducted interviews and saw the diversity of views among even a small sample of teachers. In spite of this innovation, I remained within the range of critical realism from beginning to end. However, interestingly, the shift led me to disaggregate my teacher sample in order to compare the views and situations of mid-career teachers with those of their newly assigned colleagues.

8.2. Major Findings

The major findings of the study are organised according to the four RQs and presented below.

8.2.1. What is the nature of the relationship, if any, between teacher incentive-related factors and motivation in the context of Cambodia?

Strong relationships between certain teacher incentive-related factors and motivation were identified, and a highly consistent pattern of association emerged regardless of age, experience, gender or region. Most teachers were not satisfied with their current salary or working environment, both of which were raised in interview as major demotivators. In this regard, a salary increase could reduce dissatisfaction and the need to pursue additional work opportunities. This would lead to the improved social standing of teachers, which, in turn, should attract more highly qualified secondary school graduates to the profession and further impact on teacher motivation in the mid to long term. Similarly, improvements in working environment, in rural and/or remote areas in particular, should add to the general positive impacts on motivation and social standing.

Other strong relationships were identified between some advanced teacher incentive-related factors and motivation, the most significant of which, and emerging across lengths of service and regions, is instructional support from the school director and DEO. Additionally, two different factors were identified that corresponded to different lengths of service respectively: recognition from community and colleagues is a strong motivator for mid-career teachers, while INSET and other professional development opportunities represent a strong motivator for newly assigned teachers.

As basic needs (e.g. a living salary, acceptable working environment) have yet to be fully met in Cambodia, relationships between basic teacher incentive-related factors and motivation remain strong. However, although meeting such basic needs is necessary, it is

not sufficient to ensure sustained motivation. Beyond these basic factors, there are also other significant incentive-related factors, such as instructional support, recognition, and professional development.

8.2.2. What is the nature of the relationship, if any, between school context, teacher characteristics, and motivation?

Several strong relationships were identified between school context, teacher characteristics, and motivation. Firstly, initial intrinsic motivation to become a teacher was identified as a strong factor in later levels of teacher motivation. In short, those who were intrinsically motivated to become a teacher remained more highly motivated throughout their career compared with those who did not possess such an intrinsic drive.

Secondly, the geographical location of the school was also found to have a significant influence on teacher motivation. As repeatedly noted in this thesis, the significant disparity between urban and rural areas of Cambodia is deeply rooted and persists today. Accordingly, all teachers under study who had transferred from remote and/or rural to urban schools exhibited much higher levels of motivation.

Thirdly, gender emerged as a significant factor in relation to job satisfaction. The most noticeable gender gap found by the study was the job dissatisfaction of mid-career male teachers due to low income and low social status, which led to low motivation; while mid-career female teachers were more likely to enjoy their work and thus had higher levels of job satisfaction, perhaps because the teaching profession allowed them to enjoy a good work–life balance.

Finally, the type of work taken in addition to teaching showed a positive relationships with motivation. This had a particularly negative impact when linked to double-shift teaching, and emerged as a strong demotivating factor across both length-of-service cohorts. Conversely, the study found an unexpected relationship in the positive effect of

private tuition on teacher motivation – a linkage that suggests the need for further examination.

Thus, certain relationships between motivation, and context and teacher characteristics were found to be significant. However, some of these elements must be understood in terms of their property of mediation with regard to relationships between teacher incentive-related factors and motivation, as reviewed below.

8.2.3. To what extent is the relationship between teacher incentive-related factors and motivation mediated by a variety of demographic, teacher and school characteristics?

Several context and characteristic factors were found to mediate relationships between teacher incentive-related factors and motivation. Firstly, intrinsic motivation to become a teacher was identified as a powerful mediating factor. As discussed in Chapter 7, the presence of intrinsic motivation determines the effectiveness of incentive-related factors. Some of these factors, such as autonomy of teachers, make a positive impact primarily in those who possess such motivation.

Secondly, length of service in the teaching profession was also identified as a significant mediating factor and effective incentives varied according to age: younger teachers tended to be more highly motivated by status and career advancement, while mid-career teachers placed greater emphasis the contribution of others, and were more motivated by recognition from colleagues and community.

Thirdly, additional work was found to mediate relationships between incentive-related factors and teacher motivation, such that a second job/double shift weakened any positive impacts of such linkages. Particularly, second job was significant factor for new teachers.

Finally, the geographical location of the school was found to be a mediating variable, as some incentive-related factors were not present to the same extent in urban and rural or remote schools, such working environment, instructional support, and INSET.

8.2.4. What are the implications of the links between teacher incentive-related factors and motivation for policy and practice?

The findings of this study suggest several implications for policy and practice of relationships between teacher incentive-related factors and motivation, as reviewed below.

Firstly, the primary determinants of teacher motivation should be met, particularly a higher salary and better working environment. The study identified the low salary level of Cambodian teachers as compared with other occupations as the most significant unfulfilled basic need. A further increase in the salary level is thus required not only to mitigate teachers' lack of job satisfaction in the short term, but also to improve their status and professionalism in the long term. However, the salary should not be unconditionally increased. The unattractive working environment, particularly in rural and remote areas, should also be addressed as resources permit. Areas in need of attention are a gradual increase in the hardship allowance, and improvements in the quality of school infrastructure, availability of teaching and learning materials, and number of teachers per school.

Secondly, instructional support from the school director and DEO should be strengthened. Although the study identified this as the most significant incentive-related factor after basic needs, the frequency of instructional support was found to vary significantly by district and school. A number of policies to strengthen instructional support have already been implemented in Cambodia (MoEYS 2015a), but further effort clearly needs to be put into ensuring that all school directors and DEOs provide high quality support to teachers.

Thirdly, it emerged that teachers with different lengths of service were motivated by different incentives. Given that mid-career teachers were found to respond positively to recognition from school and community (as discussed 8.2.1), the official Good Teacher Award should be implemented in a more transparent manner and target more individuals from this cohort. Conversely, newly recruited teachers were found to have very little chance of attending INSET programmes provided by MoEYS or NGOs, but such opportunities were valued highly by this cohort. Therefore, regular training should be initiated for newly recruited teachers, or scholarships could be provided to allow them to attend university at the weekend or in the evening.

Fourthly, some new teachers were found to receive support from TTCs only once or twice annually in the first year of service. Therefore, school induction programmes for newly assigned teachers should be improved as those from this cohort were found to be more sensitive to challenges in the classroom (disruptive student behaviour, high student-to-teacher ratio, etc.).

Lastly, given that that intrinsic motivation was found to be the strongest teacher characteristic correlated with high levels of ongoing motivation and retention, the current TTC entrance examination should be reformed to select more applicants able to show strong intrinsic motivation – as determined through interview screening, psychological tests, or other means.

8.3. Contribution of the Thesis

One significant contribution of this thesis is to fill gaps in knowledge of how incentive-related factors, context, and other relevant characteristics interact with teacher motivation in developing countries. There are three main ways in which the study achieves this, as follows.

Firstly, the thesis makes a novel theoretical and conceptual contribution by beginning to bridge research on both sides of the familiar developed–developing country divide. In spite of being brought to our attention more than 15 years ago, the theoretical and conceptual disparity between research on teacher job satisfaction and motivation in the developed and developing worlds persists right up to the present day (Garrett 1999). Many teacher motivation studies on developing countries have been based on a set of theoretical assumptions and empirical investigations originally carried out in developed countries. Although the present thesis also establishes it overarching theoretical framework from research originating developed countries, it also extensively reviews literature from developing countries and seek to explicitly highlight new areas and specific issues that must be incorporated into future studies on teacher motivation in the developing world.

The thesis formulated a framework that combines three major theories from the literature on work motivation. However, this still masked one major source of the theoretical gap: questions concerning the degree to which teacher motivation fundamentally differs by generation. Currently, little motivation-related research examines teachers by generational cohort, let alone in a context that has experienced civil war and rapid reconstruction within 40 years.

Secondly, the thesis makes some novel methodological contributions. Few research projects have conducted classroom observation to identify level of teacher motivation in developing countries. Perhaps hindered by lack of resources, most research to date has utilised the survey, interview, and focus group discussion – or simply used proxy indicators to evaluate motivation. Conversely, the present study employed a survey questionnaire, classroom observation, and interviews. It also utilised a large-scale dataset representing teachers sampled from all 24 provinces of Cambodia. In conducting subsequent observations and interviews with smaller samples selected from the large dataset, the study was able to triangulate findings from three levels. Such a hybrid data

collection strategy may present a new methodological model for obtaining more reliable and valid knowledge on teacher motivation. In addition, there is another methodological contribution: mixed approach provides different views to the relationships between teacher motivation and incentives. The qualitative case study analysis deepens understanding of teacher motivation issues. Specifically, it highlights there several gaps between survey analysis and case studies surrounding issues of higher salary, promotion, and intrinsic motivation to become a teacher. This helps demonstrate that the study design and its analytical strategy (Figure 4-1) makes an important contribution, one that can hopefully contribute to more contextually-relevant policy suggestions.

Thirdly, the thesis makes several empirical contributions. Currently, there is much research from Africa and South Asian countries, but little from South-East Asia. For example, only one report has been published on the linkage between motivation and teacher incentives in Cambodia: conducted by an NGO, this study covered just four provinces (out of 24 provinces) and mainly examined external incentives (NEP 2012). Therefore, the present study fills large empirical gaps in the case of Cambodia, including utilisation of national data and consideration of both intrinsic and extrinsic incentive factors vis-à-vis teacher motivation.

Furthermore, current teacher motivation research in developing countries focuses primarily on extrinsic factors, even though it has been acknowledged in developed countries that intrinsic motivation is also a key factor in an effective teacher. Therefore the present study has also explored the role of intrinsic drive in overall motivational patterns of teachers. It has then shown how intrinsic motivation can also play a significant role and should be taken into account in the planning of incentive policies.

There are a host of other empirical contributions made by this thesis that fill gaps in research in terms of, for example, (i) disaggregation of teachers with high motivation and low motivation respectively; and (ii) the lack of evidence on the effects of non-

remuneration incentive-related factors (e.g. instructional supervision, working and living conditions, community support, etc.) on teacher motivation.

