Study on Teacher Absenteeism in Indonesia 2014




Analytical and Capacity Development Partnership (ACDP)

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The Government of Indonesia (represented by the Ministry of Education and Culture, the Ministry of Religious Affairs, and the Ministry of National Development Planning / BAPPENAS), the Government of Australia, through Australian Aid, the European Union (EU) and the Asian Development Bank (ADB) have established the Education Sector Analytical and Capacity Development Partnership (ACDP). ACDP is a facility to promote policy dialogue and facilitate institutional and organizational reform to underpin policy implementation and to help reduce disparities in education performance. The facility is an integral part of the Education Sector Support Program (ESSP). EU's support to the ESSP also includes a sector budget support along with a Minimum Service Standards capacity development program. Australia's support is through Australia's Education Partnership with Indonesia. This report has been prepared with grant support provided by Australian Aid and the EU through ACDP.

The institutions responsible for implementation of the study were the Australian Council for Educational Research/ACER and SMERU Research Institute supported by Cambridge Education.

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Study on Teacher Absenteeism in Indonesia 2014

Foreword

This national study on teacher absenteeism comes at a time of change as we review the current education practices and adopt new strategies and policies to improve the performance of the education sector in Indonesia, particularly with regards to improving the teaching and learning in classrooms to ensure that the adequate level of knowledge, skills and attitudes are acquired by the nation's youth. The timing is particularly important because of the increased competitiveness that will undoubtedly result from Indonesia's participation in the Asean Economic Community (ACD) starting from 2015. Students will need the skills to enable them to participate productively in the economy, to fill skills gaps in the changing labour market, as well as to develop "smart" citizens with good character to contribute to a socially harmonious nation. As such, the findings of the Teacher Absenteeism Study provide valuable insights on the need to reform teacher performance and student learning. At the very least, we have to ensure that teachers are in the classrooms doing what they are tasked to do.

This study indicates that Indonesia has achieved significant progress over the past ten years in reducing the absence of teachers from schools from 19 percent in a national sample of schools surveyed in 2003 to 9.8 percent in the same schools in 2014. The study also reveals that there is a continuing challenge to make sure that teachers are present and effective in teaching in the classroom.

The non-class teaching role of teachers needs to be clarified and the school environment needs to better encourage and support teachers to use their time outside of class more productivity – for the benefit of improving student learning. Here the role of the school principal is crucial in managing the teachers and providing professional support for teaching effectiveness and achieving optimum student learning outcomes.

The Study also indicates that issues of teacher deployment – the geographical distribution of teachers in the system – needs urgent review since teacher absenteeism is one of the symptoms of a broader challenge of the inequitable geographical distribution of teachers in the Indonesian education system.

Last, but perhaps most importantly, the Study also indicates the urgent need to strengthen support and supervision of the teaching and learning process. Regular and focused visits by district level officials such as district supervisors play a critical role in providing the teacher with professional respect as well as encouraging attendance and effective teaching in the classroom. The role of the school principal, the district education officer as well as the community in tracking and recording teacher absenteeism needs to be greatly enhanced.

Jakarta, December 2014
Deputy for Human Resources and Culture
Ministry of National Development Planning (Bappenas)

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The project has drawn on contributions from a wide range of staff at ACER, SMERU and Cambridge Education in addition to the study team. ACER staff who contributed to the study included Julie Kos, Peter McGuckian, Siek Toon Khoo, Viv Acker and Julie Zubrinich. SMERU staff who contributed included Syaikhu Usman, Meuthia Rosfadhila, Ruhmaniyati and Asri Yusrina. Robert Smith from Cambridge Education provided significant assistance throughout all aspects of the work.

Over 200 people were involved in the roles of district data coordinator, enumerator or data entry in the two phases of the data collections. We are very grateful for their dedication to the work, which was often conducted under difficult conditions.

The views expressed in the report are those of the authors and not necessarily of any other individual or organisation.

October 2014

Study Team

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Abbreviations and Acronyms

ACDP		Analytical and Capacity Development Partnership
ACER		Australian Council for Educational Research
ADB		Asian Development Bank
ANU		Australian National University
BAPPENAS	*Badan Perencanaan dan Pembangunan Nasional*	Ministry of National Development Planning
BOS	*Bantuan Operasional Sekolah*	School Operational Assistance
CSPro		Census and Survey Processing System
DAPODIK	*Data Pokok Pendidikan*	National education database
DEO		District Education Office
GoI		Government of Indonesia
ESSP		Education Sector Support Programme
EU		European Union
FTE		Full-time equivalent
MI	*Madrasah Ibtidaiyah*	Islamic Primary School
MoEC		Ministry of Education and Culture
MoRA		Ministry of Religious Affairs
MSS	*Standar Pelayanan Minimal*	Minimum Service Standards
MT	*Madrasah Tsanawiyah*	Islamic Junior Secondary School
OECD		Organisation for Economic Co-operation and Development
OLS		Ordinary Least Squares Regression
P2KP	*Proyek Penanggulangan Kemiskinan di Perkotaan*	Urban Poverty Project (P2KP)
PGRI	*Persatuan Guru Republik Indonesia*	The National Teacher Organisation
PIRLS		Progress in International Reading Literacy Study
PISA		Programme for International Student Assessment
PKH	*Program Keluarga Harapan*	Conditional Cash Transfer
PNPM	*Program Nasional Pemerdayaan Masyarakat*	National Programme for Community Empowerment
PNS	*Pegawai Negeri Sipil*	Civil servants
PP	*Peraturan Pemerintah*	Government Regulation
PPP	*Program Persiapan Kepala Sekolah*	Principal Preparation Program
Rp		Indonesian Rupiah
SD	*Sekolah Dasar*	Primary School
SE		Standard error
SMERU	*Lembaga Penelitian SMERU*	SMERU Research Institute

SMP	*Sekolah Menengah Pertama*	Junior Secondary School
STR		Student-teacher ratio
TALIS		Teaching and Learning International Survey
TIMSS		Trends in International Mathematics and Science Study
UNCEN	*University Cendrawasih*	Cendrawasih University

Executive Summary

Objectives

The Study on Teacher Absenteeism is a large-scale research project conducted for the Republic of Indonesia Education Sector Analytical and Capacity Development Partnership (ACDP).

The study is underpinned by the substantial body of international research that concludes that teachers are the single most important in-school factor in improving student learning. Like many developing countries, however, Indonesia faces a more fundamental challenge: getting teachers to be present in school. For there to be quality teaching in the classroom, teachers must first and foremost be present.

The study builds on earlier work on teacher absence in Indonesia conducted in 2003 and 2008. Aspects of the study design, including revisiting schools that participated in these earlier studies, enable analysis of change over time in the absence rate and the impact of selected policies and programs.

The study was designed to address five main questions:

1. What is the rate of teacher absence across Indonesia?
2. What are the teacher-level, school-level, and policy-level determinants of teacher absenteeism in Indonesian schools?
3. How are teachers' absences managed at the school and policy levels?
4. Has teacher certification and the remote area allowance made a difference to teacher absence rates?
5. How do teacher absences affect the quality of student learning? Are there factors that mediate the effect of teacher absences on student learning?

The findings have implications for the formulation of effective policies to increase teachers' attendance in primary and junior secondary schools and classrooms across Indonesia and to improve the quality of student learning.

Methodology

An extensive literature review identified five main gaps in regard to the understanding of teacher absenteeism in Indonesia, and which the study attempted to fill:

1. The focus in the literature is generally on teacher absence from school. However, teacher absence from classrooms when they are at school may also be widespread and have implications for student learning. The present study used a broader concept of teacher absence than in most other studies and measured two different forms of absence:

- Teacher absence from school: defined as the number of teachers who were not at school on the day of the visit (for whatever reason), expressed as a proportion of all teachers who were scheduled to be teaching during the observation; and
- Teacher absence from class: defined as the number of teachers who, although present at school, were not in fact in the classroom, expressed as a proportion of all teachers who were scheduled to be teaching during the observation.

2. Second, teacher absenteeism studies in Indonesia have been restricted to an examination of absences in primary schools. This study looks at both primary schools and junior secondary schools.
3. There is currently only limited information on the causes of different forms of teacher absenteeism in Indonesia; the study attempts to address this through in-depth observation of schools and structured interviews with principals, teachers and district education officials.
4. There has been only limited research to assess the impact of interventions to reduce teacher absence. The current study, by building on the 2003 survey conducted by SMERU, enables comparisons of changes over time and some of the factors involved.
5. Finally, there is only limited information about the impact of teacher absence on schools, other teachers, and on students. The study explores these issues through structured observations of classrooms, interviews with principals and teachers, and assessments of student learning.

Factors examined in the current study include:

- ***Teacher absence: absence from school;*** absence from classrooms.
- ***Teacher-level variables***: gender; age; marital status; number of children; caring responsibilities; teaching experience; employment status; qualifications; certification status; attendance at government training workshops; time allocated and spent on teaching and other tasks; level of satisfaction with work; and other teaching and non-teaching jobs.
- ***School or education system variables***: type of school (public/private; primary/junior secondary; school/madrasah); teacher group norms around work; supervision from district and provincial governments and other relevant bodies; teacher supervision from the principal or other school leaders; leadership style of principal; level of partnership between the school and the local community; mechanism/s used for payment of teacher salaries; any incentives or consequences for attendance/non-attendance; policies or initiatives used to enhance teacher attendance.
- ***Contextual-level variables***: whether the school is remote, rural, in or near a small town or in or near a large town or city; location of home residence of teachers and mode of transportation to work.
- ***Student achievement***: student achievement in reading and mathematics; principals' beliefs about impact of absence on students.

The study was conducted with a much larger sample of schools and teachers than had been used for previous studies of teacher absence in Indonesia; the sample was designed to yield reliable estimates at the national and regional levels. The final sample comprised 893 primary and junior secondary schools across six regions – Sumatra, Java, Bali and Nusa Tenggara, Sulawesi, Kalimantan, and Papua and Maluku – and included 120 of the 146 primary schools involved in the 2003 Indonesian teacher absenteeism study. As two of the schools had merged into a single school since the original study, 119 schools were sampled in 2013.

The study was conducted over two school visits, Visit 1 occurring between 18 October and 15 December 2013 and Visit 2 between 22 January and 31 March 2014. The structure of the study, allowing for two visits to each of the sampled schools, provided an opportunity to examine the stability of the absence rate between the two visits. Specially trained field teams (in total over 200 people) made two unannounced visits to each of the sampled schools to collect information on teacher absence and conduct interviews with the school principal and up to 15 teachers per school.

Additionally, interviews were conducted with district education officials in each of the sampled districts. In Visit 2, a reduced interview schedule was administered and a sample of students in Year 5 or Year 8 was given a short assessment in both Bahasa Indonesia reading and mathematics.

In Visit 1, data were collected from 8,302 teachers in 893 schools. In Visit 2, data were collected from 8,246 teachers in 880 schools. In addition, student achievement tests and a short questionnaire were administered to 8,210 students. The research was preceded by a Pilot Study that tested the instruments and operational processes in eight schools selected to represent each school type in the Main Study sample. The results of the Pilot Study were used to make some minor adjustments to the instruments and data collection processes.

Teacher Absence Rates from School

The key findings on the rates of teacher absence from school are summarised in the following table:

Teacher Absence from School, by Region, School Level, Type and Status

	Absence Rate (%)	Galat Baku (SE)
National rate of teacher absence from school		
Visit 1 (n=8,302)	9.7	1.0
Visit 2 (n=8,246)^	10.7	1.4
Region		
Sumatra (n=1,481)	8.4	1.7
Java (n=2,002)	9.1	1.7
Bali and Nusa Tenggara (n=1,378)	14.0	2.6
Kalimantan (n=1,116)	14.1	1.6
Sulawesi (n=1,118)	10.2	2.3
Papua and Maluku (n=1,207)	11.6	3.0
School level		
Primary (n=6,559)	9.4	0.9
Junior Secondary (n=1,743)	10.3	2.0
School type		
General (n=7,217)	9.0	1.0
Madrasah (n=1,085)	12.5	2.6
School status		
Public (n=6,353)	8.5	0.9
Private (n=1,949)	12.8	1.9

Source: Teacher Absenteeism Survey, Visit 1, 2013 (except for ^)

- Around one in ten teachers in Indonesia were found to be absent from school when they were scheduled to be teaching. During the first visit 9.7% (± 2.0%) of teachers were found to be absent and 10.7% (± 2.8%) were absent at the second visit.
- Among teachers who were observed twice, 11.0% were absent during one visit while only 0.5% were absent both times.
- Regional estimates of teacher absence rates ranged from 8.4% (± 3.5%) in Sumatra to 14.1% (± 3.2%) in Kalimantan, although these regional differences were not found to be statistically significant. Similarly, there were no statistically significant differences between primary and secondary schools, public and private schools, and general and madrasah schools.
- An exception was in the Bali and Nusa Tenggara region, where the rate of absence among teachers in private schools was 25.1% (± 7.0%), which was significantly higher than for public schools in the region (9.8% ± 4.5%) and private schools in every other region except for Kalimantan.
- The most common reason for absence nationally was to attend official teaching-related duties (26.4% ± 2.4%), which were largely related to attending meetings and training. There were significant regional differences, with 35.0% of teacher absences in Java being attributed to this reason, and only 9.0% of absences in the Papua and Maluku region.
- Meanwhile, the most common reason for absence in Sumatra and Kalimantan was late arrival, where around one in four teachers were absent for this reason. In Sulawesi and in the Bali and Nusa Tenggara regions, on the other hand, one in four teachers were absent for reasons unknown to the principal or school staff interviewed.

- In the primary schools from the 2003 sample that were revisited for this study, the absence rate had dropped from 19.0% in 2003 to 9.8% in 2013. These changes varied by district, with the largest declines taking place in the urban districts of Bandung and Pekanbaru. In one district, Pasuruan, there was a slight increase in teacher absence rate.

These are generally encouraging results for Indonesia. The decline in teacher absence rates over the past decade reflects the cumulative effects of a wide range of policy initiatives, as well as changes in the wider society. Furthermore, the estimate of teacher absence from school for Indonesia in 2013 is generally lower than estimates of absence rates in a range of other developing countries Nevertheless, the findings are not grounds for complacency. Teacher absence rates varied widely among regions and different types of schools, and there was evidence that a number of teachers – although present at school – were not teaching in class as scheduled. The fact that absence rates differed among schools with different types of characteristics suggests that policies which seek to change the conditions of schools can be effective in reducing absenteeism.

Contextual Factors and Teacher Absence from School

Contextual factors are generally those that are difficult to address by policy changes, at least in the short-term. Such factors, though, can directly and indirectly influence teacher absence rates. The study identified a number of differences in the rates of teacher absence from schools based on contextual factors:

- Schools in more remote/rural areas and smaller schools have higher absence rates than, respectively, more urban and larger schools.
- Male teachers were found absent from school at significantly higher rates, 13.4% (± 3.5%), than female teachers 7.7% (± 1.8%). Some possible causes of gender difference in absence include:
    - Principals were more likely to report female teachers as absent to care for a person or because they were themselves sick. Males were more likely to be reported absent for official duties, because they left early or for reasons unknown to the principal.
    - Female teachers who do not have a child under five were significantly less likely to be absent than male teachers, regardless of whether the male teachers have a child under 5 or not. Rate of absence among female teachers who have a child under five were not statistically significantly different than that for other groups.
    - Male and female teachers who work in more than one school were significantly more likely to be absent than their peers who worked in only one school. However, male teachers were almost twice as likely to teach at more than one school as female teachers.
- Teachers who were born outside of the province where their school is located were less likely to be absent than those who were born within the province. This difference is largest among teachers in the Bali and Nusa Tenggara region. Schools that are attractive to a wide range of teachers were less likely to experience high rates of absenteeism.
- Teachers who relied on public transport to get to school from home were less likely to be absent from school when they were scheduled to teach compared to teachers who rely on other forms of transport (e.g. walking, private vehicles).
- More experienced teachers were less likely to be absent, as were teachers with permanent civil servant (pegawai negeri sipil /PNS) status compared to honorary or contract teachers.
- In secondary schools, physical education teachers were found to be 3.5 times more likely to be absent from school when they were meant to teach than teachers of other subjects.
- Secondary school teachers who were also form/homeroom teachers (wali kelas) were less likely to be absent than other secondary teachers.

Working Environment and Teacher Absence from School

A number of specific aspects of the school working environment were found to be significantly correlated with the rate of teacher absence from school:

- Schools with no principal (because the role of principal is vacant) had a significantly higher teacher absence rate, as did schools with an absent principal on the day of the visit. The presence of a principal is especially important in remote schools.
- Schools where a committee is involved in monitoring the school budget and in connecting parents and schools had lower teacher absence rates than those where a committee does not serve these functions.
- However, committee involvement in monitoring student performance was associated with higher teacher absence rates, as was more pressure from parents for schools to improve student performance. This is worth further examination in future studies as it may indicate parents' and schools committees' lack of access to reliable information on the elements of their school that led to improved performance.
- Schools with more and better facilities had lower teacher absence rates, which can only be partly explained by the relationship between location and level of school facilities.
- From a set inventory of school facilities, the lowest rates of teacher absence were found in schools with mobile phone coverage, toilets (specifically separate male and female toilets and/or staff toilets) and electricity.

System Policies and Practices and Teacher Absence from School

There have been major initiatives in Indonesia to improve the supervision of schools, monitor absences in schools, and improve teachers' salaries and allowances. The data from this study suggests that these policies are having a positive impact on rates of teacher absence from school:

- Schools that had a supervision visit from the district education/madrasah offices more recently and more frequently were found to have a lower rate of teacher absence.
- Compared to teachers who did not receive any allowance, teachers who received certification, remote area and other types of allowances had lower rates of absence.
- In the current study, the effect of certification on teacher absence remained after accounting for education level and employment status. However, the effect of certification became insignificant when teaching experience was taken into account.
- The influence that salary and allowance policies may have on teacher absence could be hindered by issues in their delivery or implementation:
    - One in five teachers reported not receiving timely salary payments. Those who experienced this had higher absence rates, at 11.9% (± 4.2%), compared to teachers who received salary payments in a timely manner, at 6.5% (± 1.7%).
    - Two-thirds of teachers reported that certification allowance payments were often late, about one-half reported that remote area allowance payments were often late, and about one-third reported that other allowance payments were often received late.
    - Targeting might also be an issue. Around 43% of teachers who reported receiving a form of remote area allowance were found in schools that were categorized by its principal as being in a rural area, and close to one-half of teachers who reported receiving a form of remote area allowance were found in schools that were categorized by its principal as being in an urban area.
- Of the different means of monitoring daily attendance that were currently in place within the Indonesian school system, only the use of a fingerprint attendance system was found to be significantly associated with lower rates of teacher absence from school. However, currently only 5.5% of all schools used fingerprint verification machines to record attendance (though this figure varies greatly by sector, with 40% of public madrasah currently using them while less than 0.6% of general public schools do).

- About 20% of teachers reported that they held a teaching role at more than one school. This seemed to be linked to the requirement for permanent teachers to have at least 24 hours of face-to-face teaching per week, and at least 37.5 hours of work at school overall; these requirements could not always be filled within one school. Teachers who taught at more than one school were four times more likely to be found absent from school than teachers who only taught at one school.
- Certification affected the relationship between teaching responsibilities and absence. It was linked with a higher likelihood of teaching at more than one school among teachers who had less than 24 face-to-face teaching hours at the visited school. Meanwhile, certification did not reduce the likelihood that teachers who taught at more than one school were found absent.
- The Minimum Service Standards (MSS) for Basic Education were introduced in 2010 to reduce disparities across the country. Based on the school survey data, the majority of schools are achieving the particular MSS indicators analyzed through the study. Schools which have achieved these standards tended to have lower rates of teacher absence than schools which have not.
- The evidence suggests that teacher absence from school is not linked to an overall shortage of teachers within the system. Rather, it is linked to how teachers are distributed within the system. The stark difference between this study's estimates of a national average student-teacher ratio of 12.6 and an average class size of 24.4 highlights this point. While the first figure suggests that Indonesian schools are very well staffed (and indeed that the staffing is well in excess of the MSS requirements), the second figure indicates that this is not necessarily reflected in students' learning environments.
- Teachers in schools with lower student-teacher ratios were significantly more likely to be found absent. This relationship is most pronounced among rural and remote schools. Around 46.4% of teachers in the study indicated that they work less than full-time at the school visited. Considering the high proportion of teachers working at more than one school, this more likely reflects inefficiency within the system rather than teachers' preferences. This distribution problem is greater among secondary schools than among primary schools.

Teacher Absence from Class

The loss of effective teaching time occurs not just when a teacher is absent from school but also when the teacher – although present at school – is absent from the class they are scheduled to be teaching. The study found that the rate of teacher absence from class was generally higher than the rate of teacher absence from school (which was about 10% nationally). The findings on absence from class are summarized in the following table.

Rates of Teacher Absence from Class, by Region and School Characteristics

	Tingkat Teacher Absence from Class (%)	SE
National teacher absence from class		
Visit 1 (n=6,526)	13.5	1.6
Visit 2 (n=5,967)	11.6	1.6
Absence from class by region		
Sumatra (n=1,481)	17.4	3.3
Java – Visit 1 (n=2,002)	13.4	2.5
Java – Visit 2 (n=1,370)	7.1	1.9
Bali and Nusa Tenggara (n=1,378)	12.5	2.6
Kalimantan (n=1,116)	11.4	2.2
Sulawesi – Visit 1 (n=1,118)	4.3	1.2
Sulawesi – Visit 2 (n=877)	11.5	1.8
Papua and Maluku (n=1,207)	10.9	2.2
Absence from class by school level		
Primary (n=6,559)	12.5	1.2
Secondary (n=1,743)	15.5	3.3
Absence from class by school type		
General (n=7,217)	12.7	1.2
Madrasah (n=1,085)	16.4	4.4

	Tingkat Teacher Absence from Class (%)	SE
Absence from class by school status		
Public (n=6,353)	14.9	2.0
Private (n=1,949)	9.7	2.0

Source: Teacher Absenteeism Survey, Visit 1, 2013 and Visit 2, 2014

- Among teachers who were scheduled to teach, 13.5% (± 3.2%) were found in school but not in the classroom in Visit 1 and 11.6% (± 3.2%) in Visit 2.
- A significantly higher proportion of teachers in public schools (14.9% ± 4.0%) were found to be absent from class than in private schools (9.7% ± 3.9%), even though the reverse was true for teacher absence from school.
- Male teachers were 1.5 times more likely to be absent from class than female teachers. This was a similar pattern as absence from school, though not as strong a relationship.
- In contrast to absence from school, the least experienced teachers were least likely to be found absent from class.
- In primary schools, teachers of higher grades were more likely to be found absent from class than those who teach lower grades.
- In secondary schools, there was some relationship between the subjects teachers taught and the extent of absence from class; teachers of English were around half as likely to be absent from class other teachers.
- Only around one in 10 secondary teachers taught more than one subject in the school visited. Most of these teachers teach a combination of non-core subjects (e.g. physical education, art and so on). Although teachers who teach more than one subject had a slightly lower rate of absence from school than other teachers, teachers who teach more than one subject were considerably more likely to be found absent from class than their colleagues who teach only one subject.
- Teachers who held other roles within the school, such as a vice-principal role, were more likely to be absent from class, as were teachers who were involved in the community as a community health facility/posyandu officer or facilitator for government programs.
- Teachers who stated that a high non-teaching workload strongly affected their work performance were more likely to be found absent from class.
- Teachers who were satisfied with their job were half as likely to be absent from the classroom as their dissatisfied counterparts.
- Unlike for teacher absence from school, the involvement of the school committee was for the most part associated with higher rates of teacher absence from class.
- Much of the time when teachers were at school but not teaching appeared to have been spent waiting for their next class or on administrative tasks, rather than on preparatory or professional development tasks.

Overall, the rate of teacher absence from class showed less stability between visits, had greater variation and was more difficult to predict based on background factors than was teacher absence from school. There is much more to understand with regard to the incidence, causes and consequences of teacher absence from class.

Effects of Teacher Absence

The study investigated the effects that teacher absences have on schools, other teachers, and student achievement. It included a detailed analysis of what took place when teachers were not present and what happened in the classroom when the scheduled teachers were absent. Some of the key findings were as follows:

- Of classes that were in session during the unannounced visits, 9.0% were unattended for the duration of the class and a further 5.3% of classes were temporarily unattended, with the teacher later returning to class.

- When unattended classes are taken into account, primary schools are estimated to provide an average of only 18.5 hours teaching per week and secondary schools only 23.1 hours per week. These are significantly below the MSS requirements.
- The most commonly used way that schools reported dealing with absence was for the absent teacher to assign an in-class activity or task and a substitute teacher was then assigned responsibility for the class.
- Schools faced greater difficulty in finding appropriate substitutes for absent teachers than principals initially presented.
- Around 60% of classes without their regularly scheduled teacher had a substitute. Most substitutes were assigned to more than one class during one lesson period.
- In secondary schools, only about one-third of substitutes were teachers of the same subject matter as the regularly scheduled teacher.
- Whether a scheduled teacher or a substitute teacher was present, there was little apparent difference between the types of activities students were engaged in.
- However, in unattended classes students were considerably more likely to be left without a prescribed activity.

The influence of the changes in classroom activity due to teacher absence is conditional on the level of teaching quality overall, both of the substitute and absent teachers. The study also attempted to gauge the influence of teacher absence on student achievement, using a short mathematics assessment. The key findings were:

- Exploratory multivariate analyses indicate that, after controlling for a range of variables and district fixed effects, teacher absenteeism from school negatively influences student achievement in mathematics for the overall sample and for primary schools, although not at the junior secondary school level.
- However, overall the study did not find a strong relationship between student achievement in mathematics and the absence rate of teachers in schools.
- Student performance reflects a range of home background and school contextual factors, and identifying the particular impact of teacher absence within the context of the teaching-and learning practices in schools is a complex issue. Future studies would benefit from a longitudinal design to investigate these important relationships, particularly through measuring the extent and impact of long-term or repeated teacher absences on student learning and motivation.

Towards an Understanding of Teacher Absence

The factors that influence the extent of teacher absence are complex and operate at different levels (the individual teacher, the school environment they work in, the type of school, and the district and province where the school is located). The study attempted to understand the influence of different factors on teacher tendency towards absence from school.

Results suggested that around 2.3% of the variation in teacher absence in the sample can be 'explained' at the province level, 3.4% at the district level and 18.4% at the school level, with the rest of the variation being across individual teachers. The results suggest that what happens at the school level is a particularly important influence on teacher absence.

Overall, the analyses identified a number of key school- and system-level levers that may be used in an effort to reduce teacher absence from school in Indonesia. These were:

- Strengthening district practices including more frequent visits to provide support and supervision of teaching and learning practices in schools, as well as increased focus on monitoring teacher attendance levels;
- Strengthening principal leadership, particularly focusing on how principals create a positive school

environment and model the behaviours that are also expected from their teachers;
- Strengthening the involvement of school committees, particularly in monitoring budgets and connecting parents with schools;
- Reducing the incidence of teachers working in more than one school, an issue that seems to be strongly influenced by teacher salary levels and gender; and
- Making schools more appealing workplaces based on the experiences of districts that are attracting teachers from other provinces.

A key finding was that schools required more assistance in managing teacher absences. There needs to be clearer policies on how teacher absences should be managed by schools in ways that minimize disruption and adverse effects on student learning. This study found that schools were facing serious challenges in deploying appropriate substitutes for absent teachers. Improvements to how teachers – permanent teachers as well as contract and honorary teachers, which have increased in proportion over the last ten years – are distributed could go some way in addressing this.

Policy Implications

The study's findings suggest a number of policy implications for decision makers at different levels of the Indonesian school system.

- At the national level priorities identified through the study include:
- Reconsidering the current national policies on teachers' working hours, so as to reduce the incentive for teachers to work at more than one school.
- Expanding the current standards concerning the expectations of teachers to include their non-teaching time and responsibilities. There is a need for the non-class teaching role of teachers to be clarified and for the environment of schools to better encourage and support teachers to use their time outside of class in ways that are more rewarding for students.
- Continuing to address the broader issues of the distribution of teachers in the system. Teacher absence from school was not found to be caused by teacher shortages. Instead, as this and other studies have concluded, it is one of the symptoms of a broader challenge of the inequitable distribution of teachers in the Indonesian education system.

At the district level priorities include:

- Strengthening support and supervision of the teaching and learning process. Regular and focused visits by district-level officials help reinforce the importance of teachers' work, and indicate an efficiently operating district in which a range of actions that directly and indirectly encourage teacher attendance are underway.
- Increasing the focus on supporting schools in recording and tracking absence levels. A fingerprint attendance system is only one way to do this, and the introduction of such machines without broader changes at the district level is unlikely to achieve the desired result.

More of the variance in teacher absence can be explained by differences between schools than between provinces or between districts. Accordingly there were a number of teacher absence explanatory factors that have implications for the school level. These implications, which will require complementary actions at national, regional and district levels include:

- Strengthening principal selection and competency development as a key to promoting a "presence and engagement culture" among teachers.
- Providing schools with clear policies and support for managing teacher absences and substitute teachers in ways that minimize the impact on students.
- Providing schools with more support to improve the management of school schedules and teachers'

roles to make the most of teachers' time.
- Building more constructive engagement with their local communities.
- Wherever possible holding meetings and training days outside of regular school teaching hours.

Implications for Future Work

Three key issues would benefit from further research and evaluation:

1. The first is the way that parents and communities (both through school committees and otherwise) can be involved in schools to improve performance. This study's findings contribute to the mixed evidence on parent and community involvement in schools internationally. Most of the components that characterize effective parent and community involvement are difficult to define and quantify, including the extent to which parents and communities have access to reliable information on factors that contribute to student performance and how they are able to exert pressure for action to be taken based on that information.
2. The second key area for further study is the quality of teaching in Indonesian schools. The effects of absence on student learning are conditional on the both the quality of the teaching and learning students receive at times of teacher absence and as well as during regular class time with their scheduled teachers. This topic deserves dedicated and well-designed mixed-methods studies that complement analyses of student performance with thorough explorations of how teaching is practiced in Indonesian schools, the factors that influence who enters and remains in the teaching profession, and the conditions that support high quality teaching and learning.
3. The third key area for further work involves continuing to monitor the levels, causes and consequences of teacher absenteeism in Indonesia, and conducting research on the relative cost-effectiveness of various policy options to reduce its incidence and effects. The fact that this large-scale study was commissioned signifies that policymakers in Indonesia view teacher absenteeism as a key concern for the quality of Indonesian education. Although the results suggest an encouraging decline in absenteeism over the past decade, absenteeism rates are still high in a number of regions and schools, and reducing the level and variation of teacher absenteeism is sufficiently important for it to be a central feature of Indonesia's monitoring, research and policy development agenda.

Chapter 1
Introduction

1.1 Background and Aims of the Study

The Study on Teacher Absenteeism is a large-scale research project for the Republic of Indonesia Education Sector Analytical and Capacity Development Partnership (ACDP).[1] The key objective of the study is to provide reliable, valid, nationally representative, and up-to-date information on the rates and determinants of teacher absenteeism in Indonesian primary and junior secondary schools. In addition, the study examines how schools are dealing with teacher absence and assesses the impact of teacher absenteeism on students. Finally, policies and programs already in place are analyzed in order to ascertain the extent they are related to teacher attendance in schools and classrooms.

The study builds on earlier work on teacher absence in Indonesia (see Section 1.2 for details). Aspects of the study design, including revisiting schools that participated in these earlier studies, are intended to enable analysis of change over time in the rate of teacher absence in Indonesia and the impact of selected policies and programs.

The sample of schools and teachers for the study is larger than for previous studies in Indonesia and was designed to yield reliable estimates at the national- and regional-levels. The final sample comprised 893 primary and junior secondary schools across six regions of Indonesia – Sumatra, Java, Bali and Nusa Tenggara, Sulawesi, Kalimantan, and Papua and Maluku – and included 120 of the 146 schools involved in the 2003 Indonesian teacher absenteeism study.[2] Details about the sampling methodology are provided in Chapter 2.

The study was conducted in 2013 and 2014. Field teams made two unannounced visits to each of the sampled schools to collect information on teacher absence and conduct interviews with the school principal and up to 15 teachers per school. Additionally, interviews were conducted with district officials in each of the sampled districts. In the second school visit, a reduced interview schedule was administered and a sample of students in Year 5 or Year 8 was given a short assessment in both Bahasa Indonesia reading and mathematics (see Sections 2.2 and 2.3 for details).

Using the data collected through these interviews, observations, and student assessments, the project addressed the following research questions:

1. What is the rate of teacher absence across Indonesia?
2. What are the teacher-level, school-level, and policy-level determinants of teacher absenteeism in Indonesian schools?
3. How are teachers' absences managed at the school and policy levels?

1 The ACDP was established by agreement between the Government of Indonesia (GoI), the Government of Australia, the European Union (EU) and the Asian Development Bank (ADB) as a facility to promote dialogue and institutional reform of the education sector to underpin policy implementation and help reduce disparities in provincial and district education performance. The ACDP is co-financed by the Government of Australia, the EU and the ADB.

2 Usman et al., 2004

4. Has teacher certification and the remote area allowance made a difference to teacher absence rates?
5. How do teacher absences affect the quality of student learning? Are there factors that mediate the effect of teacher absences on student learning?

The findings of the study have implications for the formulation of effective policies to increase teachers' attendance in primary and junior secondary schools and classrooms across Indonesia and to improve the quality of student learning.

One limitation of the study is that the sample size, while large, does not provide enough cases to make meaningful statistical analyses of individual districts and provinces. To offer reliable provincial and/or district-level estimates, a significantly larger overall sample size would have been required, which would have had implications for the budget and timeline as well as the data collection burden on schools. Nonetheless, where patterns emerged within particular provinces and districts, implications are discussed.

1.2 Literature Review

Policy research and discussions have reached a broad consensus, at least among more industrialized countries, that teachers are the single most important in-school factor for student learning.[3] This notion underpins recent efforts to define and unpack the idea of teacher and teaching quality.[4] Like many developing countries, however, Indonesia faces a more fundamental challenge: getting teachers to be present in school. For there to be quality teaching occurring in the classroom, teachers must first and foremost be present. This literature review examines rates of teacher absence in developing countries, factors influencing teacher absence, implications of teacher absence, and evaluations of initiatives to address teacher absence, with a particular focus on Indonesia. Appendix A provides an annotated bibliography of the literature.

1.2.1 Rates of Teacher Absence

In a number of studies, teacher absence is defined as a teacher not being present at their school when they ought to be and is measured by unannounced visits to a random sample of schools.[5] Two studies of teacher absence conducted in Indonesia in 2003[6] and 2008[7] and a further study conducted in Papua in 2011[8] adopted this methodology. The average teacher absence rate for Indonesia was estimated to be 20.1% in 2003, declining to 14.8% in 2008.[9] However, the incidence of teacher absence was much higher in Papua in 2011 (34%).[10] In Figure 1, teacher absence rates in Indonesia are compared with those in other countries for which there are comparable data during this period. More recent studies based on unannounced school visits have also reported rates of teacher absence from school that fall within this range in Kenya (15%)[11], Senegal (18%)[12], Uganda (20%)[13], and Tanzania (23%).[14]

The teacher absence rates in Figure 1 should be considered conservative estimates as they are restricted to

3 Darling-Hammond, 2000; Hattie, 2003; OECD, 2005

4 For example, AITSL, 2011; MET Project, 2013

5 In a review of recent and emerging best practice to address absenteeism, Rao (2013) advocated for the accurate measurement of teacher absence. Unannounced site visits have been found to be more accurate than official records and other forms of local monitoring. For example, a Ugandan study found that local monitoring by head teachers or parents on school management committees understated teacher absenteeism due to a tendency of head teachers and parents to falsely report absent teachers as present, and parents being more likely to opt to monitor on days when more teachers were present (Cilliers et al., 2013).

6 Usman et al., 2004; Chaudhury et al., 2006

7 Toyamah et al., 2010

8 UNCEN et al., 2012

9 Toyamah et al., 2010

10 UNCEN et al., 2012

11 Kimenyi & Routman, 2013

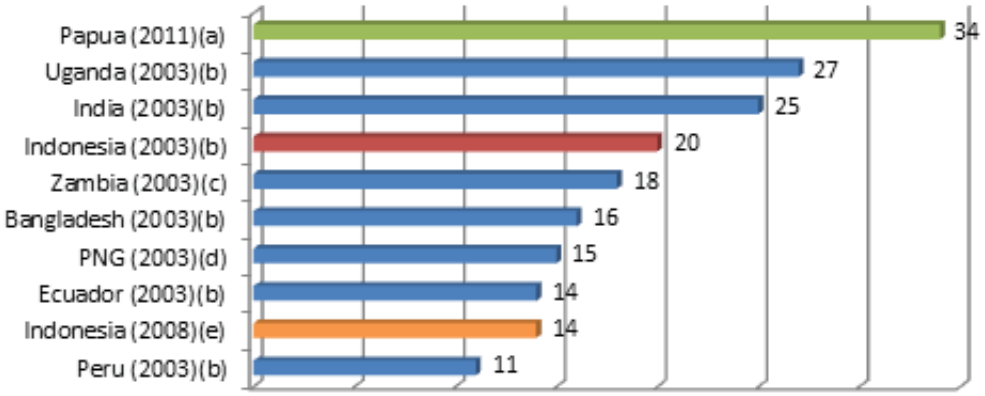
12 Kimenyi & Routman, 2013

13 Najjumba, Habyarimana & Bunjo, 2013

14 Kimenyi & Routman, 2013

teachers' absence from school.[15] Studies conducted in India, Kenya, Senegal and Tanzania used a broader definition of teacher absenteeism that also included being present in the school but absent from the classroom. Results suggest that this type of absence varies among countries but may be widespread.[16] This is an interesting and useful way of assessing absenteeism as the impact of a teacher being at school but absent from the classroom is likely to be the same as not being at the school at all.[17]

Figure 1. Teacher Absence Rates from School, Selected Countries (%)



Sources: (a) UNCEN et al. (2012); (b) Chaudhury et. al. (2006); (c) Das et al., (2007); (d) World Bank (2004); (e) Toyamah et al. (2010)

1.2.2 Factors Influencing Absence

A range of influences on teacher absence in developing countries have been identified, including factors relating to the teacher, the school or education system, and broader contextual factors.[18] The theoretical model developed by Guerrero et al. (2012) during their recent systematic review of research on teacher absence provides a useful framework for summarizing these factors (see Figure 2).

Teacher level variables include socio-demographic characteristics and teacher commitment/satisfaction.[19] School or educational system variables refer to organizational factors such as group norms around attendance and work, supervision from school leaders and external bodies and expectations on teachers' time to devote to administrative duties.[20]

Contextual level variables: The accessibility of schools (i.e. whether a school is in a rural location or whether it is remote) can influence absence rates, for example through transportation or travel issues for teachers.[21] Higher income regions and local teachers have also been found to have lower teacher absence rates.[22]

The model outlined in Figure 2 specifies a range of direct and indirect effects on teacher attendance. Although not noted in the model, previous research also suggests that contextual factors interact with

15 Rogers & Vegas, 2009

16 Glewwe, Kremer & Moulin, 1999, cited in Chaudhury et al., 2004; Kimenyi & Routman, 2013; Kremer et al., 2005; Rao, 1999 and World Bank, 2001, cited in Usman et al., 2004; see also Ganimian, 2013

17 Castro, et al., 2007. Others have also questioned a focus on absence from school and conceptualise absenteeism more broadly. Other possible dimensions of absenteeism include not being in a fit condition to teach effectively (Castro et al., 2007), arriving late at school (Ganimian, 2013; OECD's Teaching and Learning International Survey [TALIS]), a teacher's lack of adequate preparation (Dang and King, 2013; OECD's Teaching and Learning International Survey [TALIS]). Others go even further, viewing absenteeism as an example of (a lack of) teacher effort and examining what occurs in classrooms when teachers are present. For example, Sankar and Linden's (2014) study in India included an assessment of the amount of time teachers spent 'off task' when in a classroom (e.g. teachers socialising, teachers uninvolved, and teachers out of classroom). Lassibille's (2013) study in Madagascar found that the director and all teachers performed all tasks that educators deem essential to their role in only 15 per cent of schools.

18 For example, Chaudhury et al., 2004, 2006; Laslo, 2013; McGuirk, 2013; Tao, 2013; UNCEN et al., 2012; Usman et al., 2004

19 Guerrero et al., 2012

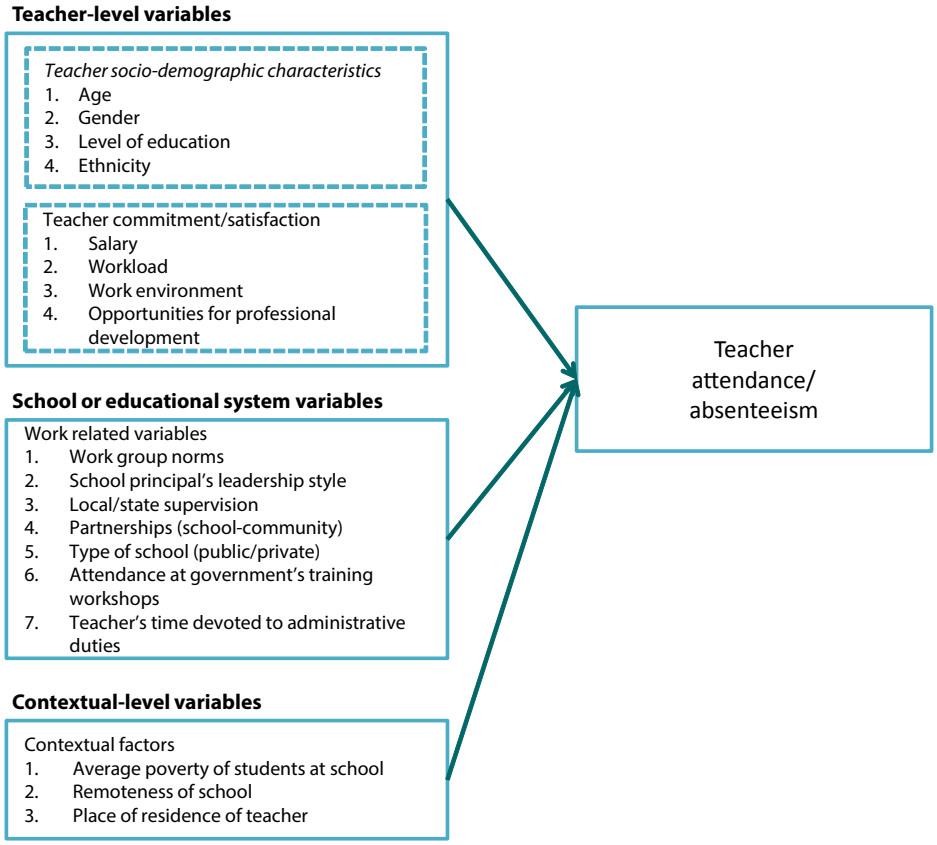
20 Guerrero et al., 2012

21 Guerrero et al., 2012

22 Chaudhury et al., 2006

demographic factors in Indonesia.[23]

Figure 2. Model of Teacher Attendance in Basic Education in Developing Countries



Source: Guerrero et al. (2012)

Data from previous surveys of teacher absenteeism in Indonesia support the significance of factors represented in Figure 2. For example, teacher absence has been found to be higher in schools located in more remote areas, among contract teachers[24] and among male teachers.[25] However, the nature of the relationships between other factors in Figure 2 and absence rates in Indonesia is not always consistent with results from other developing countries. With some factors, the nature of their relationship with absence appears to vary within Indonesia. Furthermore, even when clear patterns have emerged, such as in the case of teacher gender difference in Indonesia, the reasons as to why it influences absence and how it can be disentangled from other factors (such as outside job opportunities or family responsibilities) can still be hard to discern. This can create difficulty in formulating policy responses to address teacher absenteeism by targeting particular factors such as teacher welfare.

1.2.3 Implications of Teacher Absenteeism

While the absence of teachers from classrooms intuitively deprives students from the opportunity to learn, few developing countries have empirical evidence regarding this link. In Indonesia in 2004, higher teacher absenteeism was associated with lower mathematics test scores but was not associated with dictation.[26] A negative relationship between teacher absenteeism and student achievement has also been documented

23 For example, a 2003 survey found a positive association between education level and teacher absence (Usman et al., 2004) but a 2008 survey which included a higher proportion of remote schools found a negative association (Toyamah et al., 2010). In Papua, there was little variation in absence rates by education level in more urban areas, but a negative association was found in rural and remote areas (UNCEN et al., 2012).

24 Chaudhury et al., 2004

25 Usman et al., 2004; Toyamah et al., 2010; UNCEN et al., 2012

26 Suryadarma et al., 2006, cited in Rogers & Vegas, 2009; see also Toyamah et al., 2010; Usman et al., 2004

in India[27] and Zambia[28] as well as in the US[29], including one study using longitudinal data.[30]

Despite the extent of teacher absenteeism and its implications for student learning, teacher absenteeism is not widely perceived to be an educational barrier by Indonesian school leaders. In the 2009 OECD Programme for International Student Assessment (PISA) survey, almost all (97%) of 15-year-old Indonesian students were in schools where the principal believed that teacher absenteeism either does "not at all" hinder learning or does so "very little".[31]

1.2.4 Evaluation of Initiatives to Address Absenteeism

A recent systematic review of the impact of initiatives to reduce teacher absenteeism in developing countries found only nine studies that met the authors' criteria.[32] The authors classified initiatives into direct and indirect interventions. Indirect interventions, in which raising teacher attendance was not the main goal but was an expected secondary outcome under the programs' theory of change, were grouped into four further categories. They are programs aimed at: (i) increasing parental and community participation; (ii) providing incentives to teachers linked to student achievement; (iii) offering merit-based scholarships to students; and (iv) tracking students by prior achievement.[33]

Two direct interventions combined external monitoring of attendance with monetary incentives in the form of payment for number of days present (India)[34] or bonuses based upon attendance (Peru).[35] Both interventions were found to substantially reduce teacher absence rates. However, the first intervention was applied to para-teachers in informal one-teacher schools; the authors did not investigate whether the incentive program could be successfully instituted for government teachers, who tend to be more politically powerful than the para-teachers in that study.[36] A third study found that local monitoring only improved teacher attendance when head teachers (rather than parents on school management committees) were responsible for monitoring and there were financial incentives for teachers (Uganda).[37] These findings have important policy implications.

The impacts of the indirect interventions on teacher absenteeism were mixed.[38] Positive effects were found in a program aimed to increase parental and community involvement by giving parents decision-making capacities in El Salvador.[39] Similarly, a scholarship program for girls in Kenya increased teacher attendance as well as improving student outcomes, possibly through increased parental involvement and monitoring of teachers[40], and an intervention which streamed students based upon previous academic achievement also increased teacher attendance in Kenya.[41] However, other programs that aimed to increase parental and community involvement by providing parents with more/better information and programs that offered teachers incentives based on student test scores were not associated with increased teacher attendance.[42]

27 Duflo & Hanna, 2005; Duflo et al., 2007, cited in Suryahadi & Sambodho, 2012; Kremer et al., 2005

28 Das et al., 2007

29 Miller et al., 2007; Roby, 2013; Woods & Montango, 1997

30 Clotfelter et al., 2009; see also Glewwe et al., 2011. Other small scale studies in Iowa and Virginia in the US found no association between teacher absence and student achievement (Niemeyer, 2013) or only a small significant effect among particular sub-groups of disadvantaged students (Womack, 2013).