8.4. Areas for Further Research

There is still much scope for further research on teacher motivation in Cambodia. Firstly, relationships between incentive- and context-related factors, and intrinsic motivation should be explored in more depth. Additionally, the present study identified a significant linkage between intrinsic motivation to become a teacher and the current level of teacher motivation; however, origins and contributory factors in terms of the individual's intrinsic motivation to become a teacher are still far from clear. Further research on this key concept could thus deepen insight into dynamics at play between context, teacher characteristics, incentives, and motivation. Future research should also explore the extent to which intrinsic motivation is a characteristic unique to teachers through more extensive comparisons with other occupations.

Secondly, the linkage between teacher motivation and student learning outcome must be examined. Since what students learn in class is more important than their attendance per se, student learning outcome is a powerful proxy indicator of teacher motivation level. If a methodology could be identified that were capable of further illuminating this linkage, it would advance this line of research markedly.

Thirdly, the relationship between teacher motivation and private tuition should be explored more deeply. Unlike other forms of additional work (second job, double shift), private tuition was found to positively influence teacher school attendance and lesson plan preparation. However, it is unclear as to the motivational forces at play in such an arrangement. Therefore, the balance of intrinsic and extrinsic forces that motivate teachers to engage in private tuition should be investigated. However, eliciting 'honest' responses might be highly problematic methodologically.

Finally, the manner in which context influences a teacher's social standing should be further explored. In terms of the present context, we need to examine carefully how and why the status of teachers has changed. The present study found a significant decline in teacher status immediately following the civil war, mostly owing to rapid expansion of the teaching force with a minimum of support for the maintenance of acceptable working conditions. A deeper probe into this issue was beyond the scope of this study, but one way of exploring it more deeply would be to make a closer study of perceptions of teacher status by representatives of different generations in order to understand how such social standing has changed over time. The enquiry could then be extended beyond Cambodia to neighbouring countries in order to better understand how national contexts influence the rise or fall of teacher status against the background of international education movements – such as EFA in the 1990s and 2000s.

8.5. Concluding Remarks

Cambodian teachers have lived through harsh times since the late 1970s: the education system had to be reconstructed out of the ruins of the Khmer Rouge era; salaries have remained low; working environments remain tough, particularly in rural and/or remote areas; and the status of teachers has declined drastically compared to their social standing in the 1960s. However, throughout the course of this doctoral study, I felt hope whenever I personally met and interviewed teachers; and those with high motivation in particular amazed me with their enthusiasm and passion for educating the next generation of Cambodians. Even those who were not highly motivated were evidently doing their best in difficult circumstances, particularly those mired in the realities of rural poverty.

Many of the teachers, school directors, and DEO officers I encountered requested that I bring to the attention of the Government of Cambodia the strong sentiment that teachers' working conditions should be much improved as they were at the heart of any hope of

developing future talent for the country: their comments and narratives reminded me that teaching in Cambodia is still a thankless task.

This thesis examined relationships between context, and teacher incentives and motivation in Cambodia. The analysis clearly demonstrates that basic needs have not yet been met but must be fulfilled if all Cambodian teachers are to be motivated. It concludes that the impact of extrinsic incentives differs according to the individual's level of intrinsic motivation to become a teacher. The study has shown how such intrinsic motivation can play a significant role in teaching outcome, and should be taken into account to the extent of considering it in incentive policy planning.

These findings apply to teachers in the Cambodian context, but I suspect that similar outcomes obtain in other developing countries as well. If we assume that affording teachers a higher social status and appreciating the work they do will create an environment in which a greater number of intrinsically motivated individuals are likely to emerge, we can start to improve the situation right now by thanking rather than blaming teachers.

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Appendices

Appendix I: Case introductions to five additional mid-career and two newly assigned teachers

Mr Sambath: Urban teacher, unsatisfied with status of a public primary school teacher

Mr Sambath (41 years old/married/16 years' teaching experience) had been a teacher since 1996 and was working at a school in central Phnom Penh at the time of the fieldwork. He did not have a second job but conducted private tuition for his regular students in the afternoons.

He had not particularly wanted to be a teacher after completing Grade 12. Instead, he attended a further education college for two years to prepare for the entrance examination for the Institute of Technology of Cambodia, the foremost engineering university in the country. Subsequently, he went to another college for a further two years to prepare for the medical university entrance examination. After failing to get into either institute, he worked as a motorcycle taxi driver for a few years. His family then recommended that he become a teacher on the grounds that it was a stable public-sector job.

He complained, "*The social status of a teacher in society is in the middle of all jobs; I'm not satisfied with this as teachers used to be respected a lot more in the past.*" He thus showed stress related to his status as a teacher. However, he also asserted that the motivation of teachers at his school had recently improved because it was a special school attached to the National Institute of Education. He was also dissatisfied with the fact that a primary school teacher's salary was less than that of a secondary school teacher, stressing that the volume of preparation was a lot greater.

Nevertheless, Mr Sambath was sure that he would still be a teacher in ten years' time as there was no other option available to him – but he hoped that he would be a secondary school teacher by then. According to him, the two main incentives that would improve teacher motivation were a better working environment and a higher salary.

Ms Romdul: Teacher with chronic illness, used to have higher motivation

Ms Romdul (38 years old/married/15 years' teaching experience) had wanted to be a teacher or NGO worker when she was in Grade 8. She finally opted for a teaching career due to poor English skills. A year after completing Grade 12, she found work as a contract teacher in her hometown and enrolled in the TTC three years later.

She had taught in a rural school close to an urban area since 2002. As she liked teaching, she enjoyed her work a lot. However, she pointed out one serious disadvantage of teaching work: there was no health insurance. As she had a chronic illness, much of her salary went on medical costs. Additionally, she had to feed and clothe her five siblings. She commented, "*Now I cannot make money from additional work because I need to have a rest after the morning work. I used to conduct private tuition in the afternoon, but cannot do it anymore.*"

Nevertheless, she hoped to still be teaching in ten years' time if her healthy permitted it.

She believed that the general motivation of teachers had increased a little in recent years as the salary had risen and, more importantly, the country had developed. According to her, the principal incentives that would increase teacher motivation were more promotion opportunities and a higher salary. She added that each represented recognition.

Ms Rotana: Female teacher with six children, from a family of teachers

Ms Rotana (40 years old/married/19 years' teaching experience) was from a family of teachers, her father being the director of a secondary school in the region and her husband also a teacher at a neighbouring school. She had been at her current school, which was in her home village, for 19 years and currently worked a double shift. In addition to all her teaching duties, she was also the mother of six children.

When she was a child, she had not wanted to be a teacher because she tried to stay away from her strict father. Although she wanted to be a medical doctor, her father really wanted her to be a teacher. She might have been recalling her emotions then when told me, "*My father was very strict at that time and didn't give me any choice* [starts to cry]." After completing Grade 9, she gave up her dream of becoming a medical doctor and enrolled in the TTC.

Since qualifying as a teacher, she had made the effort to go to secondary school at the weekends in order to obtain a Grade 12 certificate. She had also taken a distance learning course in mathematics teaching run by an international NGO. However, she explained that she was unable to prepare lesson plans or visit other teachers' classes for peer learning because she simply did not have the time. Usually, she and her colleagues do not develop their own lesson plans but copied those distributed in regional seminars.

She expressed great concern about the non-transparency of MoEYS mechanisms, particularly in terms of selection for the Good Teacher Award and appointment of the school director. Having worked so hard to improve school performance, she did not feel that she had received sufficient recognition. However, she envisioned working as a teacher at least for the next ten years as there was no other option.

According to Ms Rotana, the main incentives for improving teacher motivation were more INSET opportunities, a higher salary, and greater recognition: she insisted on nominating three factors although I asked for only the two most important ones.

Mr Sodeth: Knowledgeable teacher working at a remote school

Mr Sodeth (35 years old/married/15 years' teaching experience) gave me the impression that he was the most intelligent and knowledgeable of all the mid-career teachers I interviewed. However, perhaps it was actually this attribute that had led to his dissatisfaction with the job, as he complained that it simply was not sufficiently stimulating.

When he had been in his final year at secondary school, he had wanted to attend an agricultural university but he failed the Grade 12 final examination. The only way to continue with his post-secondary education was to enter the nearest TTC.

At the time of the fieldwork, he was teaching at a remote school and was also far from home. However, as he explained, "*Although I really want to move to another school nearer home, I don't have any connections with MoEYS and don't have sufficient money to arrange my transfer: usually, we need to pay at least USD 200.00 to a broker.*" He seemed to detest these corrupt practices and the fact that he had no choice but to stay at his current school.

To supplement his low salary, he and his wife worked on a farm in the afternoons. He was unsure as to whether he would still be working as a teacher in ten years' time, saying that it would depend mainly on the future teachers' salary level.

According to his school director, Mr Sodeth was most diligent, making his own teaching aids, preparing lesson plans well, and following up with slow learners. According to Mr Sodeth, the two main incentives for increasing teacher motivation were greater

recognition and a better working environment, particularly in terms of school infrastructure, and teaching and learning aids.

Mr Sitha: Energetic male teacher with high intrinsic motivation to be a teacher

Mr Sitha (40 years old/married/20 years' teaching experience) had decided to become a teacher because he had the chance to facilitate a literacy class in a temple while he was still in Grade 7. On completion of Grade 12, he applied to three higher education institutes: the Institute of Technology of Cambodia, the foremost medical school, and a TTC. He was only accepted by the TTC, although he argued that he would still have eventually gone into teaching even if he had taken a different first degree.

He insisted that it was important for teachers to work professionally regardless of their social status: provided they showed professionalism, the community would respect them. He admitted that teaching was a demanding job, but it was very worthwhile and he would still choose it if he could have his time again. He was particularly proud when his former students became teachers.

He complained a little about the necessity to work long hours in order to feed his family, rhetorically enquiring, "*Do I have to work hard? It's not only me, but everybody in the community. I really appreciate our community here as the people support us in our arrangement of* three *shifts so that we can enrol all the children in the community: we all work hard here.*"

Strong intrinsic motivation proved to be the decisive factor in Mr Sitha's case, although, according to him, the two the main incentives for the motivation of teachers were a higher salary and full community support.