31 Schleicher, 2012. Similarly, a recent study found teacher absenteeism was 20% in Uganda, but only 3% of head teachers in that study cited teacher absenteeism as a problem (Najjumba, Habyarimana & Bunjo, 2013).

32 The criteria were that the studies: included a measure of teacher attendance; were conducted in developing countries; were carried out with teachers in primary or secondary education institutions; were quantitative and used experimental or quasi-experimental designs; and were published from 1990 to July 2010, inclusive (Guerrero et al., 2012).

33 See also Rao, 2013

34 Duflo & Hanna, 2005; Duflo et al., 2012

35 Cueto et al., 2008, cited in Guerrero et al., 2012

36 Duflo et al., 2012; Ganimian, 2013

37 Cilliers et al., 2013

38 Guerrero et al., 2012

39 Jimenez & Sawada, 1998, cited in Guerrero, et al., 2012

40 Kremer et al., 2009

41 Duflo et al., 2008 cited in Rao, 2013

42 See reviews by Guerrero et al., 2012; Laslo, 2013; Rao, 2013

Laslo argued that much of the evidence comes from relatively small projects and the challenge for the development community will be whether the successful programs can be scaled up effectively.[43]

Policies to reduce teacher absence in Indonesia mostly focus on improving teacher welfare.[44] The largest current policy to target teacher welfare is teacher certification, but two studies – a World Bank study of 3000 teachers across 360 Indonesian schools[45] and a survey in Papua[46] – suggested that teacher certification did not influence teacher absence. Similarly, an early assessment of the remote area allowance for teachers found that it generally has not yet had an impact on teacher absence.[47]

Data from the latter two studies, however, suggested that other complementary factors do influence teacher absence.[48] In addition, new initiatives that combined incentives and monitoring in the Sota District, Merauke[49] and nationally also showed promise in reducing absenteeism given the findings of the systematic review.

1.2.5 Research Gaps

Five broad gaps are evident in current understandings about teacher absence in Indonesia. The first relates to the conceptualization of teacher absence. Many studies measure absence from school. However, teacher absence from classrooms (when they are at school) may also be widespread and have implications for student learning. This suggests a need to investigate broader definitions of teacher absence. In addition, even when interventions are successful in increasing teacher attendance, existing studies lack information on what happens in the classroom during this increased time.[50]

Second, teacher absenteeism studies in Indonesia have been restricted to an examination of absences in primary schools. Studies of teacher absenteeism in junior secondary schools have not been conducted.

Third, some of the information that currently exists in Indonesia raises questions that are yet unanswered. What are the other causes of absences, to what extent can they be addressed through teacher welfare-related interventions, and what are the alternatives? Bennell (2004) has also pointed to a lack of understanding about the different forms of absenteeism, specifically that which can be attributed to teacher motivation and opportunistic behavior. He called for more in-depth, ethnographic, school-based research to explore such issues.

Fourth, despite a growing number of studies documenting the extent of teacher absenteeism, there are relatively few sound evaluation studies of interventions intended to address teacher absence.[51] In particular, there is a need to collect high-quality time series data in order to be able to assess the impact of interventions[52] and information on the cost effectiveness of interventions.[53] The current study, by building on the 2003 survey conducted by SMERU, enables comparisons of changes over time.

Finally, a national survey of secondary school principals in Indonesia suggested that they largely do not believe that teacher absence hinders student learning.[54] It is worth exploring principals' reasoning behind this – whether it is due to gaps in knowledge about the link between teacher absence and student learning,

43 Laslo, 2013
44 Suryahadi & Sambodho, 2012
45 de Ree, Al-Samarrai & Iskandar, 2012
46 UNCEN at al., 2012
47 Toyamah et al., 2010
48 For example, the remote area allowance has been found to decrease absence rates in areas where the local government has implemented complementary incentives – such as a 'favourite school' competition or the provision of additional allowance or work performance subsidy – or a monitoring mechanism such as the appointment of a supervisor at a multi-school complex (Toyamah et al., 2010).
49 Radar Merauke, 2012
50 Guerrero et al., 2012; see also Lassibille, 2013; Rogers and Vegas, 2009
51 Bennell 2004; Guerrero et al., 2012
52 Bennell 2004
53 Guerrero et al., 2012
54 Scheicher, 2012

their belief about the quality of pedagogical content students receive even if teachers are present, or other reasons – as ultimately, principals' buy-in of any policies or programs to reduce absence could play an important role in their success.

1.3 The Current Study

The current study is designed to provide a nationally- and regionally-representative estimate of teacher absence in Indonesia, identify determinants of teacher absence, examine the effects of teacher absenteeism on student achievement, and assess the effectiveness of current initiatives intended to address teacher absence. Teacher absence from both primary schools and junior secondary schools is investigated, and two definitions of teacher absence are adopted: absence from school; and absence from classrooms.

The research team used the theoretical model of Guerrero et al. (2012), described in the previous section, as a starting point to investigate the known correlates of teacher absence in schools. Factors examined in the current study include:

- ***Teacher absence***: absence from school; absence from classrooms.
- ***Teacher-level variables***: gender; age; marital status; number of children; caring responsibilities; teaching experience; employment status; qualifications; certification status; attendance at government training workshops; time allocated and spent on teaching and other tasks; level of satisfaction with work; and other teaching and non-teaching jobs.
- ***School or education system variables***: type of school (public/private; primary/junior secondary; school/madrasah); teacher group norms around work; supervision from district and provincial governments and other relevant bodies; teacher supervision from the principal or other school leaders; leadership style of principal; level of partnership between the school and the local community; mechanism/s used for payment of teacher salaries; any incentives or consequences for attendance/non-attendance; teacher distribution among schools; Minimum Service Standards for Basic Education; policies or initiatives used to enhance teacher attendance.
- ***Contextual-level variables***: whether the school is remote, rural, in or near a small town or in or near a large town or city; location of home residence of teachers and mode of transportation to work.
- ***Student achievement***: student achievement in reading and mathematics; principals' beliefs about impact of absence on students.

In order to achieve the research aims and fill the five research gaps noted in the previous section, the study methodology and data collection instruments were based partly on the 2003 Indonesian study.[55] In particular, the current study included two unannounced visits to schools, used some of the researchers who participated in the earlier work in Indonesia; and re-visited 119 of the schools visited in the 2003 collection. This permits a direct comparison of absence rates over a 10-year period, as well as an examination of the impact of policy initiatives such as teacher certification and the remote area allowance on absenteeism.

However, the current study is not merely a replication of the earlier studies, and the research team significantly modified the instruments used in those earlier studies. In particular, questions were developed to further investigate the determinants of teacher absence. In addition, the Visit 2 case studies enabled more in-depth school-based research to occur, which is in-line with Bennell's (2004) recommendation. Information on policy-related variables was collected during district level office interviews. Such interviews were not undertaken in the earlier studies of absenteeism in Indonesia, and thus they provide additional insight into the correlates and implications of teacher absenteeism.

55 Usman et al., 2004

Chapter 2
Design and Methodology

This chapter describes the design and methodology of the study, including the development of instruments, sampling and field data collection practices. To supplement the chapter, the following appendices are included in the report:

- Appendix B provides technical information on the sample design and weighting;
- Appendix C includes the instruments used in the data collection; and
- Appendix D provides material from the District Education Offices interviews

2.1 Sample Design

Following extensive consultation and taking into account local contexts, a three-stage stratified sample design was implemented. A sampling frame was constructed using information about schools obtained from the Ministry of Education and Culture (MoEC) and the Ministry of Religious Affairs (MoRA). This frame included the location of the school, school type, sector and level. Six regions were defined and within each region a sample of districts was selected at the first stage, followed by the selection of schools within districts and finally of teachers within schools. The cluster design meant that all eligible schools within each region would have approximately equal probability of selection into the sample. It was expected that subgroups of schools, such as primary and junior secondary, general and madrasah, public and private would appear in the sample in approximately the same proportion as they appear in the population.

In addition to this national sample of schools, a supplementary sample of schools that participated in the 2003 SMERU teacher absenteeism study was included.

2.1.1 Sample of Districts

As noted above, districts were sampled using a stratified, systematic sample with probability proportionate to size and without replacement. Ten districts were selected in the regions of Sumatra, Java, Bali and Nusa Tenggara, Kalimantan and Sulawesi. Five districts were selected in the region of Papua and Maluku.

A sampling frame comprising a list of districts (Kota and kabupaten) by regions was constructed for stage one of the sampling process. For each district, the numbers of schools within the district were counted to give a measure of the size of the district. Within each region, the frame was sorted by geographical type of the district (urban and rural). Finally the districts were ordered by size of the number of schools using a serpentine sorting method across the implicit strata. In the first implicit strata, urban, they were ordered from largest to smallest; in the second from smallest to largest.

Systematic (random start, constant interval) sampling of each explicit stratum meant that the sample was implicitly stratified by geographical type.

2.1.2 Sample of Schools within Districts

Schools were sampled using a stratified, systematic sample with equal probability of selection. Thirteen schools were selected in the districts representing the regions of Sumatra, Java, Bali and Nusa Tenggara, Kalimantan and Sulawesi. Twenty-six schools were selected in the districts representing the region of Papua and Maluku, for a total of 780 schools in the sample.

A sampling frame comprising a list of schools in each of the 55 selected districts was constructed for stage two of the sampling process. As there was no information relating to the number of teachers within schools, school size was not available to be used to select this stage of the sample with probability proportionate to size. Therefore schools were selected with equal probability of selection.

The list was explicitly stratified by district, effectively creating 55 individual sampling frames. Within each explicit stratum (district), the list was sorted by three variables creating 3 implicit strata for this stage of sampling. These variables were school type (general, madrasah), school level (primary, secondary) and school status (public, private). The schools sampling frame was sorted by these variables prior to drawing the sample.

Systematic (random start, constant interval) sampling of each explicit stratum meant that the sample was implicitly stratified by school type, level and status. Table 1, Table 2 and Table 3 show the distribution of sampled schools across subgroups within regions and overall in comparison with the population distributions according to the sampling frame.

Table 1. Sample of Schools, by Level and Region

	Sample Schools		Population Schools (From Sampling Frame)	
	n	%	n	%
Indonesia				
Primary	601	77.6%	168,758	78.8%
Secondary	179	22.4%	51,004	21.2%
Sumatra				
Primary	98	76.0%	37,434	76.6%
Secondary	32	24.0%	12,704	23.4%
Java				
Primary	104	84.5%	84,473	81.9%
Secondary	26	15.5%	23,499	18.1%
Bali and Nusa Tenggara				
Primary	101	77.2%	11,080	76.7%
Secondary	29	22.8%	3,314	23.3%
Kalimantan				
Primary	100	77.3%	12,696	77.4%
Secondary	30	22.7%	3,870	22.6%
Sulawesi				
Primary	99	76.3%	16,693	74.5%
Secondary	31	23.7%	5,643	25.5%
Papua and Maluku				
Primary	99	76.2%	6,382	76.4%
Secondary	31	23.8%	1,974	23.6%

Table 2. Sample of Schools, by Type and Region

	Sample Schools		Population Schools (From Sampling Frame)	
	n	%	n	%
Indonesia				
General	678	86.9%	180,770	82.3%
Madrasah	102	13.1%	38,992	17.7%
Sumatra				
General	110	84.6%	42,757	85.3%
Madrasah	20	15.4%	7,381	14.7%
Java				
General	102	78.5%	83,490	77.3%
Madrasah	28	21.5%	24,482	22.7%
Bali and Nusa Tenggara				
General	112	86.2%	12,573	87.4%
Madrasah	18	13.8%	1,821	12.6%
Kalimantan				
General	109	83.8%	14,558	87.9%
Madrasah	21	16.2%	2,008	12.1%
Sulawesi				
General	121	93.1%	19,627	87.9%
Madrasah	9	6.9%	2 709	12.1%
Papua and Maluku				
General	124	95.4%	7,765	92.9%
Madrasah	6	4.6%	591	7.1%

Table 3. Sample of Schools, by Sector and Region

	Sample Schools		Population Schools (From Sampling Frame)	
	n	%	n	%
Indonesia				
Public	575	68.6%	156,555	61.4%
Private	205	31.4%	63,207	38.6%
Sumatra				
Public	101	65.1%	38,744	61.0%
Private	29	34.9%	11,394	39.0%
Java				
Public	90	54.8%	70,832	50.7%
Private	40	45.2%	37,140	49.3%
Bali and Nusa Tenggara				
Public	96	72.5%	10,082	68.8%
Private	34	27.5%	4,312	31.2%
Kalimantan				
Public	108	77.2%	13,696	77.9%
Private	22	22.8%	2,870	22.1%
Sulawesi				
Public	97	73.7%	17,696	76.6%
Private	33	26.3%	4,640	23.4%
Papua and Maluku				
Public	83	63.8%	5,505	65.8%
Private	47	36.2%	2,851	34.2%

Up to two replacement schools were designated in the sampling frame for each originally sampled school. Where participation could not be secured from the originally sampled school, a designated replacement school was approached. Replacement schools were immediately preceding or following the sample schools on the sampling frame within the same district, provided that these schools were not themselves sampled. Since neighboring schools on the frame are similar to the original sampled school in terms of the characteristics determining stratification (in this case, school level, type and sector), the replacement of one school with the other should mitigate bias.

2.1.3 Sample of Teachers within Schools

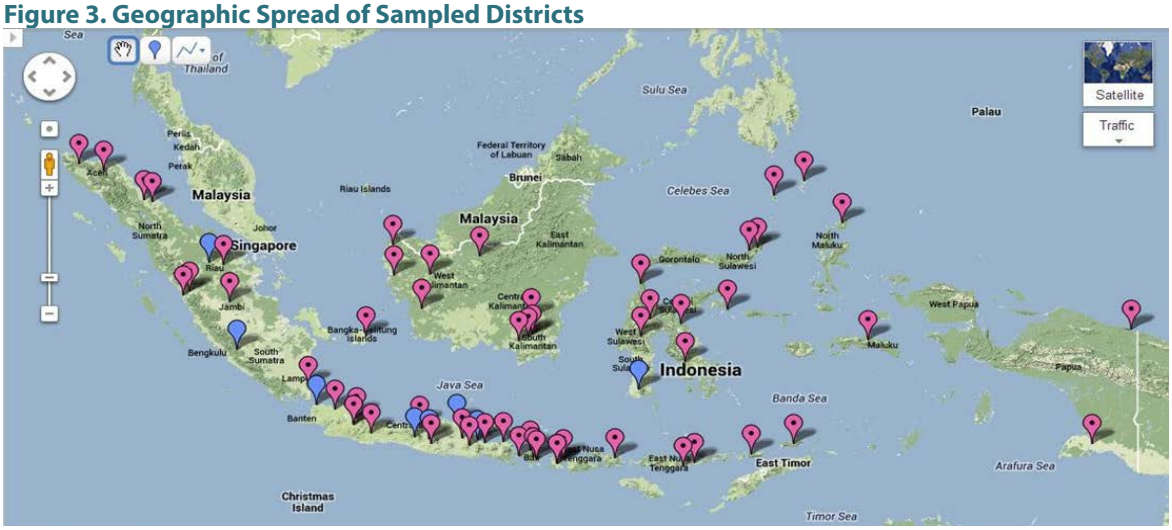
The final stage of sampling to be conducted was the sample of teachers within schools. As the number of teachers in each school was not known before the field team arrived, a simple random sample of 15 teachers in each of the school was taken using the staff roster and a number table to make the random selection. In schools with fewer than 15 teachers, all teachers at the school were considered sampled.

2.1.4 Supplementary Sample of 2003 Absenteeism Study Schools

In addition to the nationally representative sample of 780 schools, 120 of the schools involved in the 2003 teacher absenteeism study[56] were selected to be revisited as part of this study. This resulted in a total sample of 900 schools across Indonesia. The 120 schools to be revisited were selected by simple random sample from the 146 schools in 10 districts visited during the original 2003 study. The list of schools was checked to ascertain the status of all 146 schools, accounting for any school closures or mergers between schools that occurred over the preceding ten years. Two of the schools had merged into a single school since the original study and so 119 schools were sampled in 2013. While the research team was able to compare differences nationally by comparing the results of the 2013 and 2003 representative studies, revisiting this sub-set of the 2003 schools allows for the opportunity to directly investigate teacher absenteeism rates in these specific schools as an example of change over time.

Figure 3 shows the geographic spread of the 55 districts in the main sample (pink markers) alongside the districts visited for the supplementary sample (blue markers).

Figure 3. Geographic Spread of Sampled Districts



Source: Map data © 2014: Google, MapIT

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2.1.5 Achieved Sample

The study was conducted over two visits to the sampled schools and to the schools in the supplementary sample, the first visit occurring between 18 October and 15 December 2013 and the second visit occurring between 22 January and 31 March 2014.

In Visit 1, data were collected from 8,302 teachers in 893 schools (Table 4). Of these schools, 734 were 'sample' schools, 21 were first replacement schools and 18 were second replacements schools - visited when the sampled schools was unwilling or unable to participate. Replacements were used in the first visits due to unfavorable weather preventing the originally sampled school being reached and causing issues of safety for the enumeration teams charged with conducting the visit. Some schools refused to participate and were replaced and some schools were found not to have existed. In addition to the schools visited as part of the main sample, a further 119 were schools that were sampled from the 2003 teacher absenteeism study[57] were revisited. Two pairs of these schools were found to have merged in the intervening years, in one district this school was replaced with another 2003 sample school, however in the other case there were no available 2003 sample schools in the area that were not already being revisited. Finally there was one case of a school (in Java) being visited in error, as it was not sampled or designated as a replacement school for this study.

Table 4. Achieved Sample, Visit 1

	Total Number of Schools	Number of Sampled Schools	Number of Replacement Schools	Number of 2003 Study Schools	Total Number of Teachers
Sumatra	151	123	6	22	1,481
Java	204	128	1	74	2,002
Bali and Nusa Tenggara	142	128	2	12	1,378
Kalimantan	130	124	6	-	1,116
Sulawesi	139	122	6	11	1,118
Papua and Maluku	127	109	18	-	1,207
Indonesia (Total)	**893**	**734**	**39**	**119**	**8,302**

Source: Teacher Absenteeism Survey, Visit 1, 2013

In addition to the visits to schools, during Visit 1 district office data were collected from 61 local education offices and 54 district level MoRA offices.

In Visit 2, data were collected from 8,246 teachers in 880 schools (Table 5). In addition, student achievement tests and a short questionnaire were administered to 8,210 students.

Table 5. Achieved Sample, Visit 2

	Total Number of Schools	Total Number of Teachers	Total Number of Students
Sumatra	151	1,317	1,416
Java	202	2,055	1,927
Bali and Nusa Tenggara	142	1,390	1,353
Kalimantan	130	1,172	1,204
Sulawesi	139	1,179	1,263
Papua and Maluku	116	1,133	1,047
Indonesia (Total)	**880**	**8,246**	**8,210**

Source: Teacher Absenteeism Survey, Visit 2, 2014

The response rate was affected by several factors; however the participation from schools and teachers on the whole was pleasing. Weather and accessibility presented significant challenges for data collection teams in the field. Transportation to some areas was irregular or non-existent at the time designated for

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data collection. Heavy rains, floods, landslides, high waves and tides in some districts hampered the ability of teams to conduct their field work and some delays were experienced, however very little data was lost due to the persistence of the teams in the field. Remoteness was a particular problem in the region of Papua and Maluku, and particularly for the district of Maluku Barat Daya and additional data collection teams were sent from Jakarta and Nusa Tenggara Timur to assist in these areas. Where it was impossible to visit a sampled school for these reasons a replacement was used.

2.1.6 Sample Weighting

To reflect the differences in the probability of selection at each level of the sampling process, and to account for the number of teachers at each of the sampled schools, a number that was unknown before schools were visited, sample weights were calculated and applied to the final data. Schools that were representing a larger number of schools in the population have larger sample weights. The weighting process is described in detail in Appendix B.

The process involved applying base weights at the district, school and teacher level, calculated as the inverse of the probability of selection at each level, to the schools participating from the main sample. These weights were further adjusted to account for non-response at the school and teacher level. Schools that were part of the supplementary sample of schools from the 2003 teacher absenteeism study[58] were given a sample weight of 1, indicating that they represented only themselves. The school that was visited in error was also given a weight of 1 and the data collected was representative of that school only; the data, though, were not included in the analyses.

2.2 Development of Instruments

For the first visit to schools a suite of four survey instruments – a district office interview schedule, a principal interview schedule, a teacher interview schedule and a school data and observation schedule – were developed. Instruments were refined and revised prior to the second visit to schools and a series of new questions asked of the school principal. Teachers who had been absent for the first visit but were present for the second visit were interviewed according to the original teacher interview schedule. Finally student achievement tests were developed and adapted for use in this study in mathematics and reading (Bahasa Indonesia) each at primary and junior secondary level. Items for these tests were acquired from the previous study[59] and from the publically available and published items used in the Progress in International Reading Literacy Study (PIRLS) and Trends in International Mathematics and Science Study (TIMSS). All instruments used in the study are provided in Appendix C.

The development process took place in three stages, the first reviewing and adapting the instruments from the 2003 study[60] and preparing new instruments to capture new information for the current study. Training manuals for training of the survey field teams along with a survey implementation manual were also developed at this time. The second stage involved trialling the instruments in conditions as close to those that could be expected in the field. The third stage incorporated modifications and additions based on the results in the field trial to improve the overall validity and reliability of the instruments as well incorporating the feedback of external research experts on the face validity and refining of the instruments. Final approval for all instruments was sought from the ACDP Secretariat prior to implementation in the field.

2.2.1 Piloting

The pilot study was conducted in the district of Lebak in Banten province. The area was suitable for the pilot study for a number of reasons. The district stretches across urban and rural areas and so the sample

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of schools from which the pilot study schools were drawn therefore comprised schools located in the urban capital Rangkasbitung and schools in rural and remote locations such as in the Bayah sub-district. Similarly, all types of schools to be investigated as part of the main study were accessible in this district. From a logistical point of view, the district is located within a reasonable distance from Jakarta, where the project team was based. Further, the Lebak district education office had cooperated with previous studies managed by SMERU and it was expected that they would allow access to their schools for pilot purposes.

Eight schools were randomly selected for the pilot study, one school to represent each school type in the main study sample (public SD (*Sekolah Dasar*/primary school), private SD, public SMP (*Sekolah Menengah Pertama*/Junior Secondary School), private SMP, public MI (Madrasah Ibtidaiyah/Islamic Primary School), private MI, public MTs (Madrasah Tsanawiyah/Islamic Junior Secondary School) and private MTs). Two replacement schools of the same type and sector were also randomly selected for each sampled school in the event that the sampled school was not willing or able to participate in the pilot. Random sampling with replacements was used to approximate the sampling methods to be used in the main study. This highlighted some of the logistical challenges of the project where sampled schools and replacements could be quite some distance apart. All eight types of school were visited for the pilot; one type was not available through the pre-selected sample and replacement procedure, highlighting some of the difficulties to be anticipated in the field. However, in the interest of collecting a complete set of data and exposing the teams to the full range of institutions they would be required to visit, an alternative school of the same type that was missing was visited instead.

The pilot experience enabled the team to prepare ahead of the main study by conducting precise mapping of school locations and the allocation of extra days for work in cases where replacement schools were some distance away.

The pilot period was also used to test the structure of the school visits themselves. Two enumerators visited one school per day. Each visit began with enumerators introducing themselves and the study to the school principal (or his replacement). Thereafter, one enumerator commenced the interview with the principal while the other obtained a list of teachers and drew the random sample of teachers using a pre-prepared random number table. This enumerator also completed the school observation at this time and began the teacher interviews, assisted by the other enumerator when they had finished interviewing the school principal. Lessons learned from these procedures were formalised in the training of the field team enumerators and documented in the field implementation manuals produced out of this piloting work.

The pilot process was repeated prior to the second visit to schools. On this occasion the new instruments were tested again with the same schools that had participated in the pilot for Visit 1. On this occasion the student achievement tests were also administered and the implications for the time allowed for students to sit these tests as well as an evaluation the overall suitability of the tests for the grades and students selected was undertaken. Adjustments to instruments again occurred as a result of the pilot testing.

2.2.2 External Review of Instruments

The pilot instruments were reviewed by three external reviewers: Dr Julie McMillan from the Australian Council for Educational Research (ACER); Ir. Suharti, MA from the Ministry of National Development Planning (BAPPENAS); and Dr Daniel Suryadarma from the Australian National University (ANU). The reviewers were asked to comment on specific qualities of the instruments as well as make any additional comments they thought useful to improving the study.

- The reviewers were asked to respond to the following questions in the process of their review:
- Are any questions unclear/do the questions make sense?
- Do you get the idea that we are measuring absenteeism?
- Are we asking sufficient questions to capture our research questions?
- Are we asking questions which you would deem irrelevant to our research questions?

The reviewers had access to the instruments after an initial revision was conducted by the project team following the pilot study, and changes were made following their comments.

2.3 Field Operations

2.3.1 Recruitment of Field Teams

The first step in field operations involved the recruitment and training of qualified field teams to collect the data during Visit 1 and Visit 2 in the field. The field teams consisted of district coordinators, enumerators and data entry staff. ACER and SMERU core team members were responsible for the management of the field work from the national project base in Jakarta. In addition, to maintain a strong connection and quality control on data collection procedures, SMERU assigned six regional coordinators from their own staff to each of the regions of the study.

The core team, supported by regional coordinators, recruited 22 individuals to be assigned district coordination roles. The district coordinators were responsible for managing and overseeing the field data collection in the 64 districts in the study. District coordinators had a range of backgrounds and came from several different institutions and included academics, non-government organisations and independent researchers. District coordinators all had at least a university program (S1/Strata 1/Bachelor Degree) educational background and were experienced in the operation of educational research activities. Most district coordinators had worked with SMERU in the past and three of them had participated in the 2003 teacher absenteeism study.[61] They resided near the sampled districts that they were responsible for or within the same province.

The enumerators and data entry staff were selected by the district coordinators with the support of the core team and regional coordinators. A total of 160 enumerators and 22 data entry staff were recruited. Most enumerators were located in the sampled areas and most were S1 graduates in educational or other relevant fields and had some experience in survey and research activities. The remainder were recent university graduates or in their final year of study. Each field team consisted of 6-10 enumerators depending on the size of the district and the number of schools within the district.
Data entry staff was responsible for entering the data in the data collection program, CSPro (Census and Survey Processing System). A summary of the staff recruited for the field work can be found in Table 6.

Table 6. Staff Recruited for the Field Teams

	District Coordinators		Enumerators		Data Entry Staff	
Visit 1	Male	Female	Male	Female	Male	Female
Sumatra	4	2	24	12	4	2
Java	2	3	15	23		5
Bali and Nusa Tenggara	1	2	19	7	2	1
Kalimantan	1	2	12	6	1	2
Sulawesi	2	1	21	5	2	1
Papua and Maluku	1	1	12	4	2	
Indonesia (Total)	**11**	**11**	**103**	**57**	**11**	**11**
Visit 2	Male	Female	Male	Female	Male	Female
Sumatra	4	2	25	10	4	2
Java	2	3	12	20		5
Bali and Nusa Tenggara	1	2	13	13	2	1
Kalimantan	1	2	10	6	1	2
Sulawesi	2	1	21	5	2	1
Papua and Maluku	1	1	12	4	1	1
Indonesia (Total)	**11**	**11**	**93**	**58**	**10**	**12**

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2.3.2 Field Team Training

Following the recruitment of the field teams, training was undertaken at all levels of the project to ensure quality control and a detailed understanding of the project amongst all project staff. A national "Training of Trainers" was conducted in Bogor, over three days, for district coordinators. At this training event the instruments were introduced and the data collection manual, including the field implementation manual and the data entry manual, were presented. This event was also intended to provide training for district coordinators to take back to their enumerator and data entry teams at the district level, in a cascade training model. In conjunction with the presentation of the field manuals, district coordinators participated in a mini-pilot of the instruments in Bogor and some final corrections to instruments followed feedback from that event.

For the second visit a training event for regional coordinators was undertaken in Bogor and the regional coordinators then in turn trained their district coordinators who in turn trained the enumerator and data entry staff in their teams. Cascade training events were conducted in towns nearby to the place where the team would begin collection data and the ongoing training between the first and second visits was intended to ensure that the teams had the most up-to-date information and a thorough understanding of the work required at every stage of the data collection process.

2.3.3 Main Data Collection

Main data collection began simultaneously across Indonesia following the district-level training for both school visits. The field team worked according to the data collection manual. For Visit 1, teams of two enumerators shared the tasks of interviews, observations and school data collection. For the second visit, where possible, enumerators worked alone. However, working in pairs was strongly recommended by the core team where there were more than three teacher interviews to occur or where schools were situated in remote areas.

In addition to the collection of data from schools, the field team also collected qualitative data from local education offices and district level MoRA offices. District coordinators were responsible for interviewing the relevant officials on these occasions.

District coordinators were charged with providing all survey instruments and stationery to their teams during data collection in the field. Before visiting schools, enumerators were provided with the list of sampled schools by name and address, region, district and school codes, as well as random number tables for the sampling of teachers. For the second visit enumerators were also equipped with the names of principals and teachers who were not interviewed in the first visit and the number of classes expected at the school. This data was not available until after it had been collected on the first visit to the school. District coordinators were required to oversee the process in each district and control and direct the data entry staff in consultation with regional coordinators.

Data entry staff was responsible for the entry of data collected by enumerators using CSPro. Data from the field began to be uploaded to the central Jakarta office through the SMERU online portal almost immediately and continued throughout the data collection period. These data were reviewed by SMERU data specialists and cleaned, queries were directed back to the data entry staff where responses were not clear and data was refreshed and re-uploaded through the portal before being finalised.

As a measure of quality control, during both visits, spot-checking was conducted in 10% of the schools visited by the SMERU team. Schools were randomly selected in each region for spot-checking. Spot-checking involved asking the principal and sample teachers questions which would validate the information collected by the field team. In two cases it was found that data collection had not been properly conducted and the field team was required to return to these schools to complete the data collection in accordance with the manual.

2.4 Measures of Teacher Absence

A key purpose of this study is to obtain estimates of teacher absence in Indonesian schools. This involved two measures:

- *Teacher absence from school:* this was defined as the number of teachers who were not at school on the day of the visit (for whatever reason), expressed as a proportion of all teachers who were scheduled to be teaching during the observation; and
- *Teacher absence from class:* this was defined as the number of teachers who, although present at school, were not in fact in the classroom, expressed as a proportion of all teachers who were scheduled to be teaching during the observation.

The denominator in both measures is the same: the number of teachers who were scheduled to be teaching. In one sense, both measures could be added together to give an overall indicator of the extent of teacher absence from teaching duties. However, without additional information such a measure would need to be treated cautiously. Some of the teachers absent from school may have been attending a professional development activity, or were visiting another school. Such teachers are presumably still meeting their professional obligations. Schools often use replacement teachers to take the classes of those who are absent.

Accordingly, in order to help with interpretation of the measures and discussion of their implications, the study also collected information on the reasons for teachers' absences and the steps, if any, that schools took to ensure that students (and other teachers) were not disadvantaged. Nevertheless, it is still reasonable to conclude that on either measure of teacher absence – absence from school, and absence from class – the higher the rate the more potentially problematic it is for the quality of schooling.

Chapters 3 to 6 focus on the first measure, teacher absence from school. Chapter 7 presents data on the second measure, absence from class. The two measures are brought together in Chapter 8, which looks at the implications of teacher absence.

2.5 Data Analysis

Data collection and analysis was undertaken using several statistical and data analysis packages. Data entry was done using CSPro. The majority of the data analysis was done in Stata versions 12 and 13. To account for the sampling structure, all Stata analyses were performed using the survey data commands, [svy], allowing for the use of weights for accuracy of point estimates and the specification of stratification and clustering for greater accuracy in the calculation of standard errors. The student achievement tests were calibrated using ConQuest to fit the Rasch model for item analysis.

The statistics computed in this report provide an accurate account of the samples from which they came, but they are only estimates of the summary statistics for the complete population. Estimates such as these are not perfectly precise and the level of imprecision they contain is captured in the standard error statistic (SE). The SEs are reported in the same unit of measurement as the variable concerned – for example when the absence rates are reported as a percentage, the SE is also shown as a percentage. The SE captures the amount of variation to be expected from similarly-designed samples of the population. The SE also allows for the calculation of confidence intervals around any reported statistic. The 95% confidence interval, for example, extends from 1.96 standard errors below the point estimate to 1.96 standard errors above the point estimate. This enables the conclusion that the population value is almost certainly within that range. The 95% confidence interval is the one most widely in research used and is what has been used in this report.

Chapter 3
Rates of Teacher Absence from School

This chapter describes rates of teacher absence from school observed during the two visits that form the current study. It discusses the stability of the rates of absence between the two visits, and the differences observed among regions and between different types of schools. The chapter discusses the reasons presented for teacher absence from school. Changes between the rates observed in the current study and those in previous studies, particularly of the first Indonesian teacher absence study in 2003, are also explored.

3.1 Teacher Absence Rates from School

Teachers were considered to be absent from school if they could not be located within the school by the enumerators when they were scheduled to be present at school. As documented in Table 7, during the first visit 9.7% (± 2.0%) of teachers were found to be absent from school and 10.7% (± 2.8%) were absent at the second visit.

The structure of this study, allowing for two visits to each of the sampled schools, provided an opportunity to examine the stability of the absence rate between the two visits. One assumption of the study is that the absence rate, recorded on a particular day, is representative of the absence rate on any given day when school is scheduled. This would be consistent with the findings of the 2003 teacher absence study, which reported little difference between their two visits. The assumption is confirmed in the current study, which found a statistically insignificant difference between the estimates of teacher absence from the two visits. Because of this stability, this chapter will largely discuss absence estimates from the first visit, noting only where there are significant differences with the second visit within sub-groups.

Four key sub-groups of interest were built into the design of this study: differences between six pre-determined regions, between school level (primary and secondary), between school status (public and private) and between school type (general and madrasah). The teacher absence rate estimates for these subgroups are also summarised in Table 7. Because the proportion of schools by level, status and type were sampled to reflect their proportion in the six respective regions, this chapter also discusses these subgroup differences within regions.

This study uses data from 16,534 observations of 9,867 individual teachers. Enumerators took a random sample of 15 teachers from the pool of teachers who were scheduled to be present on the day of their visit. This means that not all teachers observed in the first visit were necessarily scheduled to be present, and therefore could be sampled, in the second visit. Of the total number of teachers, 6,667 were observed in both visits, while 1,630 were only observed in the first visit and 1,570 were only observed in the second visit.

Among teachers who were observed twice, 11.0% were absent from school during one visit while only 0.5% were absent both times. If teachers who were absent both times are assumed to have been absent

for the duration of the time between visits (14 weeks, on average), this suggests that teacher absence in Indonesia is likely to be characterized more by one-off or short-term absences, with a relatively smaller rate of long-term absences. There were no significant differences by region, school type, status or sector for how this short-term and long-term absence is split.

Table 7. Teacher Absence from School, by Region, School Level, Type and Status

	Absence Rate (%)	SE
National rate of teacher absence from school		
Visit 1 (n=8,302)	9.7	1.0
Visit 2 (n=8,246)^	10.7	1.4
Region		
Sumatra (n=1,481)	8.4	1.7
Java (n=2,002)	9.1	1.7
Bali and Nusa Tenggara (n=1,378)	14.0	2.6
Kalimantan (n=1,116)	14.1	1.6
Sulawesi (n=1,118)	10.2	2.3
Papua and Maluku (n=1,207)	11.6	3.0
School level		
Primary (n=6,559)	9.4	0.9
Junior Secondary (n=1,743)	10.3	2.0
School type		
General (n=7,217)	9.0	1.0
Madrasah (n=1,085)	12.5	2.6
School status		
Public (n=6,353)	8.5	0.9
Private (n=1,949)	12.8	1.9

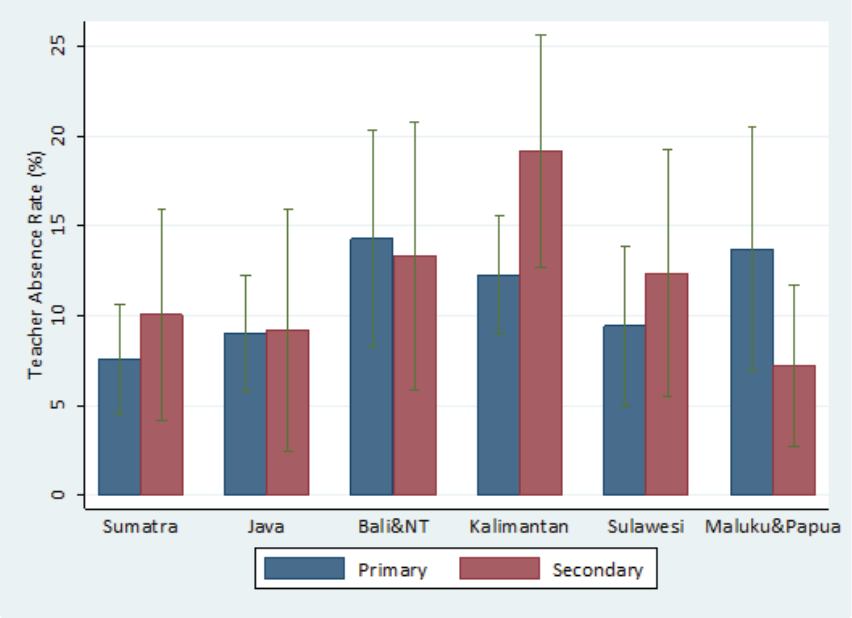
Source: Teacher Absenteeism Survey, Visit 1, 2013 (except for ^)

Regional estimates of teacher absence rates ranged from 8.4% (± 3.5%) in Sumatra to 14.1% (± 3.2%) in Kalimantan (Table 7). These regional differences, however, were not found to be statistically significant. For the most part, the regional estimates of absence were stable across the two visits. The only exception was the difference between the estimates for the Bali and Nusa Tenggara region. In the first visit, 14.0% (± 5.3%) of teachers who were scheduled to teach were found to be absent from schools in Bali and Nusa Tenggara, a significantly higher proportion than those found to be absent in the second visit, at 8.9% (± 2.9%).

The estimate of teacher absence in primary schools was 9.4% (± 1.9%) and in secondary schools was 10.3% (± 4%), as seen in Table 7. This small difference was not statistically significant. There were also no signficant differences in regional estimates of teacher absence in primary and secondary schools, as shown in Figure 4.

The difference between national estimates of absence between madrasah and general (or non-madrasah) schools was similarly small (Table 7). The teacher absence rate in madrasah schools was 12.5% (± 5.2%), while at general schools it was 9.0% (± 2.0%). This difference was also statistically insignificant within regions, shown in Figure 5, although the large standard errors caused by the small number of madrasah in some regions should be noted as they contribute to the lack of statistical significance.

Figure 4. Teacher Absence from School, by Region and School Level

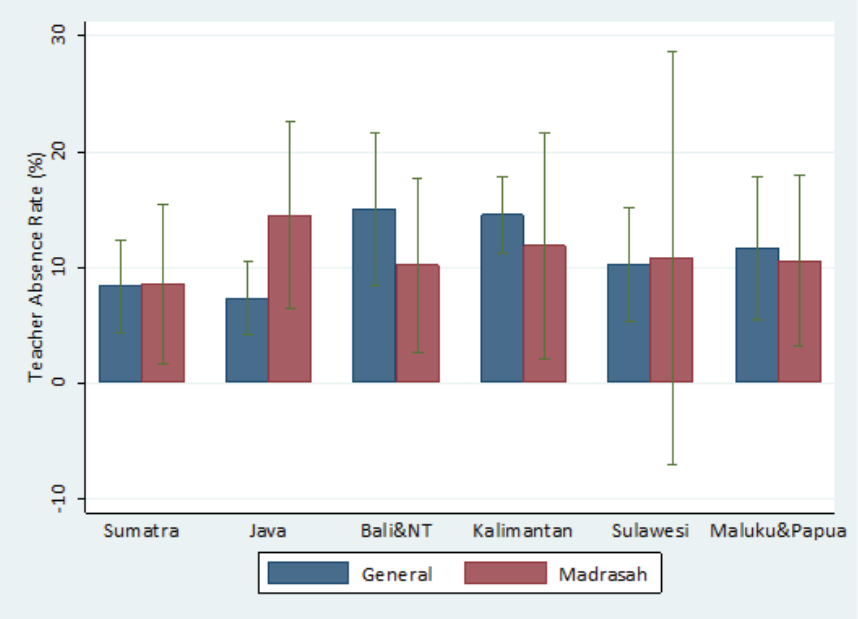


Source: Teacher Absenteeism Study, 2013, Visit 1

Appendix D reports on the perspectives of officials in DEOS and MoRA district offices. Most respondents in the 61 DEOs and 54 MoRA district offices said that teacher absence in their coverage area was no longer a significant problem, as the rate is now between 5% and 10%. Further, the officials generally felt that most teachers were only absent temporarily, not permanently. Nevertheless, there are two issues of concern:

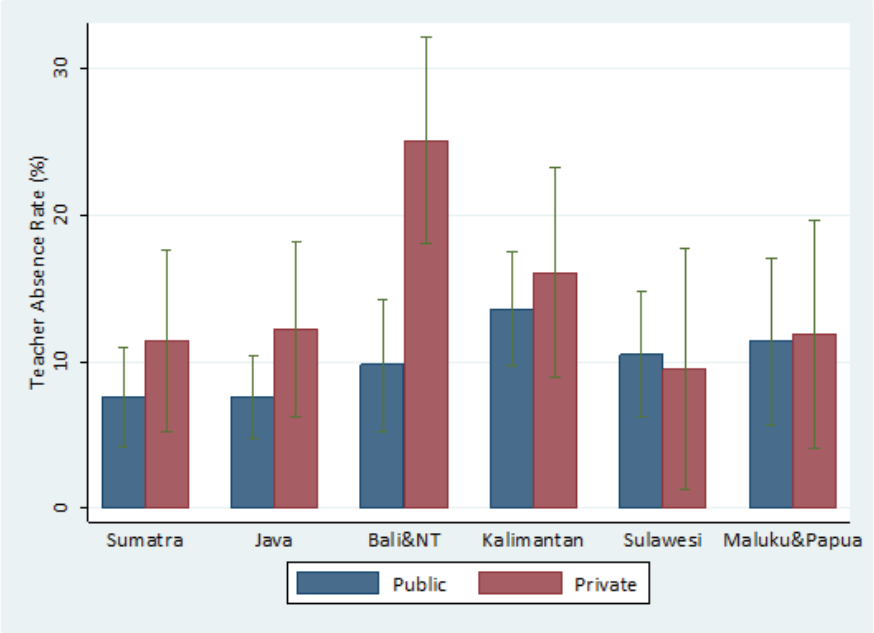
- Teacher absence in remote areas remains an unresolved problem, where the absence rate is about 20%; and
- Teachers in private madrasah are markedly more likely to be absent than their counterparts in public madrasah.

Figure 5. Teacher Absence from School, by Region and School Sector



Source: Teacher Absenteeism Study, 2013, Visit 1

Figure 6. Teacher Absence from School, by Region and School Status



Source: Teacher Absenteeism Study, 2013, Visit 1

Nationally, the absence rate for private schools was higher than the rate for public schools at 12.8% (± 3.9%) and 8.5% (± 1.7%) respectively (Table 7). While most regional estimates do not show a significant difference, the Bali and Nusa Tenggara region was an exception, as shown in Figure 6. While the rate of teacher absence in public schools in the region was at 9.8% (± 4.5%), close to the national estimate, the rate of absence in private schools was 25.1% (± 7%), significantly higher than the absence rate in private schools in every other region except for Kalimantan.

Later in the report, the discussion of teacher absence is continued by examining differences by district and selected teacher and school characteristics. As the sample design of this study only took account of the four subgroups reported in Table 7, caution should be exercised when interpreting analyses by the other groupings.

3.2 Absence Reasons and Duration

For every teacher who was found to be absent, principals or other school staff were asked to provide the reason for absence and the number of days the teacher had been absent up to that day (the day of visit is counted as 1 day). The responses, restricted to the group of teachers who were scheduled to be teaching, are summarised in Table 8. Due to issues with the instrument used to collect reasons for absence in the first visit, the results discussed here were from the revised instrument used in the second visit.

The most common reason for absence was to attend official teaching-related duties (26.4%± 2.4%), which were largely related to attending meetings and training. There were significant regional differences here, with 35.0% of teacher absences in Java being attributed to this reason, compared with only 9.0% of absences in the Papua and Maluku region.

Around 14.2% of teacher absences were attributed to the teacher being sick. For those teachers, principals and school staff were asked a follow-up question about whether the teacher was frequently ill. The majority of teachers who were absent due to sickness were not reportted to be frequently ill, but 20.0% were reported to be frequently ill. On average, teachers have missed 6.7 days of school for reasons of sickness.

Another 10.3% of teachers had not arrived at school. One-third of these absences were attributed to cases where the teacher did not have a class early in the day. However, it should be noted that these teachers

were still absent when their class was scheduled to start. One in four absent teachers in Sumatra and in Kalimantan were reported to be absent for this reason, while only 4.0% of teachers in Java were.

Pursuing further studies – in all but three cases referring to studies towards a bachelor's/S1 degree – was one of the least frequent reasons (4.1%) presented for teacher absence. In most of these instances, the teacher was absent only on the day of the enumerator visit, but in a handful of cases teachers have missed one to two months of classes, thus leading to the average 18.1 days of absence due to this reason.

The least common reason given was "official non-teaching related duties" (3.2%), and on average this involved a relatively low 1.3 days absence per teacher concerned.

Table 8. Reasons for Absence from School and Duration of Absence

	Reason for Absence %	Average Days Absent for this Reason
Official teaching related duties (n=229)	26.4	1.2
Official non-teaching related duties (n=43)	3.2	1.3
Sick (n=214)	14.2	6.7
Care for a sick person (n=67)	4.9	2.3
Study (n=54)	4.1	18.1
Not arrived yet (n=136)	10.3	1.0
Left early (n=39)	4.7	1.3
Do not know / not known to respondent (n=163)	11.6	1.6
Other (n=239)	20.8	6.7

Source: Teacher Absenteeism Study, 2013, Visit 2

Aside from the regional differences noted above, in 25.0% of absences in the Bali and Nusa Tenggara region and 22.0% in Sulawesi, the principal or school staff did not know the reason. Meanwhile, only in 8.0% of absences in Java was this the case. Finally, the category of other reasons for absence, referred mostly to teachers being absent to attend a funeral or for other personal reasons.