Mr Chanthol: Newly assigned male teacher with no intrinsic motivation

Mr Chanthol (27 years old/unmarried/3 years' teaching experience) had not originally planned a career in teaching, but applied to the TTC when he was in Grade 12 because there were not many job opportunities in his rural home area and many of his friends were also applying.

At the time of the fieldwork, he had been teaching a double shift for three years and thought that it was quite an easy job, although he was frustrated because many students did not attend school due to family obligations. He did a minimum of lesson preparation and follow-up with slow learners as time was in short supply owing to his double shift.

He was unsure as to whether he would still be working as a teacher in ten years' time, asserting that would leave the profession if there were no improvement in the salary, and find work in a hotel, move to an urban area, or migrate to Thailand; in the meantime, he would continue to actively search for other opportunities such as something in the tourism industry or NGO work.

According to Mr Chanthol, the two main incentives for increasing teacher motivation were more INSET and more promotion opportunities (he was one of only two teachers who did not cite a salary rise as a key incentive).

Ms Phalin: Newly assigned female teacher who enjoys teaching but in need of further training

Ms Phalin (26 years old/unmarried/3 years' teaching experience) had never thought about any career other than teaching since she had been 15 years old. She asserted that she liked teaching and helping children as it made a social contribution.

On completion of Grade 12, she applied to both the regional TTC and PTTC but was only accepted by the latter (to study to be a primary school teacher). However, she still wanted to pursue secondary teaching and the following year, while she was studying at the PTTC,

she applied again to the regional TTC. She passed the examination but due to MoEYS regulations, she was unable to transfer courses. Nevertheless, she completed the two-year PTTC course was assigned to a rural primary school. At the time of the fieldwork, she had been teaching a double shift there for three years.

Ms Phalin enjoyed teaching although she was unsatisfied with the low salary and remoteness of the school. Nevertheless, her motivation level had increased since she had first been posted there as she now found the work more interesting. I gained the impression that she prepares well for classes, and she also followed up with slow learners and visited colleagues' classes regularly.

At the end of the interview, she stressed, "*I can bear the salary level as I really feel the job is interesting, but I need some training as I don't know how to use the new textbooks, and the teacher's guides have not been distributed.*"

According to Ms Phalin, the main incentives for increasing teacher motivation were more INSET and a higher salary.

Appendix II: Detailed results of regression analysis on survey and

observation data

Throughout step-wise analysis below (1-3), only significant variables in the univariate analysis are included in the multivariate analysis below. All significant variables in incentive model and context/characteristics model are included in the integrated model.

1. Step-wise analysis for all surveyed teachers
1.1.   Satisfaction for all surveyed teachers

Incentive Model:

	School director's support		Number of students per class		Student Behaviour		Salary scale	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	7.069	0						
	10.315	0						
2	6.342	0	0.955	0				
	11.287	0						
3	4.156	0.002	0.953	0	0.839	0.774		
	8.675	0			1.982	0.278		
4	5.017	0.001	0.948	0	0.87	0.824	1.557	0.375
	10186	0			1.998	0.283		

Context/characteristic Model

	Pre-service training		Teaching years		Final grade completed		Years in the current school		Private tutorial	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	1.148	0.623								
	0.485	0.001								
2	1.061	0.836	1.005	0.622						
	0.496	0.01								
3	1.069	0.814	1.002	0.824	0.955	0.418				
	0.533	0.03								
4	1.054	0.852	1.005	0.761	0.952	0.392	0.995	0.804		
	0.535	0.031								
5	1.059	0.841	1.006	0.717	0.965	0.545	0.998	0.944	0.692	0.089
	0.552	0.043								

Integrated Model:

R2=0.0964

	School director's support		Number of students per class		Pre-service training		Private tutorial	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	7.069	0						
	10.315	0						
2	6.342	0	0.955	0				
	11.287	0						
3	4.033	0.002	0.958	0.001	1.049	0.922		
	7.759	0			0.307	0.004		
4	4.443	0.001	0.959	0.002	1.102	0.84	0.629	0.201
	8.609	0			0.329	0.007		

1.2. Attendance for all surveyed teachers

Incentive Model:

- No significant variable was identified in the univariate analysis.

Context/characteristic Model

	Private tuition		Geographical location		Second job		Years in the current school		Teaching years		Final grade completed	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	2.457	0										
2	1.76	0.018	0.431	0								
3	1.674	0.034	0.464	0	0.747	0						
4	1.556	0.077	0.485	0	0.709	0	1.035	0.002				
5	1.619	0.055	0.499	0.002	0.68	0.054	1.023	0.302	1.016	0.41		
6	1.715	0.033	0.479	0.001	0.659	0.036	1.023	0.293	1.005	0.793	0.912	0.156

Integrated Model:

R2=0.0522

	Geographical location		Community involvement		Private tutorial		Second job	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	0.354	0						
2	0.374	0	4.386	0				
			5.123	0				
3	0.465	0	4.496	0	1.866	0.009		
			5.496	0				
4	0.512	0.002	4.906	0	1.753	0.02	0.698	0.058
			5.979	0				

1.3. Teacher interaction for all surveyed teachers
   Incentive Model:

- Only one significant variable was identified in the univariate analysis: School director's support.

Context/characteristic Model

	Second job		Final grade completed	
	Odds.R	P	Odds.R	P
1	0.708	0.89		
2	0.737	0.138	1.082	0.15

   Integrated Model:

- Only one significant variable was identified in the above models: School director's support.

1.4. Lesson Plan for all surveyed teachers
   Incentive Model:

	Promotion		Community involvement	
	Odds.R	P	Odds.R	P
1	0.81	0.613		
	0.17	0.064		
2	0.798	0.595	4.25	0.079
	1.832	0.079	7.02	0.02

Context/characteristic Model

	Gender		Double-Shift		Final grade completed		Geographical location		Second job		Pre-service training	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	0.45	0.002										
2	0.493	0.007	0.467	0.012								
3	0.575	0.043	0.412	0.003	1.274	0.002						
4	0.606	0.074	0.439	0.007	1.266	0.003	0.669	0.256				
5	0.631	0.104	0.429	0.007	1.251	0.005	0.73	0.401	0.763	0.373		
6	0.627	0.098	0.432	0.008	1.239	0.025	0.73	0.401	0.762	0.382	0.983 / 1.06	0.973 / 0.878

Integrated Model:

$R^2 = 0.104$

	Double-Shift		Community involvement		Promotion		Final grade completed		Gender	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	0.423	0.003								
2	0.433	0.004	1.75 / 2.48	0.357 / 0.149						
3	0.407	0.006	3.118 / 5.496	0.13 / 0.024	0.785 / 2.053	0.582 / 0.042				
4	0.37	0.002	3.171 / 5.961	0.149 / 0.027	0.946 / 2.215	0.902 / 0.031	1.31	0.002		
5	0.428	0.014	4.972 / 9.872	0.049 / 0.007	0.787 / 2.468	0.604 / 0.021	1.234	0.015	0.374	0.002

1.5. Classroom cleanliness for all surveyed teachers

Incentive Model:

	TS rate		Student Behaviour	
	Odds.R	P	Odds.R	P
1	1.031	0.034		
2	1.031	0.032	3.014	0.103
			3.412	0.064

Context/characteristic Model

	Geographical location		Second job		Final grade completed		Private tutorial		Gender		Pre-service training	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	0.301	0										
2	0.364	0.003	0.565	0.054								
3	0.371	0.003	0.649	0.147	1.222	0.006						
4	0.394	0.009	0.66	0.168	1.217	0.007	1.206	0.596				
5	0.409	0.015	0.681	0.207	1.21	0.009	1.211	0.588	0.828	0.521		
6	0.417	0.016	0.691	0.225	1.177	0.037	1.194	0.613	0.809	0.475	1.339	0.559
											1.438	0.583

Integrated Model:

R2=0.0673

	Geographical location		Final grade completed		Number of students per class		Student Behaviour	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	0.301	0						
2	0.364	0.003	1.246	0.002				
3	0.346	0.001	1.232	0.003	1.022	0.146		
4	0.322	0.001	1.188	0.023	1.019	0.239	2.5	0.157
							2.62	0.124

1.6.   Classroom Management I (Active time) for all surveyed teachers

Incentive Model:

- Only one significant variable was identified in the univariate model: School director's support.

Context/characteristic Model

- Only one significant variable was identified in the univariate analysis: Pre-service training.

Integrated Model:

R=0.0361

	School director's support		Pre-service training	
	Coeff.	P	Coeff.	P
1	0.244	0.035		
	0.152	1.8		
2	0.244	0.055	0.091	0.085
	0.144	0.207	0.024	0.532

1.7. Classroom Management II (Off time) for all surveyed teachers

Incentive Model:

- Only one significant variable was identified in the univariate model, in-service training.

Context/characteristic Model

	Geographical location		Second job		Private tuition		Years in the current school	
	Coeff	P	Coeff	P	Coeff	P	Coeff	P
1	0.0366	0.001						
2	0.0302	0.009	0.175	0.106				
3	0.024	0.046	0.0157	0.15	-0.0167	0.22		
4	0.02	0.093	0.017	0.112	-0.0166	0.222	-0.001	0.094

Integrated Model:

$R2=0.0429$

	In-service Training		Geographical location		Years in the current school	
	Odds.R	P	Odds.R	P	Odds.R	P
1	-0.341	0.014				
2	-0.341	0.013	0.366	0.001		
3	-0.03	0.026	0.033	0.002	-0.0008	0.183

2. Step-wise analysis for mid-career teachers

2.1. Satisfaction for mid-career teachers

Incentive Model:

	Community involvement		School director's support	
	Odds.R	P	Odds.R	P
	4.574	0.071		
1	7.759	0.018		
	3.82	0.155	1.03	0.975
2	6.12	0.06	3.31	0.211

Context/characteristic Model

- No significant variable was identified in the univariate analysis.

Integrated Model:

- Only one variable is significant in the above analysis: Community involvement.