The information provided by DEO and MoRA district officials on the reasons for teacher absence were broadly similar to the reasons provided by the sample schools. As summarised in Appendix D, district officials reported that the most common reasons for teachers not being at school were as follows: attending training or a meeting; continuing education; sickness; family issues; rainy season/flood/weather-related situations; and difficult access to schools/damaged roads. Other reasons for absences that were suggested by officials included: teachers with debt-related problems; teachers managing their own businesses; teachers who are poorly prepared to teach; teachers teaching in more than one school; insignificant financial incentives; some teachers are bored; some teacher are lazy; and dissatisfaction related to a lack of promotion.

3.3 Changes in Teacher Absence between 2003 and 2013

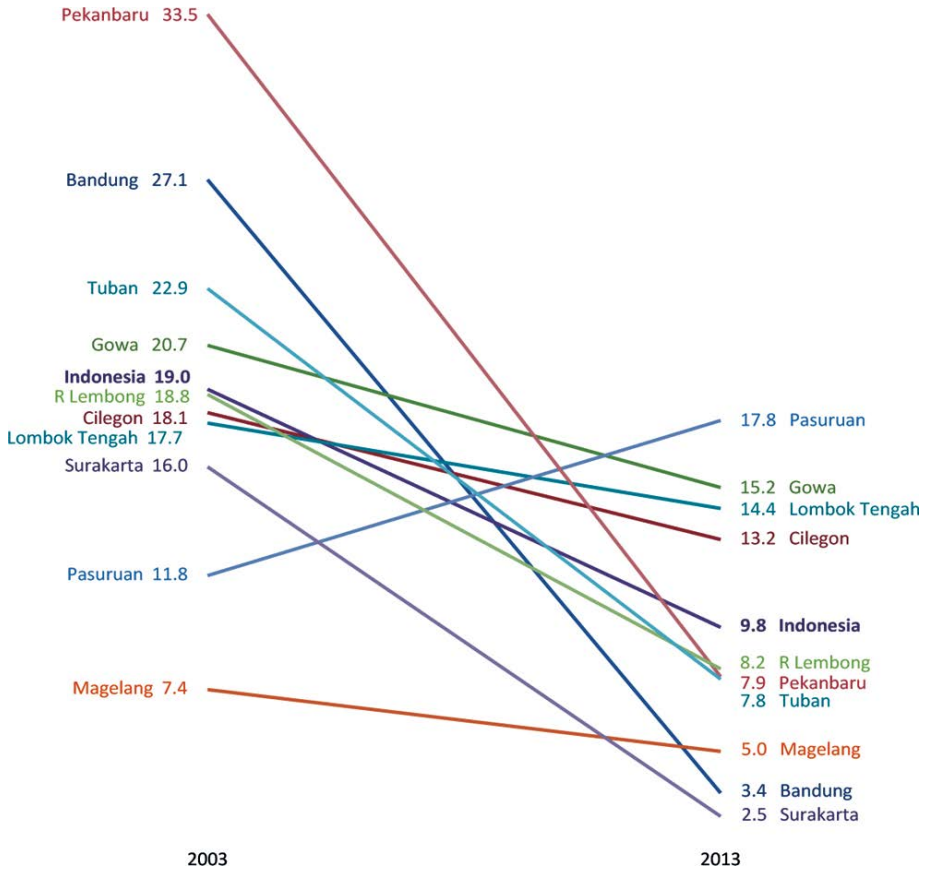
The current study selected 120 from the 146 primary schools of the 2003 study to be revisited.[62] The team was able to collect data from 119 of these schools. Two pairs of schools from 2003 were found to have been merged with each other. In one instance another 2003 sample school was selected to be visited but in the other instance all other sampled schools from the same district had already been selected. The selection of these schools and the use of comparable visit procedures and instruments were designed to allow for some level of comparison between the primary teacher absence rates and schools' context in 2013 and ten years earlier.

The analyses reported in this section refer only to the 119 schools that were visited in both 2003 and 2013. This is a sub-sample of the full sample of schools visited in 2013. Results for the full sample, which differ in some respects from those for the sub-sample, are reported in later chapters.

62 Usman et al, 2004

While the current study explicitly sampled teachers who were scheduled to be present in school, the 2003 study collected absence information from all teachers registered at the school. However, teachers who were not scheduled to be teaching in the session (if there are morning and afternoon sessions) were removed from the 2003 sample. Taking into account the context of primary schools, where most teachers are and were scheduled to teach for almost the entire duration of the school day, comparability between the two samples can be broadly assumed. Nevertheless, the interpretation of data in Figure 7 and Table 9 should still be made with caution, as standard errors were not reported in the earlier study, and a relatively small number of schools were common to both studies.

Figure 7. Changes in Teacher Absence in the Same Primary Schools between 2003 and 2013, by District



Sources: Usman, Akhmadi & Suryadarma, 2004; Teacher Absenteeism Survey, Visit 1, 2013

Figure 7 and Table 9 show the rates of teacher absence from school as presented in the report from the 2003 study and the unweighted estimates from the first revisits in 2013. The national estimate for teacher absence among revisited schools is 9.8%, close to half of the 19.0% rate of absence ten years earlier. Two districts that experienced the largest drop – Bandung City (by 23.7 percentage points), and Pekanbaru City (by 25.6 percentage points) – are urban districts (i.e. they are designated as a city/kota) and had the highest rates of absence in 2003. They are followed by a rural district (kabupaten), Tuban in Java (15.1), Surakarta City (13.5) and Rejang Lebong (10.5). The only district to have experienced an increase in teacher absence between 2003 and 2013 is Pasuruan City in Java (an increase of 6.0 percentage points).

Table 9. Teacher Absence from School in the Same Primary Schools, 2003 and 2013

	Teacher Absence Rate 2003 (%)	Teacher Absence Rate 2013 (%)
District		
Bandung City	27.1	3.4
Cilegon City	18.1	13.2
Gowa	20.7	15.2

	Teacher Absence Rate 2003 (%)	Teacher Absence Rate 2013 (%)
Lombok Tengah	17.7	14.4
Magelang	7.4	5.0
Pasuruan City	11.8	17.8
Pekanbaru City	33.5	7.9
Rejang Lebong	18.8	8.2
Surakarta City	16.0	2.5
Tuban	22.9	7.8
Indonesia	19.0	9.8

Sources: Usman, Akhmadi & Suryadarma, 2004; Teacher Absenteeism Survey, Visit 1, 2013

To provide some context for the drop in teacher absence rates over the past 10 years, Table 10 presents a comparison of some teacher and school background characteristics in 2003 and 2013. The revisit to schools 10 years later saw them with a slightly smaller proportion of male teachers, decreasing from 35.8% to 29.5%. There was also a slightly smaller proportion of teachers who were born outside of the school province, decreasing from 17.4% in 2003 to 14.6% in 2013.

Meanwhile, there were dramatic changes to the education level of teachers. While most teachers in 2003 held only a diploma, 64.0% of teachers in 2013 held a bachelor's/S1 degree. This increase is consistent with the transition from teacher training colleges that granted a Diploma 2 in teaching to degree-granting universities, as well as the introduction of a national certification which – at least in the first few years of its implementation – required teachers to hold an S1 degree.

The proportion of teachers who also held non-teaching jobs outside of school has dropped slightly in ten years, from 43.5% to 36.4%. Meanwhile, the proportion of teachers who held a teaching job at a school other than the one visited has increased from 6.8% to 10.6%.

Finally, the proportion of principals who were found to be absent in the revisited schools was 16.7%, a drop from 31.3% in the 2003 study. This and the other aspects outlined above are discussed further in subsequent chapters.

Table 10. Teacher Demographics in the Same Primary Schools, 2003 and 2013

	Proportion of Teachers/ Schools 2003 (%)	Proportion of Teachers/ Schools 2013 (%)
Teacher gender		
Male	35.8	29.5
Female	64.2	70.5
Teacher qualification level		
High school or lower	33.2	15.3
Diploma (D1/D2/D3)	52.2	20.7
Bachelor's (S1) or above	14.5	64.0
Teacher province of birth		
Same as school	82.6	85.4
Outside of school province	17.4	14.6
Teacher employment status		
Permanent	77.4	71.1
Contract	1.6	3.4
Honorary	17.7	25.0
Other	3.3	0.5

	Proportion of Teachers/ Schools 2003 (%)	Proportion of Teachers/ Schools 2013 (%)
Teachers with other jobs		
Hold a teaching job at another school	6.8	10.6
Hold a non-teaching job outside of school	43.5	36.4
Principal attendance		
Principal was absent	31.3	16.7
Principal was present	68.7	83.4

Sources: Usman, Akhmadi & Suryadarma, 2004; Teacher Absenteeism Survey, Visit 1, 2013

The decrease in teacher absence rate between 2003 and 2013, according to teacher and school characteristics, is shown in Table 11. The absence rates in 2013 (the right-hand column) are lower for nearly all of the same groups of teacher and school characteristics than they were in 2003. However, while some patterns of relationships have persisted between 2003 and 2013, other relationships have changed somewhat.

The associations between absence rate and teacher demographics variables generally remained the same over the decade. In 2013, as in 2003, male teachers, married teachers, contract-based teachers, and teachers who live far from school, all continued to have a higher absence rate than teachers in their four counterpart categories. Areas where some changes in the patterns have been observed include teacher employment status (permanent versus non permanent) which was more strongly associated with teacher absence in 2003 than in 2013. The differences in absence rates according to teachers' qualifications which were significant in 2003, were not so apparent in 2013. In 2003 the absence rate for teachers born outside of the province where their school was located was higher than for teachers born in the same as school location, but in 2013 the opposite was found.

Table 11. Factors Affecting Teacher Absence Rates in Primary Schools in 2003 and 2013*

Teacher Characteristics		Absence Rate (%)	
		2003	2013
1. Teacher Demography			
Gender	Male	17,9	8,7
	Female	21,1	11,0
Marital Status	Married	18,6	9,8
	Unmarried	17,5	6,8
Qualification Level	Junior High school or lower	4,1	2,2
	Senior high school	17,2	9,6
	Diploma 1/ 2 / 3	21,9	9,1
	Bachelor 's degree (S1) or above	16,3	9,7
Employment Status	Permanent/civil servant	18,2	8,9
	Not permanent/contract basis	27,8	10,8
Birthplace	In the same province as school location	18,2	9,8
	Outside of the province of school location	19,7	6,8
Residence	Far from school	20,3	10,0
	Near school	17,5	8,2
2. School Characteristics			
Presence of principal during visit	Principal was absent	22,2	11,3
	Principal was present	17,0	9,0
Distance to local Education Office	Near the local education agency	16,3	7,1
	Far from the local education agency	26,4	10,1

Teacher Characteristics		Absence Rate (%)	
		2003	2013
Number of class groups for each grade	One classroom for a number of class groups	36,4	14,0
	One classroom for each class group	17,8	8,7
3. School Supervision			
Visited by supervisor	Recently visited	19,7	9,4
	Has not been visited for a long time	17,9	9,3
School committee meeting	Meeting has been recently held	18,8	9,6
	Meeting has not recently held	19,2	7,9

* Calculated from the same school samples in 2003 (146 SD/MI) and 2013 (119 SD/MI).

The association between teacher absence rate and school characteristics varied little between the 2003 and 2013 studies. Teacher absence rates in schools where the principal is not present, where the distance from the school to the education agency is relatively far, and where teachers teach classes with more than one class group (rombel) is higher than in the schools belonging in the counterpart categories, where the principal is present, the education agency is nearby and there is just one class group. Some small change occurred regarding the influence of principal presence on teacher absence, which in 2013 was less strongly associated than in 2003.

In terms of school supervision, among the sub-sample of 119 schools that were sampled in in both 2003 and 2013 the recency of supervisor visits had no significant impact on the teacher absence rate. The correlation between the school committee meeting variable and teacher absence rate in 2013 is reversed from the result in 2003. In 2013, the rate of teacher absence in schools which had recently held a school committee meeting was higher than schools which had last held these meetings less recently.

3.4 Summary

The main purpose of this study was to gain an understanding of the extent and causes of teacher absence in Indonesia. It looks at two forms of absence among teachers who were scheduled to be teaching: absence from school and absence from class. This chapter focused on the first type of absence – absence from school – and compared results with the 2003 study on teacher absence in Indonesia. Some of the key findings on the current rates of absence are:

- Around one in ten teachers in Indonesia were found to be absent from school when they were scheduled to be teaching. During the first visit 9.7% (± 2.0%) of teachers were found to be absent and 10.7% (± 2.8%) were absent at the second visit.
- Among teachers who were observed twice, 11.0% were absent during one visit while only 0.5% were absent both times.
- Regional estimates of teacher absence rates ranged from 8.4% (± 3.5%) in Sumatra to 14.1% (± 3.2%) in Kalimantan, although these regional differences were not found to be statistically significant. Similarly, there were no statistically significant differences between primary and secondary schools, public and private schools, and general and madrasah schools.
- An exception was in the Bali and Nusa Tenggara region, where the rate of absence among teachers in private schools was 25.1% (± 7.0%), which was significantly higher than for public schools in the region and private schools in every other region except for Kalimantan.
- The most common reason for absence nationally was to attend official teaching-related duties (26.4%), which were largely related to attending meetings and training. There were significant regional differences, with 35.0% of teacher absences in Java being attributed to this reason, and only 9.0% of absences in the Papua and Maluku region.
- Meanwhile, the most common reason for absence in Sumatra and Kalimantan was late arrival, where around one in four teachers were absent for this reason. In Sulawesi and in the Bali and Nusa Tenggara

regions, on the other hand, one in four teachers were absent for reasons unknown to the principal or school staff interviewed.

- In the primary schools from the 2003 sample that were revisited, the absence rate had dropped substantially, from 19.0% to 9.8%. These changes varied by district, with the largest changes taking place in the urban districts of Bandung and Pekanbaru. In one district, Pasuruan, there was a slight increase in teacher absence rate.
- The characteristics of the teaching workforce has also changed over the past 10 years. Notably, a higher proportion of teachers hold a Bachelor/S1 degree and a smaller proportion hold an additional non-teaching job outside of school in 2013. The proportion of principals who were absent was also smaller in 2013 than in 2003 in the primary shools that participated in both studies.
- The teacher absence rates in 2013 are lower for nearly all of the same groups of teacher and school characteristics than they were in 2003. Some patterns of relationships between absence and teacher and school characteristics have persisted between 2003 and 2013 (e.g., male primary teachers continue to have higher absence rates than female teachers). On the other hand, changes are evident in some other relationships (e.g., the principal's presence at the time of the school visit was slightly less strongly associated with teacher absence in 2013 than in 2003), albeit within a context where the overall rate of teacher absence in primary schools has declined substantially from 2003 to 2013.

Chapter 4
Influence of Contextual and Teacher Factors

This chapter describes the influence of contextual and individual teacher factors on teacher absence from school. Contextual factors are defined here as demographic or social factors or those aspects that are relatively fixed or cannot be easily influenced by policy or programming. In the study, contextual information was collected through surveys of principals and teachers. The results presented here are focused on those factors that were found to have a statistically significant influence on the likelihood that a teacher who was scheduled to teach during an unannounced visit was found to be absent from school. Where relevant, these results are compared to findings of earlier teacher absence studies.

4.1 School Context

The theoretical framework described in Chapter 1 conceived school contextual factors as having both direct and indirect effects on teacher absence.[63] It identified a significant association between attendance and contextual variables in previous studies, with schools in urban areas, near paved roads and in communities with lower levels of poverty being associated with higher teacher attendance. In Indonesia, the 2003 study into absenteeism found that teachers at schools that were located near the local District Education Office (DEO) tended to have a lower absence rate than those who were further away.[64]

Table 12 presents findings from the current study, showing that, consistent with the 2003 study, schools that were closer to the DEO had lower teacher absenteeism rate than those that were further away. Schools in more urban areas and those with more students also had significantly lower absence rates. In remote schools, about one in five teachers (19.3%) who were scheduled to teach were found to be absent from school. This figure is similar to the national absence estimate from 2003.

In schools in urban areas a much lower proportion of teachers (6.4%) were absent. With regard to school size, the absence rate in small schools (defined here as having fewer than 98 students) was more than twice as high (15.6%) as that in schools with 261 or more students enrolled (7.4%). School location and size are related in Indonesia, with larger schools being more likely to be found in urban areas while remote schools are likely to be the smallest schools. School size and the student-teacher ratio are also related (with larger schools tending to have higher student-teacher ratios); the association between teacher absence and a school's student-teacher ratio is explored in Chapter 6.

All District office respondents in remote areas said that teacher absence rates in their areas were much higher than their counterparts in urban areas or in areas with relatively easy access (Appendix D). Teachers in archipelago areas, which are dependent on weather and commercial boat schedules, were significantly more likely to be absent.

63 Guerrero, et.al., 2012
64 Usman et al, 2004

Table 12. Teacher Absence from School, by School Contextual Factors

	Absence Rate (%)	SE
Distance to District Education Office		
Close / within 4.5 km to District Education Office (n=3,831)	7,5	1,4
Far from District Education Office (n=4,195)	11,4	1,6
School location^		
Remote (n=1,362)	19,3	2,7
Rural (n=3,627)	10,2	1,3
Urban (n=3,298)	6,4	1,2
School size		
Fewer than 98 students (n=2,060)	15,6	2,1
98 - 154 students (n=2,054)	11,0	2,1
155 - 260 students (n=2,093)	7,2	1,4
More than 261 students (n=2,095)	7,4	1,6

Source: Teacher Absenteeism Survey, Visit 1, 2013
^ Note: Principals were asked to define whether their school is located in a remote, rural or urban area

4.2 Teacher Demographics

The theoretical framework for this study also conceptualised teacher demographic factors as having both direct and indirect effects on absenteeism. Their indirect effects are derived through the effects of demographic factors in teacher satisfaction or commitment (Figure 2). Meanwhile, a range of studies has identified a significant direct association between teacher demographics and absences, although the direction of the relationship is not consistent.

In the 2003 study, female Indonesian teachers were found to have a lower absence rate compared to their male counterparts, with 18% and 21% absence rates respectively.[65] As presented in Table 13 the current study found an even larger gap between the absence rates of male and female teachers compared to ten years ago. During unannounced visits, 7.7% (± 1.8%) of female teachers were absent from school compared with 13.4% (± 3.5%) of male teachers. This difference was found to be statistically significant. It is noteworthy that in the interviews with respondents in district offices, it was often remarked that that there were no differences between the absence rates of females and males, but that they would have predicted higher female teacher absence rates due to domestic and family factors. The latter perception is more in line with the findings of teacher absence studies in other regions such as the Middle East, where higher female absence rates were attributed to family responsibilities,[66] and sub-Saharan Africa, where it was attributed to illness and official duties.[67]

Table 13. Teacher Absence from School, by Teacher Demographics

	Absence Rate (%)	SE
Teacher gender		
Female (n=5,404)	7,7	0,9
Male (n=2,895)	13,4	1,8
Teacher has a child < 5 years-old		
No child under 5 (n=5,725)	8,6	1,0
1 or more children under 5 (n=2,577)	12,2	1,5
Teacher birthplace		
In the same province as school location (n=7,183)	10,1	1,1
Outside of the province of school location (n=1,104)	6,5	1,3

65 Usman, Akhmadi & Suryadarma, 2004
66 ibid
67 Guerrero et al, 2012

	Absence Rate (%)	SE
Teacher transportation to get to school		
Walk or bicycle (n=197)	10,5	4,4
Private motorised transport (n=7,357)	10,0	1,0
Public transport (n=731)	5,9	1,9

Source: Teacher Absenteeism Survey, Visit 1, 2013

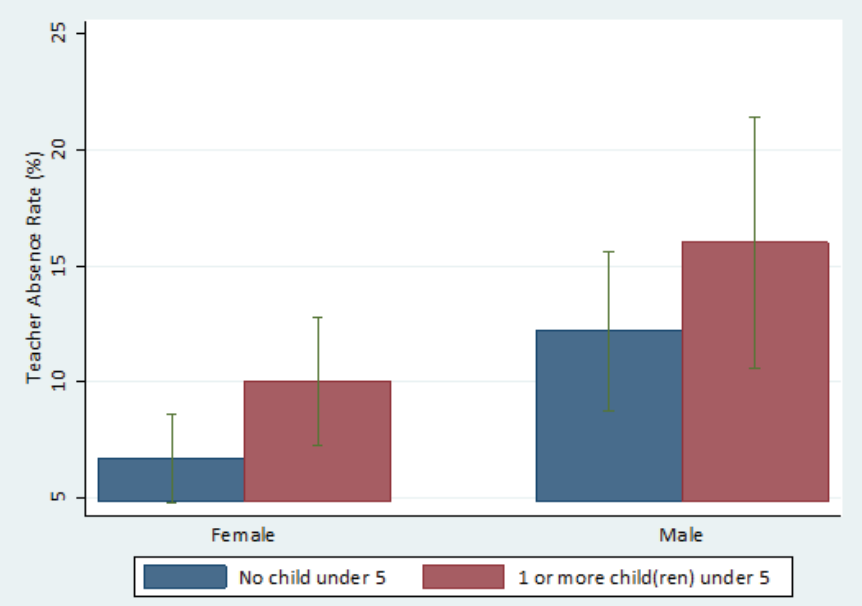
The official reasons for absence given by school principals, disaggregated by gender are presented in Table 14, showing some differences in the reasons given for male and female teachers. Consistent with previous literature, female teachers were more likely to be absent with illness and to care for a sick person. Meanwhile, male teachers were more likely to be absent for official duties, because they had left early, or for reasons not known to the principal.

Table 14. Official Reasons for Absence from School, by Teacher Gender

	Female Teacher Absence Reason (%)	Male Teacher Absence Reason (%)
Official reason for teacher absence presented by principal		
Official teaching-related duty	18,4	29,6
Official non-teaching related duty	2,0	3,2
Sick	20,9	8,6
Care for a sick person	5,7	2,2
Study	4,4	3,0
Not arrived yet	15,2	12,2
Left early	2,6	7,5
Do not know	7,6	10,9

Source: Teacher Absenteeism Survey, Visit 2, 2013

Figure 8. Teacher Absence from School, by Gender and Whether the Teacher has a Child Aged < 5 Years



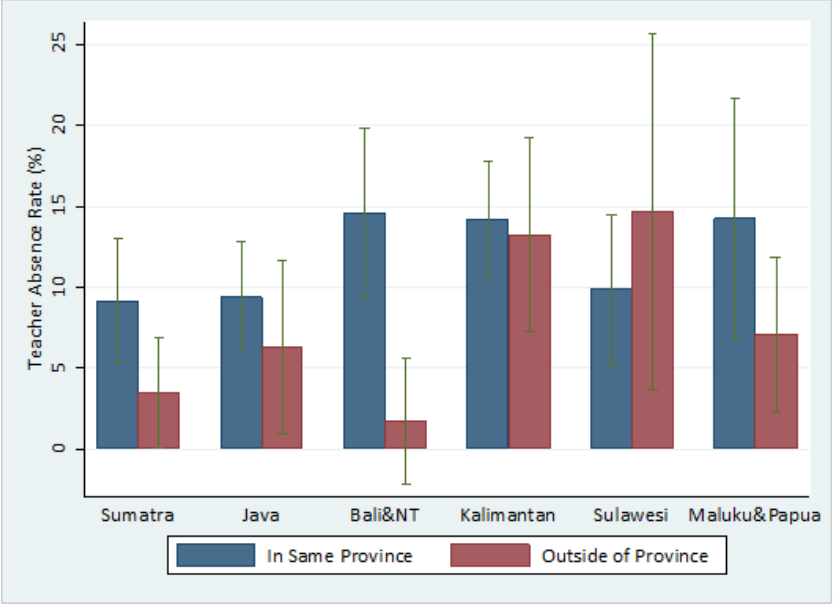
Source: Teacher Absenteeism Survey, Visit 1, 2013

Table 13 also shows that teachers who had a child under the age of five (bawah lima tahun or balita in Indonesian) were more likely to be found absent from school than those who did not. In reasons put forward for teacher absence, care responsibility was more frequently applied to female teachers than to male teachers (see Table 14).