Figure AII-1: Flow of satisfaction, incentive and context for mid-career teachers
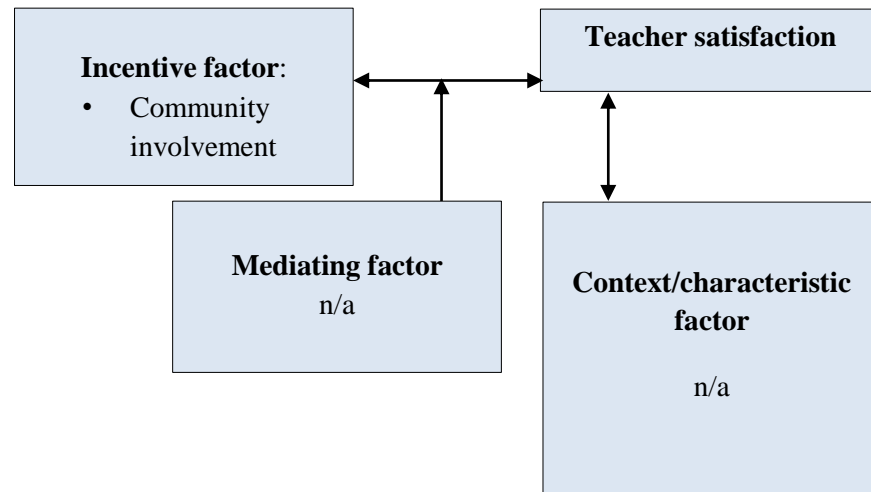
2.2. Attendance for mid-career teachers

Incentive Model:

	Community involvement		School Director	
	Odds.R	P	Odds.R	P
1	6.432	0		
	11.595	0		
2	6.382	0	0.723	0.628
	11.524	0	1.01	0.923

Context/characteristic Model

	Region		Private tutorial		Second job		Years in the current school		Gender	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	0.258	0								
2	0.311	0.001	1.744	0.187						
3	0.344	0.006	1.636	0.245	0.764	0.468				
4	0.262	0.001	1.325	0.523	0.897	0.779	1.088	0.007		
5	0.263	0.001	1.325	0.524	0.901	0.799	1.088	0.008	0.987	0.972

Integrated Model:

R2=0.121

	Community involvement		Geographical location		Years in the current school	
	Odds.R	P	Odds.R	P	Odds.R	P
1	6.432	0				
	11.595	0				
2	4.308	0	0.272	0		
	8.25	0				
3	5.309	0	0.238	0	1.099	0.004
	9.373	0				

Figure AII-2. Flow of attendance, incentive and context for mid-career teachers

2.3.   Teacher interaction for mid-career teachers

Incentive Model:

	Student behaviour		School Directors' support		Number of students per class	
	Odds.R	P	Odds.R	P	Odds.R	P
1	3.509	0				
	4.347	0				
2	3.384	0	2.564	0		
	3.629	0	4.014	0		
3	3.15	0	2.487	0	1.056	0.074
	4.757	0	2.87	0		

Context/characteristic Model

- Only one significant variable was identified in the univariate analysis.

Integrated Model:

R2=0.1233

	Student behaviour		School Directors' support		Home village		Number of students per class	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	3.509	0						
	4.347	0						
2	3.384	0	2.564	0				
	3.629	0	4.014	0				
3	3.244	0	2.65	0				
	4.224	0	2.971	0	2.101	0.081		
4	3.55	0	2.336	0	4.033	0	1.066	0.047

4.991   0   2.707   0

Figure AII-3: Flow of interaction, incentive and context for mid-career teachers
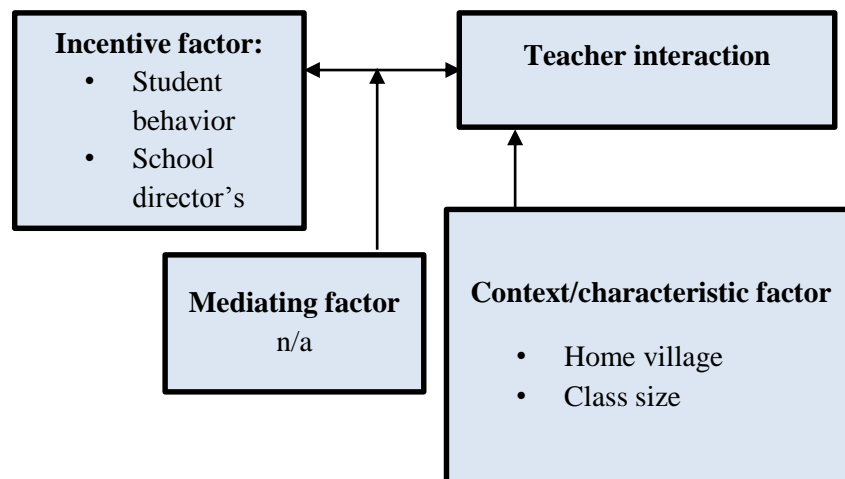
2.4.   Lesson Plan for mid-career teachers
        Incentive Model:

- Only one variable was identified in the univariate analysis.

Context/characteristic Model

	Final grade completed		Gender		Pre-service training	
	Odds.R	P	Odds.R	P	Odds.R	P
1	1.977	0.008				
2	1.801	0.018	0.385	0.6		
3	1.876	0.013	0.458	0.053	14.663	0.082
					4.311	0.8

Integrated Model:

R2=0.104

	Final grade completed		Gender		Pre-service training		Community involvement	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	1.977	0.008						
2	1.801	0.018	0.385	0.6				
3	1.876	0.013	0.458	0.053	14.663	0.082		
					4.311	0.8		
4	2.01	0.002	0.378	0.073	16.197	0.065	0.295	0.058
					6.84	0.046	1.108	0.113

Figure AII-4: Flow of lesson plan, incentive and context for mid-career teachers

Incentive factor:
n/a

Lesson plan preparation

Mediating factor
n/a

Context/characteristic factor

- Final grade
- PRESET

2.5. Classroom cleanliness for mid-career teachers

Incentive Model:

	School Directors' support		Community involvement		Salary	
	Odds.R	P	Odds.R	P	Odds.R	P
	7.173	0				
1	3.065	0				
	5.784	0	0.806	0.673		
2	5.8	0	1.202	0.502		
	4.658	0	0.621	0.383		
3	2.147	0	0.98	0.402	25.401	0.049

Context/characteristic Model

	Geographical location		Second job		Final grade completed	
	Odds.R	P	Odds.R	P	Odds.R	P
1	0.257	0.008				
2	0.364	0.092	0.459	0.186		
3	0.362	0.082	0.539	0.31	1.264	0.282

Integrated Model:

R2=0.135

	School Directors' support		Geographical location		Salary	
	Odds.R	P	Odds.R	P	Odds.R	P
1	7.173	0				
	3.065	0				
2	5.192	0	0.26	0.12		
	1.465	0				
3	5.83	0	0.215	0.005	33.25	0.119
	1.56	0				

Figure AII-5: Flow of cleanliness, incentive and context for mid-career teachers
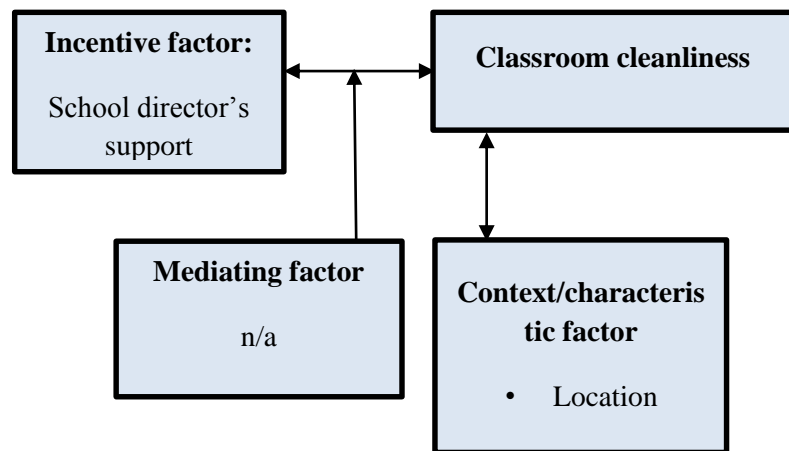
2.6.　　Classroom Management I (Active time) for mid-career teachers

Incentive Model:

	School Directors' support		Community involvement	
	Coeff	P	Coeff	P
1	0.557	0		
	0.264	0		
2	0.558	0	0.001	0.977
	0.265	0	0.027	0.876

Context/characteristic Model

	Pre-service training		Final grade completed	
	Coeff	P	Coeff	P
1	0.308	0		
	0.121	0.013		
2	0.308	0	0.035	0.01
	0.104	0.022		

Integrated Model:

R2=0.231

	School Directors' support		Pre-service training		Final grade completed	
	Coeff	P	Coeff	P	Coeff	P
1	0.557	0				
	0.264	0				
2	0.557	0	0.308	0		
	0.27	0	0.11	0.025		
3	0.572	0	0.308	0	0.035	0.012
	0.288	0	0.094	0.041		

Figure AII-6: Flow of class management, incentive and context for mid-career teachers
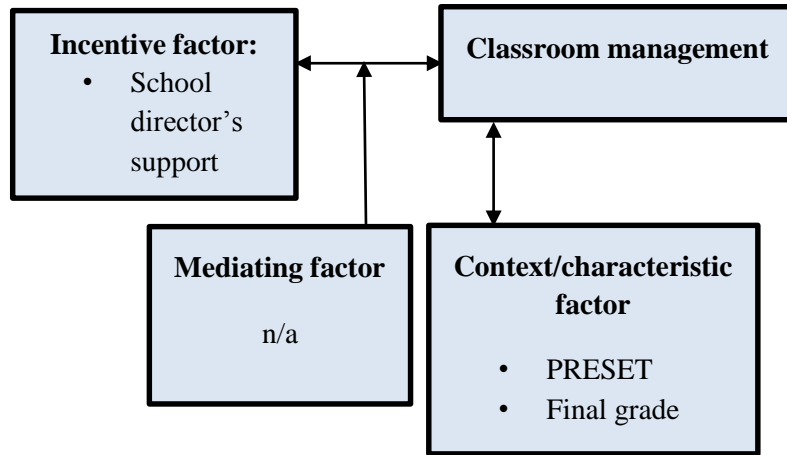
2.7. Classroom Management II (Off time) for mid-career teachers

Incentive Model:

- Only one significant variable was identified in the univariate model.

Context/characteristic Model

	Private tuition		Geographical location	
	Coeff	P	Coeff	P
1	-0.035	0.021		
2	-0.025	0.09	0.022	0.18

Integrated Model:

R2=0.0561

	In-service Training		Private tuition	
	Coeff	P	Coeff	P
1	-0.055	0		
2	-0.041	0.021	-0.031	0.039

Figure AII-7: Flow of class management, incentive and context for mid-career teachers
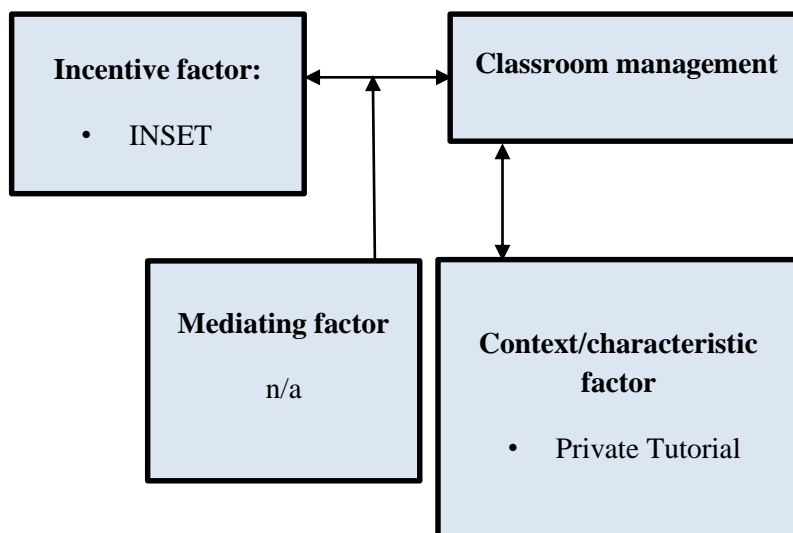
3. Step-wise analysis for new teachers

3.1.   Satisfaction for new teachers

Incentive Model:

	School directors' support		Number of students per class	
	Odds.R	P	Odds.R	P
1	2.103	0.274		
	11.737	0		
2	12.429	0.028	0.912	0.01
	19.592	0		

Context/characteristic Model

	Second job		Like teach	
	Odds.R	P	Odds.R	P
1	0.495	0.058		
2	0.42	0.3	2.14	0.048

Integrated Model:

R2=0.142

	School directors' support		Number of students per class		Second job		Like teach	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	2.103	0.274						
	11.737	0						
2	12.429	0.028	0.912	0.01				
	19.592	0						
3	13.734	0.009	0.908	0.019	0.238	0.034		
	21.769	0						
4	14.98	0	0.901	0.073	0.205	0.045	0.938	0.926
	20.507	0						

Figure AII-8: Flow of satisfaction, incentive and context for new teachers
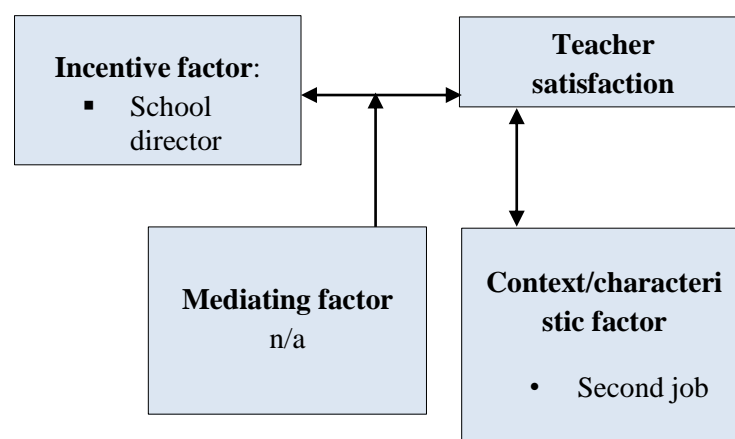
3.2. Attendance for new teachers

Incentive Model:

		Student behaviour		School Director	
		Odds.R	P	Odds.R	P
1		3.305	0		
		2.604	0.005		
2		3.072	0.004	0.981	0.906
		3.226	0.002	3.072	0.002

Context/characteristic Model

- Only one significant variable was identified in the univariate analysis.

Integrated Model:

R2=0.121

	Student behaviour		School Directors' support		Home village	
	Odds.R	P	Odds.R	P	Odds.R	P
1	3.305	0				
	2.604	0.005				
2	3.072	0.004	0.981	0.906		
	3.226	0.002	3.072	0.002		
3	2.385	0.027	0.949	0.756	2.722	0.056
	2.729	0.01	2.385	0.027		

Figure AII-9. Flow of attendance, incentive and context for new teachers
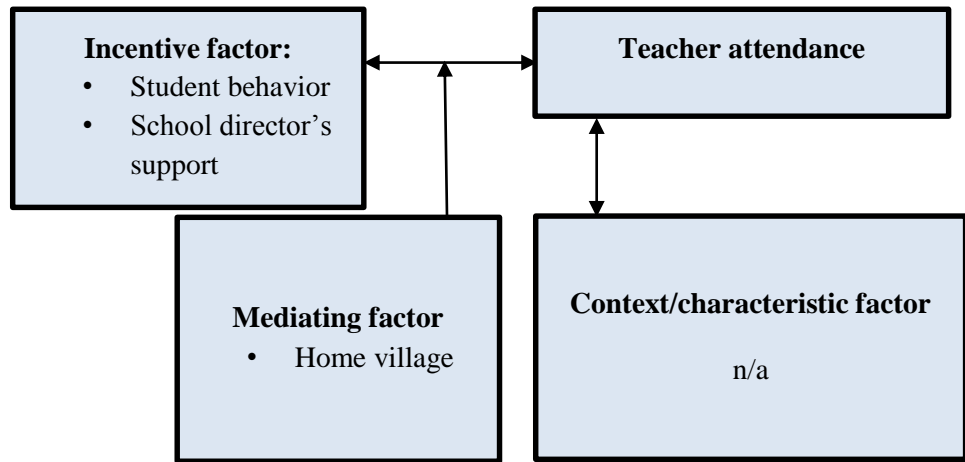
3.3.   Teacher interaction for new teachers

Incentive Model:

	School Directors' support		Student behaviour	
	Odds.R	P	Odds.R	P
	5.237	0		
1	5.189	0		
	4.887	0	1.244	0
2	4.244	0	1.871	0

Context/characteristic Model

	Gender		Second job		Final grade completed		Home village	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	2.351	0.09						
2	2.611	0.054	0.342	0.034				
3	2.967	0.029	0.392	0.064	2.101	0.019		
4	3.389	0.014	0.238	0.035	2.048	0.013	4.826	0.022

Integrated Model:

	School Directors' support		Student behaviour		Final grade completed		Second job		Gender		Home village	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	3.509 / 4.347	0 / 0										
2	3.449 / 4.287	0 / 0	1.244 / 1.871	0 / 0								
3	3.244 / 3.87	0 / 0	1.29 / 2.047	0 / 0	1.646	0.123						
4	3.054 / 3.62	0 / 0	1.277 / 2.014	0 / 0	1.561	0.113	0.301	0.035				
5	2.891 / 3.552	0 / 0	1.352 / 1.99	0 / 0	1.605	0.045	0.252	0.015	3.509	0.016		
6	2.655 / 3.309	0 / 0	1.433 / 2.003	0 / 0	1.742	0.016	0.174	0.014	4.035	0.009	3.958	0.058

Figure AII-10: Flow of interaction, incentive and context for new teachers
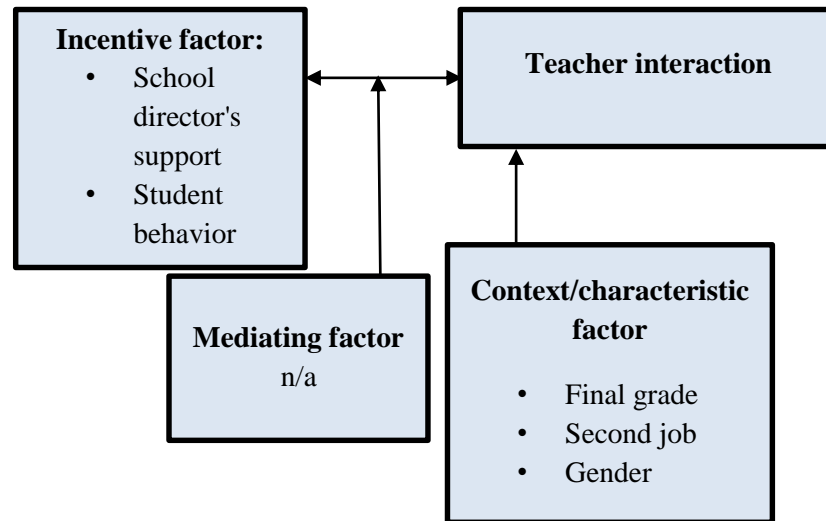
3.4.   Lesson Plan for new teachers

Incentive Model:

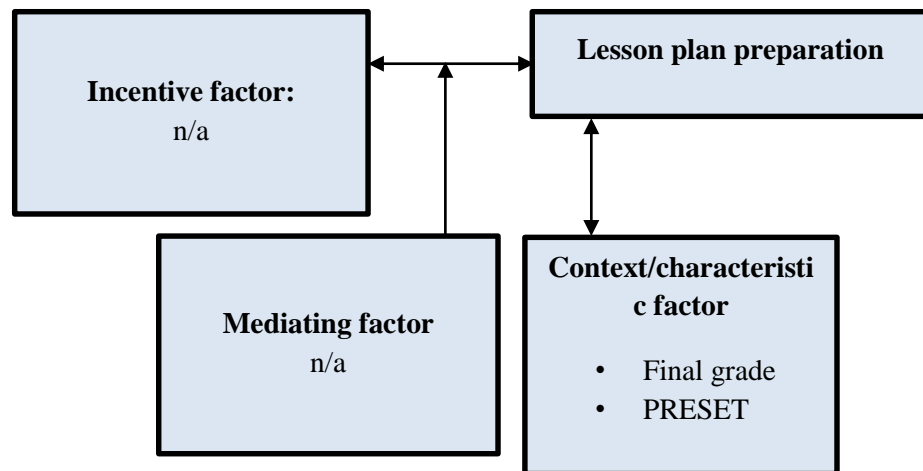- No variable was significant in the univariate analysis.