This is consistent with an analysis of teacher absence by gender and whether they have a child under 5, presented in Figure 8. Only 6.7% (± 1.9%) of female teachers who did not have a child under the age of 5 were found to be absent – significantly lower than the proportion of male teachers who were absent, regardless of whether they have a child under 5 (16.0% ± 5.4% were absent) or not (12.2% ± 3.4%). The absence rate of female teachers who had a child under 5 (10.0% ± 2.7% were absent) was not significantly different to that of teachers in the other categories.

One of the most significant factors influencing absence rates was the number of schools teachers were working at, which is discussed further in Chapter 6. This can also assist in further explaining the gender differences in absence. Male and female teachers who work in more than one school were significantly more likely to be absent than their peers who worked in only one school. However, male teachers were almost twice as likely to work in more than one school than female teachers.

Figure 9. Teacher Absence from School, by Whether the Teacher was Born in the Same Province as Where Their Current School is Located



Source: Teacher Absenteeism Survey, Visit 1, 2013

Another demographic variable featured in the theoretical framework of this study was teacher's ethnicity. Despite proposing this as an important factor, Guerrero et al (2012) was unclear on the direction of the relationship. The 2003 Indonesian study on teacher absenteeism did not find a significant difference between the absence rates of teachers based on whether they were born within or outside of the province they were teaching in.[68]

Meanwhile, a 2011 study on teacher absenteeism in Papua found that despite the theory that teachers recruited from local communities would be more engaged in their work, absenteeism rates were in fact "highest among indigenous Papuan teachers who are either native to the location of surveyed schools or indigenous Papuan teachers from other parts of the Province."[69] The authors linked this to the fact that indigenous Papuan teachers were more frequently located in isolated areas.

In the current study, 11.3% of teachers nationally were born outside of the province in which their school is located. There are notable regional differences. In the Bali and Nusa Tenggara region, only 3.5% of teachers were from another province, compared with 34.5% of teachers in the region of Papua and Maluku. Consistent with the previous Papua study, the current study found that more than one-half (56.9%) of teachers in urban schools in Papua and Maluku were from another province, while only 11.0% of teachers in remote Papua and Maluku schools were.

68 Usman, Akhmadi & Suryadarma, 2004
69 UNCEN, et al, 2012, p.55

As shown in Table 13, teachers who were born outside of the province of their school had lower absence rates (6.5% ± 2.6%) than teachers who were born in the same province (10.1% ± 2.1%). There were some differences across regions, as shown in Figure 9. In Bali and Nusa Tenggara, the gap between teachers from the same province (14.6% ± 5.3% were absent) and outside of the province (1.8% ± 3.9%) was largest. Sulawesi, meanwhile, was the only region where the relationship between province of birth and absence was reversed.

Nationally, this trend was consistent across locations – in that out-of-province teachers were less likely to be absent regardless of whether they were in a remote, rural or urban school. The same can be observed within most regions, except for in Sulawesi and in Papua and Maluku. In Sulawesi, out-of-province teachers were more likely to be absent across all location types, while only out-of-province teachers in remote schools in Maluku and Papua were more likely to be absent. The number of teachers in this type of analysis, however, was too small for solid conclusions to be drawn about the statistical significance of these within-region differences.

Another factor that has been mentioned in previous studies is the distance between a teacher's residence and their school. The difference between the absence rates of teachers who lived close to school and far from school was not found to be significant in this current study, which is consistent with the 2003 study.

However, as shown in Table 13, there was a difference in the absence rate of teachers who used different modes of transportation to get to school. Specifically, only 5.9% (± 3.8%) of teachers who relied on public transportation to get to school were found to be absent when they were scheduled to teach. This was lower than the absence rate of teachers who walked, biked or used a car or motorcycle. A possible explanation for this is that once they have arrived at school, reliance on public transportation made it more difficult for teachers to return home in the middle of their shift – therefore making it less likely that they miss a scheduled teaching session.

4.3 Teacher Qualifications

The experience, education level and employment status of teachers can also influence their absence both directly and indirectly via their commitment to and satisfaction with their job, including through intermediary factors like salary. The 2003 Indonesian study found that teachers with lower formal education levels tended to have lower absence rates.[70] It also found that full-time teachers with civil servant status had a significantly lower absence rate than part-time or contract teachers – which it in turn attributed to higher salaries.

As discussed in Chapter 3, the education levels of the teaching workforce in Indonesia have changed in the past 10 years. A dramatically higher proportion of teachers now hold a university degree / S1 or higher. However, there is not a significant difference between the absence rate of teachers with an S1 degree and those without an S1 degree. The difference emerged when the teachers without an S1 degree were further categorized into those who hold only a high school diploma or lower and those who hold a post-high school diploma – the former being significantly more likely to be absent, as shown in Table 15.

Table 15. Teacher Absence from School, by Qualifications, Experience and Employment Status

	Absence Rate (%)	SE
Highest level of education completed		
High school graduate or lower (n=1,271)	11,9	1,8
Diploma / D1 / D2 / D3 (n=1,714)	7,6	1,2
Bachelor's degree / S1 or higher (n=5,313)	9,8	1,3
Years of teaching experience		
1 - 6 years (n=1,840)	12,3	1,4
7 - 11 years (n=2,123)	11,8	1,5

70 Usman, Akhmadi & Suryadarma, 2004

	Absence Rate (%)	SE
12 - 26 years (n=2,193)	9,7	1,4
27 years and over (n=2,093)	5,3	1,0
Teaching employment status		
Honorary, Contract or Other (n=3,427)	12,1	1,4
Civil service / PNS (n=4,872)	7,8	0,9

Source: Teacher Absenteeism Survey, Visit 1, 2013

Teaching experience was also strongly correlated with teacher absence. More experienced teachers were less likely to be found absent from school when they were scheduled to teach. Whereas 12.3% (± 2.7%) of teachers with 10 or fewer years of teaching experience were absent, 9.6% (± 2.8%) of teachers with 12- 26 years of teaching experience were, and more dramatically, only 5.3% (± 2.1%) of teachers with 27 or more years of experience were found to be absent.

Experience and education level are presumably linked to each other. As discussed in Chapter 3, the data showed that there are some generational differences. A large majority of teachers who fall under the Diploma category hold a Diploma 2 – equivalent to the previous qualification granted by teacher training colleges (the Diploma 2 in Primary Teaching or Diploma 2 Pendidikan Guru Sekolah Dasar /PGSD) before these colleges were transformed into degree-granting universities beginning in the late 1990s.

Indeed, about 40% of those who fall under the category of Diploma holder have 27 or more years of teaching experience. Less experienced teachers are also likely to have lower levels of education. While fewer than 10% of teachers with more 7 or more years of experience only hold a high school diploma, about one in four teachers with fewer than 7 years experience do. When both education level and teaching experience were taken into account, experience had a stronger influence on absence rates.

Teachers with permanent civil servant (pegawai negeri sipil /PNS) status were less likely to be found absent than honorary or contract teachers. This difference (the absence rate of permanent teachers was around 65% lower than that of honorary/contract teachers) was statistically significant and was consistent with the findings of the 2003 study.

On the other hand, the interviews some District officials suggested the opposite relationship (see Appendix D). Such officials stated that contract teachers were less likely to be absent than permanent teachers since contract teachers were paid based on their attendance and they generally have high expectations to be promoted to a permanent position. Such responses suggested that the pattern of relationships between employment status and teacher absence may be playing out differently in some districts than in general across the country as a whole.

4.4 Teacher Roles and Responsibilities

Teacher roles and responsibilities, both teaching and non-teaching as well as both within school and outside of school, can have a direct influence on the likelihood they become absent from school. Those with responsibilities outside of school, for example, may leave school to attend to these responsibilities – causing them to miss a scheduled class. The significant relationships between these factors and absence from school are summarised in Table 16.

Table 16. Teacher Absence from School, by Roles and Responsibilities

	Tingkat Ketidakhadiran (%)	SE
Main subject responsibility (Secondary school teachers)		
English (n=195)	10,7	3,7
Indonesian (n=212)	6,5	2,4
Mathematics (n=209)	5,5	3,0
Science (n=251)	8,9	3,0

	Tingkat Ketidakhadiran (%)	SE
Social sciences (n=270)	6,1	1,9
Religious studies (n=190)	9,7	4,6
Civics (n=143)	10,6	5,6
Physical education (n=130)	26,2	6,8
Art (n=119)	15,9	6,8
Other subject (n=332)	11,3	4,5
Other role at school (Primary school teachers)		
Does not hold any role / teach only (n=3,427)	10,6	1,4
Extracurricular supervisor (n=990)	5,9	1,5
Other role at school (Secondary school teachers)		
Does not hold any role / teach only (n=622)	11,8	2,4
Form teacher / wali kelas (n=535)	4,3	1,1
Other role (n=1,671)	16,2	4,0

Source: Teacher Absenteeism Survey, Visit 1, 2013

In primary schools, the differences in the absence rates of teachers of different grades were not significant. However, primary school teachers who were also responsible for supervising an extracurricular activity were less likely to be absent from school than those who did not hold this role.

In secondary schools, there were also no significant differences in the absence rates of teachers of different grades, but there were differences between teachers of different subjects (Table 16). Physical education teachers, for example, had particularly high absence rates (26.2%) or about three times that of secondary teachers as a whole. Although there were some subjects where the teachers showed relatively low rates of absence – Indonesian (6.5%), social sciences (6.1%) and mathematics (5.5%) – these differences were not found to be statistically significant from secondary teachers as a whole.

Secondary school teachers who were also appointed as form teachers or homeroom teachers (wali kelas) were considerably less likely to be found absent from school compared to teachers who were not wali kelas. Conversely, secondary school teachers who held an additional role other than Vice Principal, treasurer, committee representative, or wali kelas were more likely to be absent from school. The most common of these other roles were school librarian or head of a science or language lab, followed by administration.

4.5 Summary

In the theoretical framework that underlies this study, contextual factors – that are relatively fixed and cannot be easily changed by policy – can directly and indirectly influence teacher absence rates. The following differences in teacher absence rates based on contextual factors were identified:

- Schools in more remote/rural areas and smaller schools had higher absence rates than, respectively, more urban and larger schools.
- Male teachers were found absent from school at significantly higher rates, 13.4% (± 3.5%), than female teachers 7.7% (± 1.8%). Some possible causes of gender difference in absence include:
    - Principals were more likely to report female teachers as absent to care for a person or because they are themselves sick. Males were more likely to be reported absent for official duties, or because they left early, or for reasons unknown to the principal.
    - Female teachers who did not have a child under five were significantly less likely to be absent than male teachers, regardless of whether they had a child under 5 or not. Rate of absence among female teachers who had a child under five were not statistically significantly different than that for other groups.

- Male and female teachers who work in more than one school were significantly more likely to be absent than their peers who worked in only one school. However, male teachers were almost twice as likely to teach at more than one school as female teachers.
- Teachers who were born outside of the province where their school was located were less likely to be absent than those who were born within the province. This difference was largest among teachers in the Bali and Nusa Tenggara region.
- Teachers who relied on public transport to get to school from home were less likely to be absent from school when they were scheduled to teach compared to teachers who relied on other forms of transport (e.g. walking, private vehicles).
- More experienced teachers were less likely to be found absent, as were teachers with PNS or permanent status compared to honorary or contract teachers.
- In primary schools, teachers who were also responsible for supervising an extracurricular activity were less likely to be absent from school than those who did not hold this role.
- In secondary schools, physical education teachers were found to be 3.5 times more likely to be absent from school when they were meant to teach than teachers of other subjects.
- Secondary school teachers who were also form/homeroom teachers (wali kelas) were less likely to be found absent than secondary school teachers who were not.

Chapter 5
Influence of the School Working Environment

The working environment that teachers are in has been identified by many researchers as one of the key factors for quality teaching, including the attendance of teachers.[71] This section provides an overview of how the working environment at school is related to teacher absences. The general hypothesis is that teachers will be absent less when they are in a better working environment. In this discussion, working environment includes the variables of principal characteristics and leadership, teaching work norms, parental and community involvement and the level and condition of facilities at school.

5.1 Principal Characteristics and Leadership

Effective leadership can be central to determining teacher motivation and quality of teaching. At schools, a principal is responsible for the management and day to-day operations of the school, incorporating leadership, coordination, evaluation and discipline. The theoretical framework presented by Guerrero et al. places these factors as part of the school context that can directly influence teacher absence.[72]

In the current study, 16% of schools were found without a principal on duty at the time of Visit 1. Among schools that have a principal appointed (i.e. the position of principal was not vacant), about one in four principals were absent. All schools with vacant principal positions were located in remote and rural areas (Figure 10).

Table 17 shows that teacher absence rate in schools where the principal's position was vacant was higher at 24.8% (± 20.1%) compared with schools where that position was filled at 9.5% (± 2.0%). The same pattern was observed with regards to whether the principal was absent, with 13.7% (± 3.7%) of teachers absent in schools with an absent principal compared to 8.4% (± 2.4%) in schools where principals were present. These figures are comparable to the 2003 absenteeism study results.[73]

According to the Minister of National Education Decree No 13 of 2007 on Standards for School/Madrasah Principals, five groups of competencies are required of principals around: personality, management, academic supervision, social skills and program performance monitoring. Additionally, the decree also stipulates that a principal is required to have at least a bachelor's degree, to be at least 56 years old at first appointment and to have a minimum of five years experience as a teacher. This study finds that teachers' absence rates were not significantly correlated with either principals' level of education or principals' experience, as summarised in Table 17.

71 See for example: Laslo 2013; OECD 2005; Bennel 2004

72 Guerrero et al., 2012

73 Usman et al., 2004

Table 17. Teacher Absence from School, by Principal Characteristics and Leadership at School

	Absence Rate (%)	SE
Principal position vacancy		
Principal position is filled	9,5	1.0
Principal position is vacant	24,8	10.0
Presence of principal during day of visit		
Principal was present	8,4	1.2
Principal was absent	13,7	1.9
Highest education level completed by principal		
High school or lower	10,9	3.2
Diploma 1/2/3	14,2	3.1
Bachelor's/S1	9,8	1.2
Master's/S2 and higher	8,0	2.2
Principal experience		
1-5 Years	8,6	1.4
6-10 Years	10,9	1.4
11-15 Years	7,1	3.5
> 15 Years	9,7	3.4

Source: Teacher Absenteeism Survey, Visit 1, 2013

More in-depth analysis, taking into account the location of schools, showed that the presence of principals was very important for schools in remote areas, but not significant for schools in rural and urban areas. In remote areas, the absence rate of teachers among schools without a principal was, at 47.5% (± 6.6%), almost three times as high as at the absence rate at schools with a principal, 17.5% (± 4.5%), as shown in Figure 10. Furthermore, the teacher absence rates were also higher in remote schools with an absent principal, at 27.1% (± 9.7%), compared schools with a present principal, at 14.2% (± 3.9%), as shown in Figure 11.

In the interviews with District officials, some noted directly that when the principal arrived at school earlier than teachers and monitored teacher absence, teachers felt more obligated and encouraged to come and teach (Appendix D). Other officials observed that the presence and application of school rules, which are known and agreed upon by the entire school community, encouraged the discipline among teachers to come to school.

Figure 10. Principal Position and Teacher Absence from School

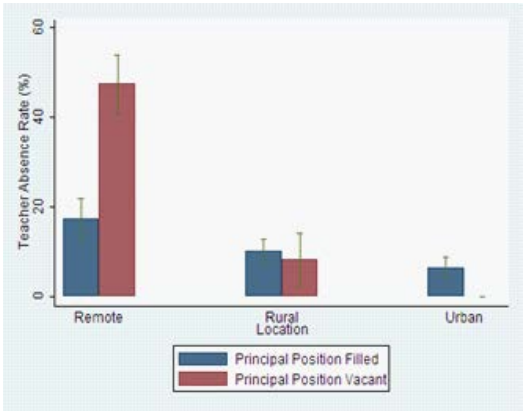
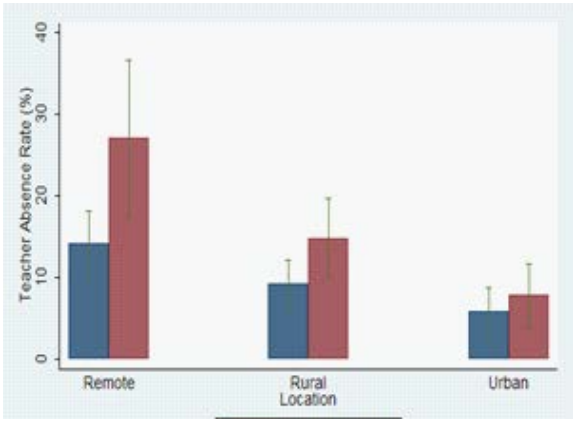


Figure 11. Principal Attendance and Teacher Absence from School



Source: Teacher Absenteeism Survey, Visit 1, 2013

According to the Minister of National Education Decree No 15 of 2010 about Minimum Service Standards for Basic Education, a principal is required to conduct class supervision and provide feedback to teachers

twice each semester. The current study found that this requirement has yet to be met by most schools. Only around 5.3% of teachers reported that their principal provided two or more supervisions per semester. However, the study also found that principal supervision of teaching, including their frequency and whether they were done with advance notice, did not have a significant effect on teacher absence.

The study examined teachers' perception towards their principal's leadership style and related it to teacher absence rates. The elements of principal leadership style measured at Visit 1 were derived from the pilot study which asked about leadership style as an open question. None of the five elements of leadership style presented were found to be significantly correlated with teacher absence. This could be largely due to a possible positive response bias leading to large standard errors. Interestingly, despite the potential of increased devolution of responsibility to teachers leading to lower absence rates, the pattern of responses presented in Table 18 indicated that teachers in schools where the principal differentiated between individual teachers (i.e. gave teachers freedom to manage their own classrooms and praised them for good performance) tended to have higher absence rates. However, none of these patterns were statistically significant.

5.2 Teacher Code and Work Norms

According to the Minister of National Education Decree No 13 of 2007, each school should develop their own written guidelines which regulate all aspects of school management to be easily read by all parties at school. One of the items that should be regulated in the guidelines is the school work norm. This study examined whether a school had written code of ethics for teachers that could be easily seen. The study found that the content of teacher codes varied between schools. Some codes mention clearly teachers' punctuality at schools, other codes paid more attention towards the teacher's appearance and attitudes, such as the tidiness of teacher's uniforms and their politeness. In most schools the teacher code was printed on small-sized (A4) paper, hung in the principals'/teachers' office, and looked shabby. Few schools made this code big enough and put it in an area where not only all teachers but also students and parents could easily read its content. The study found that the existence of these codes had very little effect on the teacher absence rates.

Teachers were also asked a series of questions about the working relationship between teachers at their school. The elements of teacher work norms that were presented revolved around practices and occurrences that indicate a school culture that demands high engagement from teachers. However, most of these factors were not found to be significantly correlated with teacher absence. A close exception was with whether or not teachers said that they met regularly with others to discuss the teaching and learning process (p=0.097). The absence rate was lower among teachers who stated that this takes place at their school (7.3% ± 1.8%), than among those who said it did not (11.5% ± 6.5%).

Table 18. Principal Leadership Style According to Teacher Perceptions

	Absence Rate (%)	SE
Sets a personal example of what he expects from teachers		
Strongly Disagree (n=52)	3,4	2,6
Disagree (n=317)	9,4	3,7
Agree (n=4,713)	8,0	1,0
Strongly Agree (n=2,517)	6,4	1,1
Encourages teachers to work together		
Strongly Disagree (n=31)	5,0	3,8
Disagree (n=191)	13,1	5,5
Agree (n=4,459)	7,6	0,9
Strongly Agree (n=2,918)	7,1	1,3
Gives teachers freedom to manage my classroom		
Strongly Disagree (n=47)	2,7	2,0
Disagree (n=450)	3,0	2,0

	Absence Rate (%)	SE
Agree (n=4,914)	7,9	1,0
Strongly Agree (n=2,187)	7,9	1,7
Praises teachers for good performance		
Strongly Disagree (n=63)	5,7	3,1
Disagree (n=838)	7,3	2,5
Agree (n=4,686)	7,6	0,9
Strongly Agree (n=2,012)	7,7	1,5
Involves teachers in making decisions about the school		
Strongly Disagree (n=44)	14,1	12,7
Disagree (n=345)	7,4	2,8
Agree (n=4,493)	7,4	0,9
Strongly Agree (n=2,716)	7,7	1,3

Source: Teacher Absenteeism Survey, Visit 1, 2013

5.3 Parent and Community Involvement

Parental and community involvement in education may cover financial and in-kind (in the form of goods and services) contributions as well as engagement in the form of supervision of student-teacher learning processes or involvement in school activities. The school community is defined here to include general people living around the schools, elites, and businesses and institutions located near the schools. Contributions can be directly conveyed to schools or channelled through school committees.

In principle, every school is obliged to have a school committee whose membership consists of parents, teachers and community representatives, selected by parents and the local community. Almost all schools were found to already have a school committee formed, yet the study found that the existence of a committee had no influence on teacher absence rates. The frequency of committee meetings – measured by the last time the committee met, as reported by principals – was also not found to influence teacher absence.

The way that school committees were involved in school management, however, was found to be associated with teacher absence. Principals were asked about whether the school committee was involved in a number of aspects of school management. Teacher absence rates significantly varied by some of these aspects, as presented in Table 19. Schools where the committee was involved in monitoring the school budget had lower teacher absence rate (8.5% ± 2.0%), compared to schools where the committee did not monitor the budget (15% ± 6.4%). Similarly, in schools where the committee served to connect parents with the school, the teacher absence rate was lower (8.8% ± 2.0%), than in schools where the committee did not serve this function (13.5% ±4.2%).

However, where the school principal indicated that the school committee was involved in monitoring student performance the teacher absence rate was found to be higher (13.1% ± 3.2%) than in schools where the committee did not play this role (7.4% ± 2.2%). This finding was counterintuitive but was supported by the finding on teacher absence rates by the level of parent pressure on schools regarding student performance. Principals were asked about the extent that parents exert pressure for schools to deliver improved student performance. Schools that received pressure from many parents, according to the principals' perceptions, had a higher absence rate (11.4% ± 5.7%) compared to schools that received no pressure (8.4% ± 1.7%).

This relationship is worth exploring further in future studies, as it may indicate the lack of access parents and committees have to information on the school factors that are related to student performance. For example, it may be that in expressing an interest in improving student performance, parents and committees push for school resources to be allocated to areas that do not actually influence student achievement, while teacher absence is not considered an issue – either because they are unaware of the rates themselves or unaware about how they influence student performance.

The frequency that schools met with parents to discuss academic or behavioral issues was not found to be associated with teacher absence rates nationally. However, it did have an influence within some Eastern Indonesia regions. Among schools in the Bali and Nusa Tenggara and the Maluku and Papua regions, for example, the frequency that schools met with parents to discuss academic issues were significantly related to teacher absence rates. In Bali and Nusa Tenggara, schools where these discussions never took place or only once a semester had an absence rate of around 10.4% (± 3.1%) while schools where this occurred at least monthly had an absence rate of only 0.6% (± 0.3%). Meanwhile, in the Maluku and Papua region, schools where these discussions never took place have a higher absence rate (38.1% ± 10%) compared to schools where these discussions occurred every semester (10.6% ± 4.4%) and schools where these discussions occurred at least monthly (2.8% ± 7.4%).