Context/characteristic Model

- No significant variable was identified in the univariate analysis.

Figure AII-11: Flow of lesson plan, incentive and context for new teachers
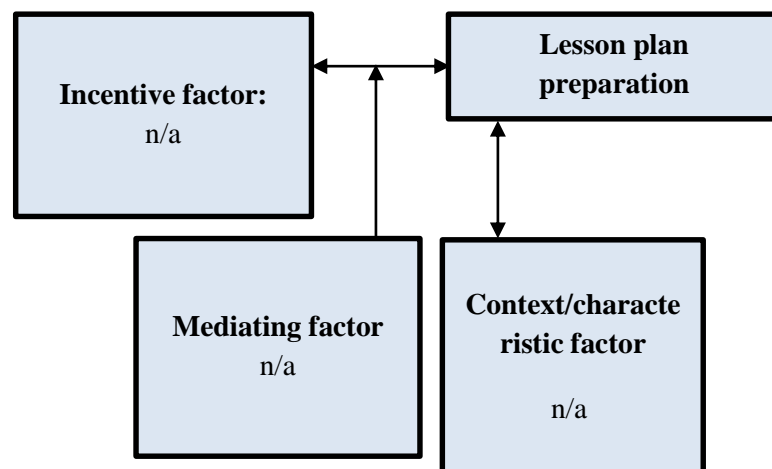
3.5.   Classroom cleanliness for new teachers

Incentive Model:

	Salary		In-service training		School directors' support		Student Behaviour		Commute		Community involvement	
	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P	Odds.R	P
1	9.51	0										
2	7.528	0.018	3.05	0								
3	6.115	0.249	1.45	0	11.88	0.091						
					4.505	0.025						
4	9.222	0.145	2.13	0	10.359	0.194	4.29	0.096				
					4.264	0.096	8.459	0.012				
5	7.793	0.229	3.32	0	9.809	0.333	6.2	0.103	7.411	0.043		
					2.264	0.398	10.099	0.018	0.1888	0.145		
6	4.418	0.421	3.59	0	10.997	0.296	6.815	0.093	9.032	0.053	9.528	0.059
					2.542	0.344	11.179	0.015	0.161	0.119	12.074	0.109

Context/characteristic Model

	Pre-service training		Final grade completed	
	Odds.R	P	Odds.R	P
1	6.994	0.023		
2	8.36	0.082	0.952	0.759

Integrated Model:

	In-service training		Student behaviour	
	Odds.R	P	Odds.R	P
1	1.29	0		
2	2.18	0	1.863	0.187
			3.089	0.058

R2=0.080

Figure AII-12: Flow of cleanliness, incentive and context for new teachers
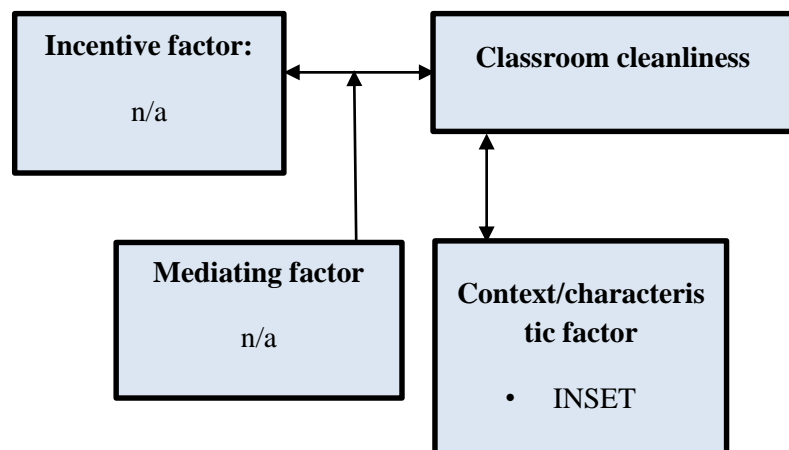
3.6.   Classroom Management I (Active time) for new teachers

Incentive Model:

	Student behaviour		Community involvement	
	Coeff.	P	Coeff.	P
	0.313	0		
1	0.365	0		
	0.302	0	-0.8	0.179
2	0.349	0	-0.135	0.103

Context/characteristic Model

- No significant variable was identified in the univariate analysis.

Integrated Model:

- Only one variable is significant in the above analysis.

Figure AII-13: Flow of class management, incentive and context for new teachers
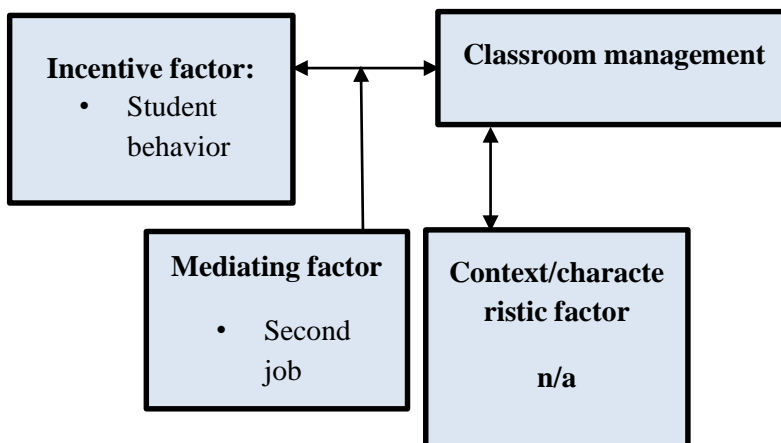
3.7.　Classroom Management II (Off time) for new teachers

Incentive Model:

|	In-service training		School directors' support	
	Coeff	P	Coeff	P
1	-0.079	0		
2	-0.741	0	-0.064	0.071
			-0.053	0.003

Context/characteristic Model

	Geographical location		Double Shift	
	Coeff	P	Coeff	P
1	-0.068	0.045		
2	-0.061	0.066	-0.037	0.082

Integrated Model:

R2=0.0561

	In-service training		School directors' support		Geographical location		Double Shift	
	Coeff	P	Coeff	P	Coeff	P	Coeff	P
1	-0.079	0						
2	-0.074	0	-0.064	0.071				
			-0.053	0.003				
3	-0.074	0.029	-0.064	0.074	0.005	0.845		
			-0.052	0.004				
4	-0.053	0	-0.053	0.091	-0.002	0.994	-0.03	0.217
			-0.043	0.031				

Figure AII-14: Flow of class management, incentive and context for new teachers
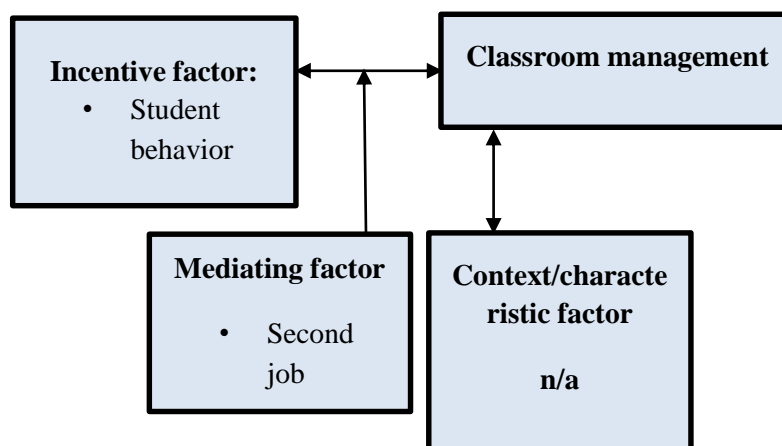
4. Identification of mediating factors for all surveyed teachers

4.1. Satisfaction for all surveyed teachers

Number of students per class			
Context Factor	Coeff	Percentage of change	Test
no context	0.01051		
Year SS	0.011155	0.061	
homevillage	0.01051	0.000	
Ptutorial	0.0098381	-0.064	
Secjob	0.010236	-0.026	
DS	0.010158	-0.033	
Teachyear	0.010898	0.037	
Gender	0.010553	0.004	
Geographical location	0.0112435	0.070	
Edulevel	0.0085467	-0.187	Not significant*
i.PRESET	0.0084315	-0.198	Not significant
Liketeach	0.009598	-0.087	Not significant

*Parameter for number of students per class changed from 0.0105 to 0.0085 when the final grade (edulevel) was included, this is a change of 18 percent. However the change is not statistically significant as the test of hypothesis that H0: 0.0105 – 0.0085=0 versus H1: 0.0105 – 0.0085~=0 resulted in these two values not being different than zero. Same

logic will apply for all other cases of 'Not significant' in the section 4 to 6 of Appendix II.