Table 19. Committee Involvement, Parental Pressure and Teacher Absence from School

	Teacher Absence Rate (%)	SE
Committee (elected by parents) already formed		
Committee not yet formed or members not elected by parents (n=622)	10,8	4,3
Committee formed and members are elected by parents (n=7,665)	9,6	1,0
Committee involvement in monitoring school budget		
Committee not involved (n=1,814)	15,0	3,2
Committee involved (n=6,305)	8,5	1,0
Committee involvement in connecting parents and school		
Committee not involved (n=1,736)	13,5	2,1
Committee involved (n=6,383)	8,8	1,0
Committee involvement in monitoring student performance		
Committee not involved (n=5,294)	7,4	1,1
Committee involved (n=2,825)	13,1	1,6
Pressure exerted from parents about student performance improvement		
No pressure from parents (n=4,237)	8,4	0,8
Pressure from some parents (n=3,386)	10,9	1,8
Pressure from many parents (n=664)	11,4	2,9

Source: Teacher Absenteeism Survey, Visit 1, 2013

In terms of parents' financial contributions, the Minister of National Education Decree No 60 of 2011 prohibits public primary and junior secondary schools from collecting a monthly tuition fee and other costs of education from parents on an obligatory basis. However, this study found that, according to principal interviews, 38.4% of schools collected one or more types of parental contributions, such as fees for school registration/entry, school tuition/regular committee fees, activity fees (e.g. sports, extracurricular), school building/facilities improvement fees, uniforms, exams, exercises/in-class assessments, computers and celebrations at schools. The study found that parents' financial contributions had no effect on teacher absence rates.

5.4 School Facilities

The 2003 teacher absenteeism study found that school facilities had an impact on teacher performance.[74] It particularly highlighted that schools with toilets had lower teacher absence rates. The current study observed general building conditions of the schools and a list of functioning school facilities. The inventory items were selected from the Minimum Facilities Standard listed in Ministry of Education Decree No 24 of 2007, and were found in a 2009 study to be associated with student performance in secondary madrasah.[75] Although teacher absence rates in schools with better building conditions tended to be lower, as presented

74 Usman, et al, 2004

75 Ali, et al, 2011

in Table 20, this difference was not found to be statistically significant. However, differences in the number of facilities in a given list that schools possessed were found to be significantly related to teacher absence rates. Of an inventory list of 11 school facilities, teacher absence was lowest among schools that had 9 or more of them, at 7.6% (± 3.1%), close to average among those that had between 5 to 8 items on the inventory list, at 11.8% (±2.4%), and highest among schools that only had 4 or fewer items, at 19.0% (± 6.3%).

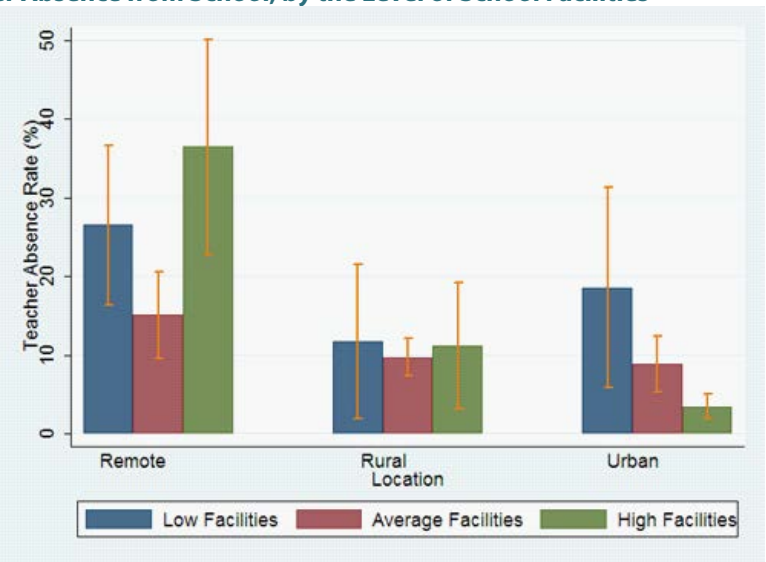
Table 20. School Building and Facilities, and Teacher Absence from School

	Absence Rate (%)	SE
Condition of school buildings		
School needs complete rebuilding (n=1,316)	10,3	1,5
Some classrooms need major repairs (n=2,229)	11,6	1,8
Most or all classrooms need minor repairs (n=1,705)	9,9	2,0
Some classrooms need minor repairs (n=1,368)	9,6	3,5
School is in good condition (n=1,660)	7,6	1,8
Completeness of school facilities		
High number of facilities (n=3,889)	7,6	1,5
Medium number of facilities (n=4,243)	11,8	1,2
Low number of facilities (n=170)	19,0	3,2
Toilet facilities		
School has a toilet (n=7,710)	9,0	1,0
School does not have a toilet (n=584)	18,1	3,9
Electricity		
School has electricity (n=7,647)	9,3	1,1
School does not have electricity (n=655)	16,7	3,3
Mobile phone signal/reception		
School within range of mobile phone coverage (n=7,592)	9,0	1,0
School not within range of mobile phone coverage (n=710)	22,8	2,5
Separate office/room for principal		
School has a separate office/room for principal (n=4,839)	7,8	1,3
School does not have a separate office/room for principal (n=3,463)	12,2	1,4
Separate office/room for teachers		
School has a separate office/room for teachers (n=4,918)	7,8	1,3
School does not have a separate office/room for teachers (n=3,384)	12,6	1,5
Science laboratory		
School has a science laboratory (n=1,408)	6,2	1,5
School does not have a science laboratory (n=6,894)	10,8	1,1

Source: Teacher Absenteeism Survey, Visit 1, 2013

In Indonesia, schools with better facilities were more likely to be found in more urban locations, and schools with poor facilities were more likely to be in remote locations. Analyses of teacher absence by level of school facilities and location showed that there was an interaction between the two, illustrated in Figure 12. The pattern of more facilities associated with lower teacher absence was maintained in urban schools. Meanwhile, in rural schools, there was little difference in absence rates by level of school facilities. To discuss the illustration differently, location mattered for schools with a high number of facilities but less so among poorly equipped schools.

Figure 12. Teacher Absence from School, by the Level of School Facilities



Low = 1-4 Facilities; Average= 5-8 Facilities; High=9-11 Facilities

Source: Teacher Absenteeism Survey, Visit 1, 2013

From the inventory list of school facilities, the existences of several types of facilities were found to be correlated with teacher absence. As summarised in Table 20 the strongest relationship existed between teacher absence rates and whether or not there was mobile phone reception at the school (22.8% ± 5% when it is available and 9.0% ± 2% when it is not), followed by whether there was a toilet within school grounds (18.1% ± 8% and 9.0% ± 2%) and whether there was electricity at the school (16.7% ± 7% and 9.3% ± 2%). A significant though smaller relationship could also be found between teacher absence rates and the availability of separate offices or rooms for the principal and for teachers, as well as a science laboratory.

In the 2003 study, the authors proposed a direct relationship between the availability of toilets and teacher absence. When they were not available in the school, teachers would need to leave to school to use a toilet. Indeed, the current study found that whether schools had allocated staff toilets had a relationship with teacher absence rates. It also seems to matter that toilets are segregated by gender, as there was an even stronger relationship between teacher absence rates and whether schools have male and female toilets. A similar explanation could likely be applied to mobile phone reception and electricity leading teachers to leave school grounds in search of them.

5.5 Summary

This study found that the work environment at schools has an influence on teacher absence rates from school. A number of specific factors were found to be significantly correlated with absence rates:

- Schools with no principal (because the role of principal was vacant) had a signficantly higher teacher absence rate, as did schools with an absent principal on the day of the visit. The presence of a principal was especially important in remote schools.
- Schools where a committee was involved in monitoring the school budget and in connecting parents and schools had a lower teacher absence rate than those where a committee did not serve these functions.
- However, committee involvement in monitoring student performance was associated with higher teacher absence rates, as was more pressure from parents for schools to improve student performance. This is worth further examination in future studies as it may indicate parents' and schools committees' lack of access to reliable information on the elements of their school that lead to improved performance.

- Schools with more and better facilities had lower teacher absence rates, which can only be partly explained by the relationship between location and level of school facilities.
- From a set inventory of school facilities, the strongest relationships were between teacher absence and whether a school had mobile phone coverage, toilets (specifically separate male and female toilets and/or staff toilets) and electricity.

Chapter 6
Influence of System-Level Policies and Practices

This chapter discusses the effects of system-level policies and practices on teacher absence rates from school. Six particular policies or practices are discussed: school supervision; teachers' salaries and allowances; absence registration and reporting; teaching hours requirements; Minimum Service Standards (MSS); and teacher distribution. The discussion on each policy or practice begins with brief background on the policy and its implementation, followed by an analysis of its impact on teachers' absence rates. Where available, comparisons with previous studies are also provided.

6.1 School Supervision

Findings of previous studies have suggested that school supervision, especially when done by an external party, can reduce teacher absence.[76] Principal interviews for the current study found that school supervision – defined here specifically as a visit by an external party that involves supervision of the teaching and learning process – is occurring in Indonesia, with only 1.6% of principals reporting that they had not had a supervision visit. Around one in four principals reported that their school was visited 1 or 2 times in the previous academic year. Another one-half were visited several times per semester, while one in four schools was visited monthly.

The frequency and recency of school supervision were found to be somewhat related to school location, although the relationship was not linear. Schools in remote areas were inspected/supervised around 6 times in 2012/13, with the last visit being on average 120 days prior to the study visit. Schools in rural and urban areas were supervised more frequently and more recently than this, but the difference between the two locations was not as expected. Schools in rural areas were supervised more frequently (8 compared to 7) and more recently (68 days compared to 83 days prior to the visit by the study team) than schools in urban areas.

However, as school supervision was usually done by district-level school/madrasah supervisors (including supervisors for Islamic religious teachers at non-madrasah schools), the variation in frequency of school supervision can mostly be attributed to differences between districts, with an intraclass correlation of 0.57.

This study found school supervision to be associated with teacher absence rate, as shown in Table 21. The median number of supervision visits in 2012/13 was 5 visits and schools that had at least this many visits had a lower rate of teacher absence, at 8.0% (± 2.1%), compared to schools with fewer visits, at 11.9% (± 3.3%). Similarly, schools that were visited more recently also had a lower rate of teacher absence than schools where the distance between the study team's visit and the last supervision visit was more than the median of 43 days.

76 Duflo and Hanna, 2005; Guerrero et.al, 2012

Table 21. Teacher Absence from School, by Implementation of School Supervision

	Teacher Absence Rate (%)	SE
School supervisions in 2012/13		
5 or more supervision visits in 2012/13 (n=4,225)	8,0	1,1
Fewer than 5 supervision visits in 2012/13 (n=3,801)	11,9	1,6
Days since last supervision visit		
School recently visited / within 43 days (n=4,226)	7,7	0,9
Last supervision visit was more than 43 days ago (n=4,076)	12,0	1,7

Source: Teacher Absenteeism Survey, Visit 1, 2013

All District office respondents stated that direct visits concerning school supervision, which were ideally to be conducted once every month, were the responsibility of school and madrasah supervisors. Most supervisors were in charge of about 4 to 10 schools, but this was not the case in some regions where each supervisor was responsible for more than 15 schools due to the shortage of supervisors (Appendix D). This is a possible explanation for the variation between districts in frequency of school visits.

6.2 Salary and Allowances

Policies on teacher salaries and allowances were the main form of economic/financial intervention, intended to both ensure the welfare of teachers and encourage their performance, including increasing teachers' attendance in schools. In Indonesia, salaries for civil servants (PNS), including PNS teachers, are managed nationally. Currently this is regulated by Government Regulation (PP) Number 15 Year 2012 about the Fourteenth Amendment to PP Number 7 Year 1977 concerning the Salary Regulation of Civil Servants. Since 1977, PNS salaries have been increased 14 times. Meanwhile, the payment mechanism and the amount of salaries for non-PNS teachers, such as honorary teachers and teachers of private schools or foundations, are not regulated by the government. Instead, they are set by each school or the management of the school foundations based on the agreement between the teachers and the principals or the foundations and the schools' financial capabilities.

This study showed a significant difference between the salaries of PNS and non-PNS teachers. The average base salary of PNS teachers, at around Rp3.4 million monthly, is more than seven times that of the average base salary of non-PNS teachers, at around Rp450,000 per month. There is also greater variance in non-PNS teacher salary than in PNS teacher salary, consistent with the lack of regulation of the former. Additionally, the Indonesian government has implemented several types of financial incentives in the form of allowances for principals, PNS teachers, honorary teachers and teachers of private schools. PNS teachers were also significantly more likely to receive allowances (89% of them do) than non-PNS teachers (56%), contributing to their higher total salaries.

Currently, the main allowances that originate from the central government are (1) certification allowance, given to teachers who already possess a teacher certificate, in which the amount for a PNS teacher is as much as one-month basic salary and for a non-PNS teacher is according to their level equivalence, period of employment and academic qualifications, (2) remote area allowance, given to teachers in special/remote regions, amounting to as much as one-month basic salary for PNS teachers and in accordance with level equivalence, period of employment and academic qualifications for non-PNS teachers, (3) special allowance for permanent but non-PNS teachers who have not had a functional position, which is Rp1,500,000 per month until the respective teacher has a functional position; and (4) functional allowance for non-PNS teachers in education units run by the community, at Rp300,000 per month.

In addition to the central government allowances, several provincial and district/municipal governments also provide allowances for teachers in their area. Of the 64 districts that were sampled for this study, around one-third reported having additional allowances for public school and/or madrasah teachers. These are summarised in the final column of Table 22. Teachers, meanwhile, reported receiving allowances from different sources. About one-half of all teachers received an allowance from the central government. The proportion of teachers who received allowances from provincial, district and other sources varied by

region, also summarised in Table 22. Significantly more teachers in Sulawesi reported receiving allowances from provincial governments. Meanwhile, district-level allowances were more prevalent in the Kalimantan and Papua and Maluku regions. In contrast, receipt of provincial- or district-level allowances was rare in the Bali and Nusa Tenggara region.

Table 22. Teacher Allowances, by Region

Region	Teachers Receiving Allowances from the Following Source				Types of Allowance Available^
	Central	Prov.	District	Other	
Sumatra	53%	10%	19%	2%	Teacher incentive (province) Regional allowance Welfare allowance Education personnel allowance Additional income allowance Meal allowance
Java	58%	11%	17%	6%	Regional welfare allowance (province) Work performance allowance/ performance based honorarium Honorary/non-PNS allowance Transportation allowance Regional allowance
Bali and Nusa Tenggara	43%	1%	5%	1%	Teaching overtime incentive Meal allowance
Kalimantan	58%	2%	39%	9%	Honorary teacher allowance Housing allowance
Sulawesi	53%	23%	11%	3%	Teaching hour allowance from BOSDA fund (province) Regional performance allowance
Papua and Maluku	47%	3%	36%	9%	Meal allowance Income improvement allowance Border area allowance

Source: Teacher Absenteeism Survey, Visit 1, 2013. Teacher Survey and District Level Interviews.

Note: Interviews with respondents were conducted in 61 offices of Education and 54 offices of Ministry of Religious Affairs of the total 64 sample districts/cities in 25 sample provinces.

Compared to teachers who did not receive any allowance, teachers who received certification, remote area and other types of allowances had lower rates of absence, as shown in Table 23. Most of allowances were introduced between the time of the 2003 absenteeism study and the current study. Teacher certification was introduced by the central government in 2007 as a way to professionalise teaching, as called upon in the National Law on Teachers that was passed two years earlier.[77] Teachers who held at least an S1 degree were eligible to take part in the certification process, and it can be assumed that this requirement at least partly explains the dramatically higher proportion of teachers who now hold an S1 degree compared to 10 years ago.

77 Undang Undang No. 14 Tahun 2005 tentang Guru dan Dosen [Law No 14 Year 2005 about Teacher and Lecturer]; Peraturan Menteri Pendidikan Nasional Republik Indonesia No. 18 Tahun 2007 tentang Sertifikasi Guru dalam Jabatan [Ministry of National Education Decree No 18 Year 2007 about In-Service Teacher Certification]

Table 23. Teacher Absence from School, by Salary and Allowances

	Teacher Absence Rate (%)	SE
Base salary		
Below median of Rp2.4 million (n=3,752)	9,4	1,2
At or above median (n=3,784)	5,4	0,8
Total salary		
Below median of Rp2.6 million (n=2,437)	7,3	1,0
At or above median (n=2,438)	5,2	0,9
Allowances received		
Do not receive any allowance (n=2,179)	9,1	1,7
Receive certification allowance (n=4,654)	6,3	0,9
Receive remote area allowance (n=1,922)	4,7	0,9
Receive other type of allowance (n=426)	2,4	1,2
Sufficiency of salary		
Teacher does not thinks their salary is too low (n=4,728)	6,4	1,0
Teacher thinks their salary is too low (n=2,870)	9,5	1,3
Reliability of salary payment		
Teacher experiences regular salary payment (n= 5,910)	6,5	0,9
Teacher experiences irregular salary payment (n=1,687)	11,9	2,1

Source: Teacher Absenteeism Survey, Visit 1, 2013

To become certified, teachers submit their portfolio (a collection of documents that provide evidence of their qualification and experience as well as their involvement in professional development activities) or, if their portfolio is deemed insufficient, they undergo a recognised training program. Once they are certified, teachers who meet the minimum requirement of 24 teaching hours per week receive an allowance that effectively doubles their salary.

More recently, the formal degree requirement has been modified to allow for teachers who do not yet hold an S1 degree to also undergo certification. Similarly, in the first three years after its introduction, centrally-mandated quotas for certification were largely allocated to PNS / civil service teachers. In subsequent years, however, district education offices were able to determine how many PNS and non-PNS teachers could be nominated for certification.[78] Based on the current surveys of teachers, two-thirds of certified teachers are PNS teachers who hold an S1 degree. The other one-third of teachers are divided almost equally into PNS teachers who do not hold an S1 degree and non-PNS teachers who hold an S1 degree.

This study found that certified teachers were less likely to be found absent from school than those who were not certified. Following the rationale for certification, this could be due to the increased salary and professional status associated with certification. However, as the current study is observational, the effect of certification could be confounded by other factors that also influence absence – both observed and unobserved. An experimental study from 2012, for example, found that although certification decreased the likelihood of teachers having a second job, it had not reduced their (self-reported) absence.[79]

Experience and certification were also related. The official requirements for certification specify only that teachers have 2-5 years of teaching experience (varying by year, status and sector). The practical implication of this is reflected in the current study, where only 10% of teachers with 7-11 years of teaching experience are certified, compared to 40-50% of teachers with more than 12 years of experience at the time of the survey. In the current study, the effect of certification on absence remained after accounting for education level and employment status. However, the effect of certification was insignificant when teaching experience was taken into account.

78 Hastuti, et al, 2009

79 De Ree, Al-Samarrai & Iskandar, 2012

In addition to employment status, base and total salary levels including allowances were also influenced by a number of other factors, chiefly qualification and experience. In turn, teacher salary was hypothesized to influence absence rates indirectly, through teacher satisfaction with their work and commitment to the school. These should be kept in mind when reading the summary of teacher absence rates by salary levels in Table 23, which shows teachers with a salary at or above the median have lower absence rates.

When asked about challenges they faced in their occupation, teachers whose monthly salary was below the median were more likely to think that their salary was too low. In turn, teachers who believed that their salary was too low had higher absence rates, at 9.5% (± 2.6%), compared to those who did not consider this an issue, at 6.4% (± 2.0%).

Other data from teacher surveys in this study suggested that any influence salary and allowance policies may have on teacher absence could have been hindered by issues in their delivery or implementation. Firstly, there were delays in the receipt of salary payments. One in five teachers reported not receiving timely salary payments. As Table 23 shows, those who experienced irregular salary payments had higher absence rates, at 11.9% (± 4.2%), compared to teachers who received salary payments in a timely manner, at 6.5% (± 1.7%). Meanwhile, two-thirds of teachers reported that certification allowance payments were often late, about one-half reported that remote area allowance payments were often late and about one-third reported that other allowance payments were often received late.

Another issue with the implementation of allowance policies was targeting. Only 7.6% of teachers who reported receiving a remote area allowance were found in schools that were categorized by the principal as being in a remote area, while around 43.2% were in rural areas. Meanwhile, close to one-half of teachers who reported receiving a form of remote area allowance were found in schools that were categorized by its principal as being in an urban area.

6.3 Absence Registration and Reporting

The responsibilities and entitlements of civil service / PNS employees, including teachers, are regulated by Government Regulation (PP) Number 53 Year 2010. The obligations outlined include expectations of presence at work and compliance with the terms of work hours. Violations of these obligations call for mild disciplinary actions in the form of: (a) a verbal warning for PNS employees who are absent from work without a valid reason for 5 working days, (b) a written warning for PNS employees who are absent from work without a valid reason for 6 to 10 working days, and (c) a written statement of unsatisfactory performance for PNS employees who are absent from work without a valid reason for 11 to 15 working days.

In addition to the obligation to be present in the workplace, the government (in the PP Number 74 Year 2008 concerning teachers) establishes rights to take leave as stipulated in PP Number 74 Year 1976, which includes: annual leave, long service leave, sick leave, maternity leave, leave for important reasons, unpaid leave and study leave. Meanwhile, non-PNS teachers or teachers appointed by an educational unit run by the community are entitled to take a leave of absence in accordance with their Employment or Work Agreements.

At the school level, the monitoring of teachers' attendance is the responsibility of principals. Particularly for PNS teachers who teach at madrasah, there are derivative regulations set by the Director General of Islamic Education Number 1 Year 2013 concerning Teachers' Attendance Discipline in madrasah. These regulations, among others, stipulate the work days and hours and the obligation to report attendance electronically, most commonly using a fingerprint / biometric attendance machine. Teachers then receive a monthly meal allowance based on their attendance record. District MoRA offices began rolling out an initiative in that year to equip all madrasah with such machines, beginning with public madrasahs.[80]
A majority of schools (88.7%) reported that monitoring of teacher attendance was done by asking

80 See, for example, Madrasah di Aceh Utara Berlakukan Absen Sidik Jari (Finger Print), [Madrasah in North Aceh Implements Fingerprint Attendance], http://aceh.kemenag.go.id/index.php?a=berita&id=156164 in North Aceh and Penerapan Disiplin Melalui Absensi Finger Print [Implementation of Discipline Through Fingerprint Attendance], http://www.kemenagpalangkaraya.com/berita/read/199/Penerapan-Disiplin-Melalui-Absensi-Finger-Print in Palangkaraya, Central Kalimantan.

teachers to sign an attendance book or sheet. In two-thirds of these schools, the principal also reported that they personally check or verify teacher attendance. In one-quarter of schools this verification was done by administrative staff. The existence of teachers' attendance lists has been confirmed also by all respondents interviewed in the offices of Education and the MoRA at district/city level. However, some of the respondents doubted the accuracy of the attendance lists that were generally still using the manual system which can easily be manipulated due to lack of supervision at school.

Only 5.5% of all schools used fingerprint verification machines to record attendance. However, this figure varied greatly by sector and status. Due to the recent push to equip public madrasah with fingerprint attendance machines, 40% of them reported currently using them. In contrast, less than 0.6% of general public schools used fingerprinting verification machines. Respondents at three district-level education offices stated that they have been using a fingerprint attendance system. Meanwhile, of the 51 MoRA offices visited, 16 reported using fingerprinting systems to monitor attendance and another two offices stated that that they will be installing the device in 2014.