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.436	0.538			
Year SS	0.407	0.525	-0.0665	-0.0242	
Homevillage	0.425	0.5254	-0.0252	-0.0234	
Ptutorial	0.464	0.563	0.0642	0.0465	
Secjob	0.482	0.578	0.1055	0.0743	
DS	0.452	0.553	0.0367	0.0279	
Teachyear	0.481	0.604	0.1032	0.1227	Not significant
Gender	0.445	0.551	0.0206	0.0242	
Geographical location	0.445	0.546	0.0206	0.0149	
Edulevel	0.523	0.644	0.1995	0.1970	Not significant
i.PRESET	0.365	0.47	-0.1628	-0.1264	Not significant
Liketeach	0.47	0.585	0.0780	0.0874	Not significant

4.2. Attendance for all surveyed teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.353	0.373			
Year SS	0.316	0.338	-0.105	-0.099	***
homevillage	0.348	0.371	-0.014	-0.005	
Ptutorial	0.338	0.379	-0.042	0.016	
Secjob	0.38	0.404	0.076	0.08	***
DS	0.361	0.381	0.023	0.021	
Teachyear	0.326	0.342	-0.076	-0.083	
Gender	0.36	0.38	0.020	0.019	
Geographical location	0.296	0.331	-0.161	-0.113	***
Edulevel	0.345	0.359	-0.023	-0.038	
i.PRESET	0.354	0.375	0.003	0.005	
Liketeach	0.324	0.361	-0.082	-0.032	

Test of hypothesis: ***<0.01, **<0.05, *<0.1

4.3. Teacher interaction for all surveyed teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.2522	0.256			
Year SS	0.2487	0.255	-0.0139	-0.0039	
homevillage	0.2405	0.2435	-0.0464	-0.0488	
Ptutorial	0.2482	0.2524	-0.0159	-0.0141	
Secjob	0.2978	0.2959	0.1808	0.1559	Not significant
DS	0.2164	0.222	-0.1420	-0.1328	Not significant
Teachyear	0.2531	0.2518	0.0036	-0.0164	
Gender	0.2598	0.2684	0.0301	0.0484	
Geographical location	0.2353	0.2411	-0.0670	-0.0582	
Edulevel	0.2143	0.2092	-0.1503	-0.1828	Not significant
i.PRESET	0.2656	0.2719	0.0531	0.0621	
Liketeach	0.2837	0.2558	0.1249	-0.0008	Not significant

4.4. Lesson Plan for all surveyed teachers

Promotion			
Context Factor	Coeff	Percentage of change	Test
no context	0.081		
Year SS	0.0787	-0.03	
homevillage	0.0839	0.04	
Ptutorial	0.0791	-0.02	
Secjob	0.0915	0.13	Not significant
DS	0.087	0.07	
Teachyear	0.09	0.11	Not significant
Gender	0.0948	0.17	Not significant
Geographical location	0.0859	0.06	
Edulevel	0.0774	-0.04	
i.PRESET	0.084	0.04	
Liketeach	0.11	0.36	Not significant

Community involvement			
Context Factor	Coeff	Percentage of change	Test
no context	0.0975		
Year SS	0.09413	-0.035	
homevillage	0.09925	0.018	
Ptutorial	0.11689	0.199	Not significant
Secjob	0.10504	0.077	
DS	0.0895	-0.082	
Teachyear	0.11604	0.190	Not significant
Gender	0.11217	0.150	Not significant
Geographical location	0.09879	0.013	
Edulevel	0.11973	0.228	Not significant
i.PRESET	0.10207	0.047	
Liketeach	0.0836	-0.143	Not significant

4.5.   Classroom cleanliness for all surveyed teachers

No significant incentive variable was identifiedl

4.6.   Classroom Management I (Active time) for all surveyed teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.2644	0.1523			
Year SS	0.2623	0.1487	-0.008	-0.024	
homevillage	0.2626	0.1512	-0.007	-0.007	
Ptutorial	0.2579	0.1446	-0.025	-0.051	
Secjob	0.2928	0.1831	0.107	0.202	***
DS	0.2613	0.14878	-0.012	-0.023	
Teachyear	0.2643	0.15415	0.000	0.012	
Gender	0.27097	0.15526	0.025	0.019	
Geographical location	0.25392	0.14058	-0.040	-0.077	
Edulevel	0.26679	0.15434	0.009	0.013	
i.PRESET	0.24416	0.144261	-0.077	-0.053	
Liketeach	0.26755	0.14086	0.012	-0.075	

Test of hypothesis: ***<0.01, **<0.05, *<0.1

4.7.   Classroom Management II (Off time) for all surveyed teachers

In-service training			
Context Factor	Coeff	Percentage of change	Test
no context	-0.03418		
Year SS	-0.02977	0.1290	Not significant
homevillage	-0.03399	0.0056	
Ptutorial	-0.02897	0.1524	Not significant
Secjob	-0.034535	-0.0104	
DS	-0.03436	-0.0053	
Teachyear	-0.03327	0.0266	
Gender	-0.034402	-0.0065	
Geographical location	-0.03416	0.0006	
Edulevel	-0.03528	-0.0322	
i.PRESET	-0.03675	-0.0752	
Liketeach	-0.03258	0.0468	

5. Identification of mediating factors for mid-career teachers

5.1. Satisfaction for mid-career teachers

Community Involvement					
Context Factor	Coeff		Percentage of change		Test
no context	0.295	0.431			
Year SS	0.298	0.432	0.0102	0.0023	
homevillage	0.357	0.491	0.2102	0.1392	Not significant
ptutorial	0.305	0.423	0.0339	-0.0186	
Secjob	0.278	0.415	-0.0576	-0.0371	
DS	0.293	0.429	-0.0068	-0.0046	
gender	0.289	0.426	-0.0203	-0.0116	
Geographical location	0.321	0.447	0.0881	0.0371	
edulevel	0.313	0.448	0.0610	0.0394	
i.PRESET	0.29	0.428	-0.0169	-0.0070	
liketeach	0.3	0.406	0.0169	-0.0580	

5.2. Attendance for mid-career teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.351	0.509			
Year SS	0.39	0.525	0.1111	0.0314	
homevillage	0.368	0.525	0.0484	0.0314	
Ptutorial	0.317	0.537	-0.0969	0.0550	
Secjob	0.414	0.571	0.1795	0.1218	Not significant
DS	0.379	0.533	0.0798	0.0472	
Teachyear	0.413	0.551	0.1766	0.0825	
Gender	0.383	0.536	0.0912	0.0530	
Geographical location	0.245	0.404	-0.3020	-0.2063	Not significant
Edulevel	0.364	0.521	0.0370	0.0236	
i.PRESET	0.358	0.531	0.0199	0.0432	
Liketeach	0.357	0.523	0.0171	0.0275	

5.3.   Teacher interaction for mid-career teachers

School director's support				
Context Factor	Coeff		Percentage of change	Test
no context	0.21	0.3		
Year SS	0.231	0.324	0.100	0.080	Not significant
homevillage	0.21	0.26	0.000	-0.133	
Ptutorial	0.215	0.303	0.024	0.010	
Secjob	0.189	0.278	-0.100	-0.073	Not significant
DS	0.237	0.326	0.129	0.087	Not significant
Gender	0.216	0.304	0.029	0.013	
Geographical location	0.238	0.321	0.133	0.070	Not significant
Edulevel	0.23	0.314	0.095	0.047	
i.PRESET	0.218	0.306	0.038	0.020	
Liketeach	0.309	0.398	0.471	0.327	Not significant

5.4.   Lesson Plan for mid-career teachers

No significant incentive variable is identifield.

5.5. Classroom cleanliness for mid-career teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	-1	-0.732			
Year SS	-1.02	-0.771	0.02	0.0533	
homevillage	-1	-0.705	0	-0.0369	
Ptutorial	-1.08	-0.778	0.08	0.0628	
Secjob	-0.871	-0.56	-0.129	-0.2350	Not significant
DS	-1.004	-0.738	0.004	0.0082	
Gender	-1.002	-0.735	0.002	0.0041	
Geographical location	-1	-0.836	0	0.1421	
Edulevel	-0.968	-0.6921	-0.032	-0.0545	
i.PRESET	-1	-0.706	0	-0.0355	
Liketeach	-1.036	-0.82	0.036	0.1202	Not significant

5.6.   Classroom Management I (Active time) for mid-career teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.557	0.264			
Year SS	0.535	0.234	-0.0395	-0.1136	
homevillage	0.557	0.263	0.0000	-0.0038	
Ptutorial	0.532	0.258	-0.0449	-0.0227	
Secjob	0.566	0.275	0.0162	0.0417	
DS	0.591	0.312	0.0610	0.1818	Not significant
Gender	0.562	0.27	0.0090	0.0227	
Geographical location	0.557	0.251	0.0000	-0.0492	
Edulevel	0.575	0.287	0.0323	0.0871	
i.PRESET	0.557	0.278	0.0000	0.0530	
Liketeach	0.546	0.231	-0.0197	-0.1250	

5.7. Classroom Management II (Off time) for mid-career teachers

In-service training			
Context Factor	Coeff	Percentage of change	Test
no context	-0.055		
Year SS	-0.054	-0.0182	
homevillage	-0.05	-0.0909	Not significant
Ptutorial	-0.0411	-0.2527	Not significant
Secjob	-0.056	0.0182	
DS	-0.0551	0.0018	
Gender	-0.0675	0.2273	Not significant
Geographical location	-0.043	-0.2182	Not significant
Edulevel	-0.0508	-0.0764	
i.PRESET	-0.0499	-0.0927	Not significant
Liketeach	-0.0637	0.1582	Not significant

6. Identification of mediating factors for new teachers

6.1. Satisfaction for new teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.169	0.595			
Year SS	0.169	0.595	0.0000	0.0000	
homevillage	0.169	0.61	0.0000	0.0252	
Ptutorial	0.169	0.603	0.0000	0.0134	
Secjob	0.381	0.742	1.2544	0.2471	Not significant
DS	0.184	0.602	0.0888	0.0118	Not significant
Gender	0.163	0.585	-0.0355	-0.0168	
Geographical location	0.169	0.593	0.0000	-0.0034	
Edulevel	0.169	0.59	0.0000	-0.0084	
i.PRESET	0.169	0.597	0.0000	0.0034	
Liketeach	0.143	0.609	-0.1538	0.0235	Not significant

6.2. Attendance for new teachers

Student Behaviour					
Context Factor	Coeff		Percentage of change		Test
no context	0.232	0.181			
Year SS	0.232	0.181	0.0000	0.0000	
homevillage	0.191	0.143	-0.1767	-0.2099	***
Ptutorial	0.231	0.18	-0.0043	-0.0055	
Secjob	0.221	0.169	-0.0474	-0.0663	
DS	0.238	0.194	0.0259	0.0718	
Gender	0.215	0.175	-0.0733	-0.0331	
Geographical location	0.217	0.172	-0.0647	-0.0497	
Edulevel	0.239	0.227	0.0302	0.2541	
i.PRESET	0.2	0.181	-0.1379	0.0000	
Liketeach	0.24	0.188	0.0345	0.0387	

Test of hypothesis: ***<0.01, **<0.05, *<0.1

6.3. Teacher interaction for new teachers

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	0.169	0.243			
Year SS	0.169	0.243	0.0000	0.0000	
homevillage	0.169	0.199	0.0000	-0.1811	
Ptutorial	0.169	0.24	0.0000	-0.0123	
Secjob	0.323	0.35	0.9112	0.4403	Not significant
DS	0.278	0.293	0.6450	0.2058	Not significant
Gender	0.227	0.351	0.3432	0.4444	Not significant
Geographical location	0.169	0.259	0.0000	0.0658	
Edulevel	0.169	0.258	0.0000	0.0617	
i.PRESET	0.169	0.25	0.0000	0.0288	
Liketeach	0.185	0.26	0.0947	0.0700	

6.4. Lesson Plan for new teachers

Promotion			
Context Factor	Coeff	Percentage of change	Test
no context	0.0859		
Year SS	0.0859	0.0000	
homevillage	0.091	0.0594	
Ptutorial	0.096	0.1176	Not significant
Secjob	0.075	-0.1269	
DS	0.086	0.0012	
Gender	0.091	0.0594	
Geographical location	0.09	0.0477	
Edulevel	0.0952	0.1083	Not significant
i.PRESET	0.085	-0.0105	
Liketeach	0.138	0.6065	Not significant

6.5. Classroom cleanliness for new teachers

In-service training			
Context Factor	Coeff	Percentage of change	Test
no context	0.843		
Year SS	0.843	0.0000	
homevillage	0.859	0.0190	
Ptutorial	0.896	0.0629	
Secjob	0.847	0.0047	
DS	0.85	0.0083	
Gender	0.825	-0.0214	
Geographical location	0.847	0.0047	
Edulevel	0.812	-0.0368	
i.PRESET	0.801	-0.0498	
Liketeach	0.775	-0.0807	Not significant

Classroom Management I (Active time) for new teachersStudent Behaviour					
Context Factor	Coeff		Percentage of change		Test
no context	0.313	0.365			
Year SS	0.313	0.365	0.0000	0.0000	
homevillage	0.338	0.396	0.0799	0.0849	Not significant
Ptutorial	0.306	0.358	-0.0224	-0.0192	
Secjob	0.344	0.403	0.0990	0.1041	Not significant
DS	0.313	0.364	0.0000	-0.0027	
Gender	0.315	0.366	0.0064	0.0027	
Geographical location	0.322	0.372	0.0288	0.0192	
Edulevel	0.314	0.365	0.0032	0.0000	
i.PRESET	0.32	0.371	0.0224	0.0164	
Liketeach	0.327	0.36	0.0447	-0.0137	

6.6. Classroom Management II (Off time) for new teachers

In-service training			
Context Factor	Coeff	Percentage of change	Test
no context	-0.0794		
Year SS	-0.0794	0.0000	
homevillage	-0.0772	0.0277	
Ptutorial	-0.0783	0.0139	
Secjob	-0.076	0.0428	
DS	-0.0552	0.3048	***
Gender	-0.0862	-0.0856	
Geographical location	-0.0738	0.0705	
Edulevel	-0.0785	0.0113	
i.PRESET	-0.075	0.0554	
Liketeach	-0.0933	-0.1751	Not significant

Test of hypothesis: ***<0.01, **<0.05, *<0.1

School director's support					
Context Factor	Coeff		Percentage of change		Test
no context	-0.0648	-0.0561			
Year SS	-0.0648	-0.0561	0.0000	0.0000	
homevillage	-0.0648	-0.0527	0.0000	-0.0606	
ptutorial	-0.0648	-0.0552	0.0000	-0.0160	
secjob	-0.0822	-0.0731	0.2685	0.3030	Not significant
DS	-0.05109	-0.04338	-0.2116	-0.2267	Not significant
gender	-0.0648	-0.06109	0.0000	0.0889	
Geographical location	-0.0648	-0.056	0.0000	-0.0018	
edulevel	-0.0648	-0.0554	0.0000	-0.0125	
i.PRESET	-0.06482	-0.0507	0.0003	-0.0963	
liketeach	-0.0186	-0.0101	-0.7130	-0.8200	Not significant

Appendix III: Teacher policy questionnaire

(Only relevant questions)

A. Relevant questions from teachers questionnaires

Section 1. Identification

Questions	Option	Answer
Date of Visit	Day-Moths-Years (dd-mm-yyyy)	□□, □□, □□
Province	Name:	Code: □□
Village	Name:	Code: □□

Section 2. Teacher Characteristics

Name of teacher	Name:	Tel:
Gender	1=male, 2=female	□
Date of birth	day, month, year (dd,mm,yyyy)	□□, □□, □□
Were you born in this village? (school location)	1=yes 2=no -97=don't know	□
What is the usual amount of time required to travel from your home to school everyday?	1= Less than 15 minutes 2= 16 to 30 minutes 3= 30 minutes to an hour 4= more than an hour -98=not applicable	□
How far away from school do you live?	1=less than ½ kilometer 2= between ½ and 1 kilometer 3=between 1 and 2 kilometers 4=between 2 and 5 kilometers 5= more than 5 kilometers -98=not applicable	□
For grade 1 to grade 12, what is the highest grade that you completed?	Number from 1 to 12	□□
How many years of experience do you have as a teacher? *(In this or any other school)*	Years 1-50 -97=don't know -98=not applicable	□□
How many years have you worked in this school as a teacher?	Years 1-50 -97=don't know -98=not applicable	□
Do you teach a double shift?	1=yes 2=no -97=don't know	□

Section 3: Teacher Training

Pre-Service Training		
Did you complete teacher training prior to becoming a teacher (Teacher Certification)?	1=yes 2=no -97=don't know -98=not applicable	☐
How many years of pre-service teacher training did you complete?	1=one year 2=two years 3=three years or more -97=don't know 77=Less than one year -98=not applicable 99= other (specify)_____	☐
In-Service Training		
Have you attended any in-service teacher training activity over the past 12 months?	1=yes 2=no -97=don't know	☐

Section 4: Teacher Activities and Salary

Gross Salary		
How much is your total salary including all allowances?		
Have you had any delays in basic salary received in this year?	1=yes 2=no -97=don't know -98=not applicable d. delays in salary received	☐
Do you offer extra tuition (private tutorial) to students after school (with pay)?	1=yes with pay 2=no -97=don't know -98=not applicable	☐
Have you ever had another job outside the school (other than tuition/tutoring) that you worked in while teaching?	1=yes 2=no	☐
What kind of job? **(If has 2 jobs, record only the main 2nd job)**	1=farmer 2=motor driver 3=small item vendor (e.g. snacks, etc.) 4=crafting (e.g. carpenter, other services) 5=animal raising (e.g. pig, chicken, etc.) 99=other (specify) : _____	☐
Do you still have this job? If no, how long ago did you quit the job?	1=Yes 2=No	☐

Section 5: Teacher Attendance

Teacher Absence		
It is normal for teachers to sometimes be absent from school. Including both official and personal reasons, approximately how many days in total were you absent in this school year?	1=more than 90 days 2=51-90 days 3=31-50 days 4=11-30 days 5=1-10 days 6=0 days -97=don't know -98=not applicable	☐

Section 6: Students

Student Behavior & School Environment		
How would you rate your students behaviour in respect of motivation to do well in schools? (Think only your teaching class)	1= high 2= medium 3= low 4= very low	☐

Section 7: Schedule and Support

Teacher Group Meeting		
How often does the Director attend the meetings?	1=always 2=usually 3=rarely 4=never -97=don't know -98=not applicable	☐
Advice & Support		
How often do you unofficially visit another teacher's classroom to observe his/her teaching? (Read responses)	1=Daily or almost daily 2=weekly 3=monthly 4=almost never 5=never 6= not remember	☐
Promotion		
How often your steps and ranks are upgraded?	1=Once per school year 2=Every two school years 3=Every three school years 4=Every four years 99=Other	☐

Section 8: Teacher Satisfaction

What are the top reason that you decided to become a teacher?	1=I like teaching 2=The importance of education for the society 3=Job security/stability 4=Social respect and recognition for the profession 5=Good pay 6=Lack of a better option 7=Unable to pursue further study 8=Family tradition 99=Other (Specify) -97=don't know / no opinion	Reason ☐☐

B. Relevant questions from community questionnaires

How often does the School Support Committee organize meetings to discuss school management?	1. Never, we do not have meetings 2=One time per year 3=2-3 times per year 4=Every month 5=2-4 times per month -97=Don't know	☐

C. Relevant questions from classroom observation questionnaires

Section 1. Task on time

Instructions: Each observer uses the format for task-on-time observation (the complete form covers 60 minutes. All observers were trained how to fill the observation results in the form).

Student Activities	minute	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
	seconds	30		30		30		30		30		30		30		30	
1.Recieving lesson instruction																	
2.Question and Answer (recitation)																	
3.Student asking question																	
4.Student receiving answer from teacher																	
5.Reading																	
6.Copying																	
7.Written assignment-individual seatwork																	
8.Practical Drill																	
9.Discusion, Making answer (book)																	
10.Kinesthetics																	
11.Group work																	
12.Exam																	
13.No instructional activities																	
14.Teacher trying to get control of classroom																	
15.disorder																	
16.Class ended																	

Section 2. Questions for Teacher

Instructions: After the class has finished, immediately go to the teacher and ask him/her the following questions.

"Thank you for letting me observe your class. I just have a few very brief questions that I would like to ask you."

Do you have your lesson plan written out for today's lesson? *(ask to see the lesson plan)*	1=Yes 2=No→**skip to question 305**	☐
May I see your lesson plan? *For the enumerator*: Were you able to see the lesson plan?	1=yes, and lesson plan seen 2=yes, but teacher didn't want to show lesson plan 3=No	☐

Section 3. Post-Observation Questions
Instructions: After the class has finished, each observer should answer this question.

General Classroom Environment		
How would you classify the hygiene in the classroom? (to observers)	1= extremely clean and well maintained 2= reasonably clean and maintained 3= not very clean or maintained	☐