Table 24. Teacher Absence from School, by Daily Attendance Monitoring Method

Daily Attendance Monitoring Method^	Teacher Absence Rate (%)	SE
No method of monitoring daily attendance (n=285)	19,1	7,2
Attendance recorded by any method (n=7,939)	9,6	1,0
Attendance recorded by signing attendance book/sheet (n=7,253)	9,5	1,1
Attendance recorded using fingerprinting machine (n=346)	3,5	0,8
Attendance checked by administration staff (n=2,180)	9,4	1,7
Attendance checked by principal (n=4,681)	10,1	1,4
Attendance monitored by other method(s) (n=442)	15,1	4,5

Source: Teacher Absenteeism Survey, Visit 1, 2013
^ Note: Schools could report using >1 method

Of the different means of monitoring daily attendance that are currently in place within the Indonesian school system, only fingerprinting was found to be significantly associated with teacher absence rates from school. Table 24 presents the rate of teacher absence by the daily attendance monitoring method used by schools (schools could report using more than one method). The rate of teacher absence in schools that used a fingerprint system to record daily attendance was significantly lower, at 3.5% (± 1.7%), than in schools that use other forms of attendance monitoring methods, at 9.9% (± 2.1%), or no method at all, at 19.1% (± 14.4%).

It is worth noting, though, that the analyses in Chapter 9 indicate that the effect of fingerprinting machines on teacher absence becomes statistically insignificant with the inclusion of district fixed effects. This reflects the fact that the use of such machines was concentrated in several districts, and in turn suggests that the use of this technology reflected district-level attention to a range of factors influencing teacher attendance, rather than just the fingerprinting machines themselves.

Monitoring and reporting of teachers' absenteeism in schools is also part of the responsibilities of the school/madrasah supervisors. Respondents in the offices of Education and MoRA at district/city level explained that principals must report the teachers' attendance lists/books to supervisors, and especially for primary schools through the technical implementation unit of the office of Education at sub-district level (UPTD) once a month. After that, the supervisors or UPTD will submit the report to the offices of MoEC and MoRA at district/city level.

According to district education office respondents in Kota Bandung and Kota Pekanbaru, there is a relationship between school supervision and allowance and the decreasing teacher absence rates in their areas compared to 2003. As already explained in Chapter 3, the data suggested that the teacher absence rate in primary schools of 2013 in both municipalities diminished significantly compared to that of 2003.

In addition to using the electronic fingerprint system to monitor teachers' attendance, the decrease in Pekanbaru municipality is attributable to the monthly teaching allowance for teachers as well. The amount

of allowance is based on the teacher's rank. Those in rank level II receive Rp1.250.000 and those in rank levels III and IV receive Rp1.500.000. Meanwhile since 2008 the government of Bandung municipality has removed education offices at sub-district level and school supervisors have been required to be stationed at school.

Almost all schools report their teacher attendance data to an external group or institution, most commonly to local education offices. Around 94.7% of public schools and 69.0% of private schools submit a report (often monthly) to either the district or sub-district education office. Additionally, 82.2% of private schools report their teacher attendance rates to a non-government group, most commonly to parents (89.9% of them do), school committee (60.4% of them do), or to a private foundation (21.9%).

Most of these types of reporting were not found to be correlated with teacher absence rates. Interestingly, however, private schools who did not report teacher attendance to a private foundation had significantly lower levels of absence (5.3% ± 4.2%) than those who did (15.5% ± 6.9%). Like the counterintuitive relationship between parents' involvement in student performance and teacher absence, discussed in the preceding chapter, this is an area worth exploring further. This finding may suggest that private foundations do not currently have access to reliable information on the extent on teacher absence, why it matters and what they can do to manage it.

6.4 Teaching Hours Requirements

The teaching hours of Indonesian teachers are regulated. Law No 74 (2008) stipulates that teachers are required to have at least 24 hours and at most 40 hours of face-to-face teaching in a week. Teachers can accumulate teaching hours at more than one school or educational unit that is appropriately registered The Minister of National Education Decree No 15 (2010) about Minimum Service Standards (MSS) for Basic Education also stipulates that a permanent teacher is to work 37.5 hours per week, which is to include lesson planning, teaching, assessment and student guidance.[81] Particularly for PNS teachers who teach at madrasah, MoRA has stipulated requirements through the Regulation of the Director General of Islamic Education Number 1 (2013). The regulation stipulates that the workload accumulation for PNS teachers in madrasah is also 37.5 hours per week.

Most teachers in the study reported average teaching hours close to the national minimum standard – an average of just over 24 hours per week. Additionally, teachers reported spending an average of 7.3 hours per week on other teaching-related work (such as grading assignments, meetings, and school administrative tasks). In total, teachers reported an average of 31.7 hours of work during the school week. Combining the two stipulations of a minimum of 24 of hours of face-to-face teaching and 37.5 overall working hours per week, an assumed but officially unstated expectation is for teachers to spend around 13.5 hours per week on tasks other than face-to-face teaching. Based on how teachers reported their hours in this study, however, this expectation does not appear to be widely met.

Not all teachers fulfil their required work hours in only one school. One in five teachers in this study reported that they held a teaching role at two or more schools. Such teachers reported an average of 39.6 hours of work per week, with a slightly smaller proportion of this time spent on face-to-face teaching (75%, with 25% of their time on other work), as opposed to teachers who only teach at one school (77% of their time on teaching and 23% on other tasks).

Those teachers who taught at more than one school were four times more likely to be found absent when they were scheduled to teach than teachers who only taught at one school (25.7% and 6.4%, respectively), as shown in Table 25. Meanwhile, although almost one-half of all teachers reported that they held a non-teaching job outside of school (most commonly farming, followed by private tutoring and small retail business ownership), this was not a significant factor in whether teachers become absent from school.

81 Other aspects of the MSS are discussed later in Chapter 6.

Table 25. Teacher Absence from School, by Working Hours

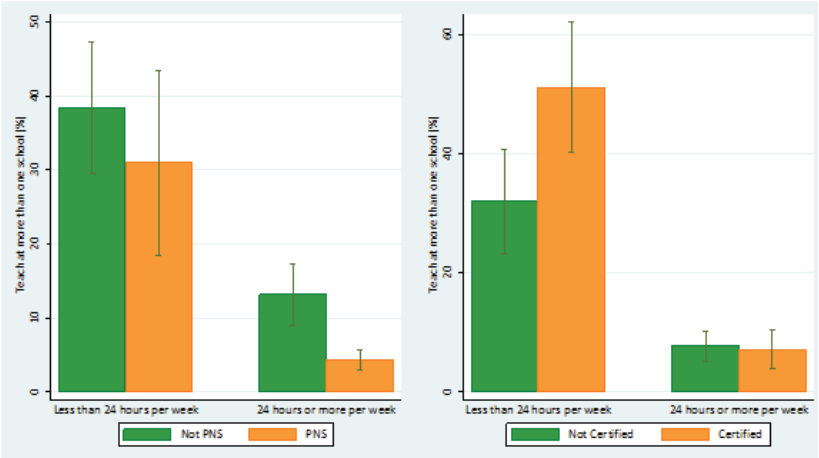
	Teacher Absence Rate (%)	SE
Hours of face-to-face teaching at visited school		
Less than 24 hours per week (n=1,817)	6,4	0,7
24 or more hours per week (n=5,810)	25,7	2,7
Hours of non-teaching work at visited school		
Less than 6 hours per week (n=3,638)	10,7	1,8
6 or more hours per week (n=3,985)	6,7	0,8
Teach at more than one school		
Teaching in only one school / at this school only (n=6,852)	9,3	1,1
Teaching in more than one school (n=1,448)	6,2	1,0
Mengajar di lebih dari satu sekolah		
Mengajar di hanya satu sekolah (n= 6825)	6,4	0,7
Mengajar di lebih dari satu sekolah (n =1.448)	25,7	2,7

Source: Teacher Absenteeism Survey, Visit 1, 2013

Due the large effect of teaching at more than one school on absence, it is worth discussing further which teachers are more likely to do so, and whether other factors can influence this decision. One in three secondary school teachers, for example, taught at more than one school, compared with only one in eight primary school teachers. The effect of teaching at more than one school on absence was also greater among secondary school teachers. Secondary school teachers who taught at more than one school were eight times more likely to be found absent than those who teach at only one school.

Employment and certification status may influence the decision to teach in another school in two directions. The higher salary associated with a permanent / civil service status and the allowance associated with certification may reduce the need for teachers to seek a second source of income. However, under the national teacher laws, PNS teachers and certified teachers also have to meet minimum teaching hours as part of their employment and allowance conditions. Some groups, including the national teacher organisations PGRI (Persatuan Guru Republik Indonesia), have challenged the minimum standard of 24 teaching hours per week as being unreasonable and minimising the importance of the non-teaching work of teachers,[82] as well as leading them to work at two or more schools in order to meet this requirement.[83]

Figure 13. Proportion Teaching at More than One School by Teaching Load, Employment Status and Teacher Certification



Source: Teacher Absenteeism Survey, Visit 1, 2013

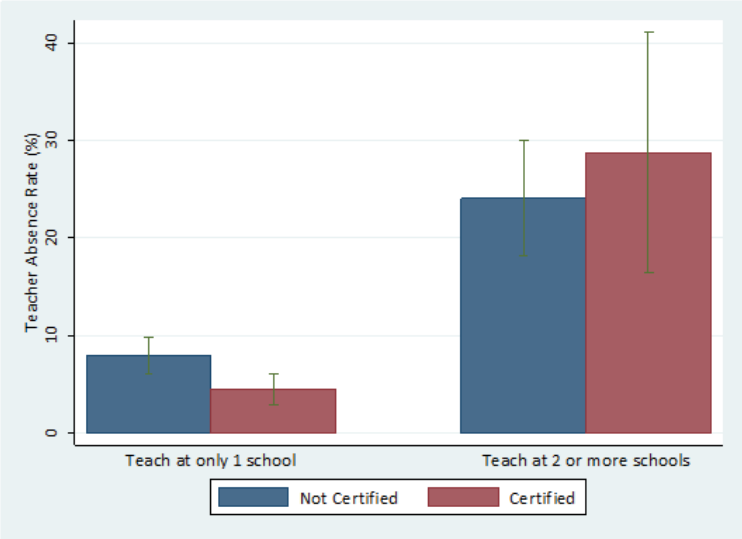
82 JPNN, 2013, "Ketentuan Mengajar 24 Jam Seminggu Rugikan Guru" [Teaching Requirement of 24 Hours a Week Disadvantages Teachers], http://www.jpnn.com/read/2013/06/22/178208/Ketentuan-Mengajar-24-Jam-Seminggu-Rugikan-Guru-

83 Zubaidah, 2012, "SKB 5 Menteri Rugikan Guru" [Joint Ministerial Decree 5 Disadvantages Teachers], http://news.okezone.com/read/2012/03/14/337/592611/skb-5-menteri-rugikan-guru

PNS/permanent employment status and teacher certification influenced, in different ways, the relationship between teaching hours and the number of schools in which teachers work, as illustrated in Figure 13. Among teachers with at least 24 teaching hours a week, those with PNS/permanent status were significantly less likely to teach at more than one school. Presumably, this was the effect of the higher salary of PNS teachers, easing the need for those teachers to seek extra sources of income. There was no difference for the group of teachers who worked less than 24 hours per week based on PNS status.

However, among teachers who taught less than 24 hours per week at the school visited, those who were certified were more likely to report teaching at one or more other school. This may be attributable to the stronger enforcement of the minimum teaching hour requirement in the certification allowance payment. Some district education offices, for example, have reportedly asked teachers to return their certification allowance for not meeting the minimum required teaching hours.[84] This may have created an incentive for certified teachers to seek employment at more than one school to meet the minimum requirements for teaching hours.

Figure 14. Teacher Absence from School, by Certification and Number of Schools Taught At



Source: Teacher Absenteeism Survey, Visit 1, 2013

The relationship between certification and teaching at more than one school also influenced teacher absence rates. As previously discussed, teaching at more than one school had a strong effect on absenteeism. This effect was greater among certified teachers – who were more than eight times more likely to be found absent if they teach at more than one school – than among uncertified teachers. Put differently, among teachers who only taught at one school, certified teachers were less likely to be absent, as shown in Figure 14. However, of those who taught at two or more schools, certification status did not have a significant effect on the likelihood of being absent at the time of the school visit.

6.5 Minimum Service Standards

The Minimum Service Standards (MSS) for Basic Education were set by the Ministry for National Education in 2010. The MSS aims to reduce disparity by ensuring basic standards across the country in teaching and learning processes, infrastructure and equipment. The 2010 MSS legislation specifies 27 minimum standards, of which 14 are borne at the district/municipal government level and the rest at the school level. Of the MSS borne at the district/municipal level, six are common for both primary and secondary schools, three are specified for primary schools only, and five for secondary schools only. In terms of the MSS borne by schools, nine are common to both primary and secondary schools, two are specified for primary schools only, and one standard is for secondary schools only.

84 Hanafi, 2014, "Puluhan Guru Kembalikan Dana Sertifikasi" [Dozens of Teachers Return Certification Allowance], http://www.antarakalsel.com/berita/16925/puluhan-guru-kembalikan-dana-sertifikasi

This study collected data that enabled analysis of the relationship between teacher absence and seven of the 14 MSS that are borne at the district/municipal level:

- The number of students in each learning group does not exceed 32 for primary schools and 36 for secondary schools (MSS No.2);
- In both primary and secondary schools, there is a teachers' rooms have a desk and a chair, and in secondary schools there is a separate room for the principal (MSS No. 4);
- In primary schools, there is one teacher for every 32 students, in urban and rural schools there are at least six teachers, and in remote schools at least four teachers (MSS No. 5);
- There is a laboratory for natural sciences in every secondary school (MSS No. 3);
- There are two teachers with a Bachelor's degree and Diploma IV qualification and two teachers with a teacher's certificate in every primary school (MSS No. 7);
- All the principals of primary schools hold a Bachelor's degree and a Diploma IV and a Teacher's Certificate (MSS No. 10)
- All the principals of secondary hold a Bachelor's degree and a Diploma IV and a Teacher's Certificate (MSS No 11).

The above MSS indicators for primary schools (SD/MI) are analyzed in Table 26, and those for secondary schools (SMP/MT) are analyzed in Table 27.

Table 26. Selected MSS Indicators and Teacher Absence from School: Primary Schools

Minimum Service Standards Indicator	School Has Achieved the Standard?		Teacher Absence Rate (%)	SE
	Yes or No	% of Schools		
The number of students in each learning group does not exceed 32	Yes	65,4	10,6	1,3
	No	34,6	7,3	1,2
Teachers' rooms have a desk and chair	Yes	50,3	7,3	1,0
	No	49,7	11,7	1,4
There is 1 teacher for every 32 students	Yes	99,5	9,5	0,9
	No	0,6	0	0
In urban and rural schools there are 6 teachers	Yes	99,5	8,3	1,0
	No	0,5	10,4	7,7
In remote schools there are 4 teachers	Yes	95,5	17,9	2,4
	No	4,6	11,9	11,5
There are 2 teachers with a Bachelor's degree and Diploma IV qualification	Yes	89,8	9,1	1,0
	No	10,2	18,3	3,5
There are 2 teachers with a Teacher's Certificate	Yes	76,5	8,5	0,9
	No	23,5	14,2	2,4
The principal holds a Bachelor's degree and a Diploma IV and a Teacher's Certificate	Yes	70,0	8,8	1,0
	No	30,0	12,4	1,9

Source: Teacher Absenteeism Survey, Visit 1, 2013

Table 27. Selected MSS Indicators and Teacher Absence from School: Secondary Schools

Minimum Service Standards Indicator	School Has Achieved the Standard?		Teacher Absence Rate (%)	SE
	Yes or No	% of Schools		
The number of students in each learning group does not exceed 36	Yes	70,6	12,4	3,5
	No	29,4	6,9	1,9
Teachers' rooms have a desk and chair	Yes	71,8	8,5	2,3
	No	28,3	17,0	4,2
There is a laboratory for natural sciences	Yes	46,9	5,7	1,7
	No	53,1	17,0	3,8
There is a principal's room that is separate from teachers' rooms	Yes	72,3	8,9	2,3
	No	27,7	16,1	4,8
The principal holds a Bachelor's degree and a Diploma IV and a Teacher's Certificate	Yes	74,6	9,1	5,1
	No	25,4	17,1	2,2

Source: Teacher Absenteeism Survey, Visit 1, 2013

Based on the school survey data, the majority of schools have achieved the particular MSS indicators analyzed through the study. Among primary schools, all eight of these indicators have been achieved by the majority of schools; the standard that the lowest proportion of schools has met is "teachers' rooms have a desk and chair" (50.3%). Among secondary schools the only MSS criterion that the majority of schools have not achieved is "there is one laboratory for natural sciences" (46.9%).

Table 26 and Table 27 show that schools which have fulfilled the MSS criteria analyzed in the study tended to have lower rates of teacher absence than schools which have not achieved these standards. However, there is one exception, namely the maximum number of students in each learning group (32 in primary schools and 36 in secondary). Schools that achieve this standard had a higher rate of teacher absence than schools that had not. This can be explained by the fact that attractive schools in urban areas generally have a higher number of students per learning group than schools located in remote areas; this relationship is explored further in the next section.

6.6 Teacher Distribution

Previous studies have concluded that Indonesia does not face a general shortage of teachers, but rather an issue with how they are distributed among schools.[85] This study of teacher absence tends to support that conclusion – both in terms of the school-level data, and also from the interviews with district education officials.

As discussed earlier in this chapter, when teachers do not have sufficient teaching hours from one school to meet the 24 hours per week requirement, they face incentives to accumulate more teaching hours at other schools, which leads to higher rates of absence. This relationship between teacher working hours, employment in more than one school and absence from school has broader implications for the way that teachers are currently distributed within the system.

The stark difference between this study's estimates of a national average student-teacher ratio[86] of 12.6 and an average class size[87] of 24.4 highlights this point. While the first figure suggests that Indonesian schools are very well staffed (and indeed that the staffing is well in excess of the MSS requirements), the second figure indicates that this is not necessarily reflected in students' learning environments.

Furthermore, when adjusted to full-time equivalent teachers (defined as teachers who work at least

85 See del Granado, et al., 2007.

86 Calculated by the number of students per teacher registered at a school.

87 Calculated by the number of students divided by the number class groups at a school.

37.5 hours per week at a school), the student-teacher ratio estimated by this study is 16.4. The difference between this and the unadjusted figure of 12.6 reflects the system's reliance on part-time teachers. Indeed, around 46.4% of teachers in this study indicated that they work less than full-time at the school visited. Considering the high proportion of teachers working at more than one school, this more likely reflects inefficiency within the system rather than teachers' preferences. This distribution problem is greater among secondary schools, as shown in Table 28.

Table 28. Student-Teacher Ratios and Class Sizes, by Level of Schooling

	Primary Schools	Secondary Schools
Student-teacher ratio	13.1	11.7
Student-teacher ratio (FTE)^	16.3	16.6
Average class size	22.3	28.8
Teachers working fewer than 37.5 hours per week at the visited school	41.3%	56.9%

Source: Teacher Absenteeism Survey, Visit 1, 2013

^ Note: Full-time equivalent teachers are defined in the study as teachers who work at least 37.5 hours per week at a school

In relation to the current study, there is a statistically significant relationship between teacher absence from school and the student-teacher ratio. As presented in Table 29, in schools where there are fewer than 11.4 students to every teacher, 13.0% (±4.1) of teachers were absent, compared to a much lower absence rate of 5.3% (± 1.4) among schools with more than 21 students per teacher.

Table 29. Teacher Absence from School, by Student-Teacher Ratio

Student-teacher ratio	Teacher Absence Rate (%)	SE
Fewer than 11.4 students per teacher (n=2,070)	13.0	2.0
Between 11.5 and 16.4 students per teacher (n=2,074)	12.3	2.2
Between 16.5 and 20.9 students per teacher (n=2,708)	8.0	1.5
More than 21 students per teacher (n=2,078)	5.3	0.7

Source: Teacher Absenteeism Survey, Visit 1, 2013

Smaller schools with lower student-teacher ratio are concentrated in more remote or rural areas. As Figure 15 shows, however, the effect remains even after taking into account school location. It shows that schools in remote and rural areas face a particular challenge. Conversely, differences in student-teacher ratios make little difference to teacher absence rates in urban areas.

The school-level data collected for this study indicates that the unadjusted student-teacher ratio (12.6 overall) is fairly similar among regions. The regional student-teacher ratio ranged from 12:1 in Sumatra and in Bali and Nusa Tenggara, up to 15:1 in Java. On the other hand, the overall ratio of students to civil servant teachers was much higher (23:1) and varied more widely among regions: from a low of 20:1 in Kalimantan up to 29:1 in Java.

Chapter 4 concluded that the rate of absence among teachers who are civil servants was generally lower than among teachers who are not employed as civil servants. [88] In this study, the proportion of teachers who are not civil servants is estimated to be 44%, and this proportion varies widely among regions: from a low of 35% in Maluku and Papua up to almost 50% in Bali and Nusa Tenggara. The relatively high proportion of teachers who are not civil servants in Bali and Nusa Tenggara may contribute to the high rate of teacher absence in that region. Furthermore the data also showed that madrasah schools (particularly the private ones) relied more on the teachers who were not civil servants than did other schools, which is a factor contributing to the higher teacher absence in madrasah than among other schools.[89] In other words, the rate of teacher absence is to some extent influenced by differences in the number and distribution of teachers who are civil servants, as well as teachers who are not employed as civil servants.

88 Teachers who are not employed as civil servants include those work in foundations, contract-based teachers who are recruited by the regional government, and non-permanent teachers).

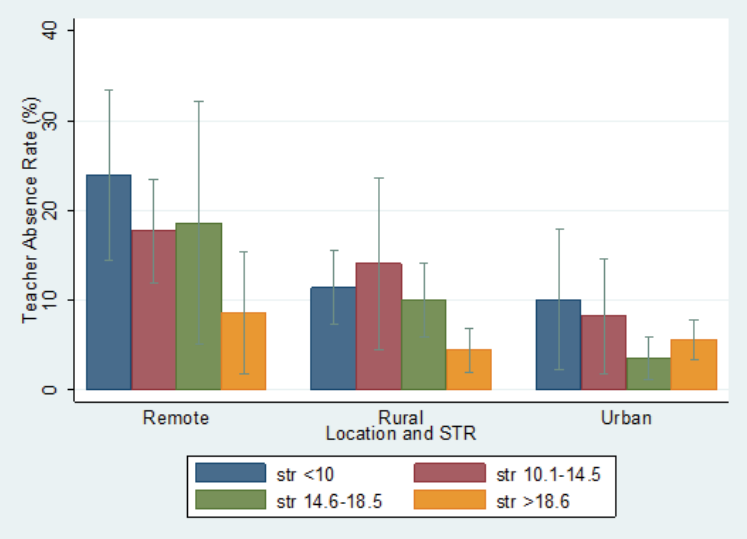
89 Information from the district office interviews suggests that almost 80% of teachers in schools which are under the local office of MoRA are not civil servants.

Interviewees from the district offices indicated that they have attempted to address concerns about the distribution of teachers among different types of schools and locations. The district offices have tried to assign teachers to areas based on the mapping of the demand for teachers at the school level, the distance between home location and the school, and the duration of the assignment. However, a number of interviewees acknowledged that decisions to assign or move teachers are still predominantly based on teachers' personal requests, such as because their spouse has changed location for job or family reasons, and also often because of support or recommendations from local officials.

The interview data also suggests that district education offices do not seem to take account of low student-teacher ratios as indicating there may be a problem of teacher oversupply. Some interviewees indicated that more contract-based teachers are needed to make up for a shortage of civil servant teachers. The local education office and the local office of MoRA do not strictly limit the recruitment of contract-based teachers, and consider the recruitment of such teachers to be within the authority of schools through funding from the School Operational Assistance (BOS) program (the BOS is fully managed by schools). The district office officials also note that it is difficult for some districts to fully comply with the standard student-teacher ratio and the requirement for a minimum of 24 hours of teaching hours per week due to disparities in the number of students and learning groups (rombel) per class between schools in urban and rural areas.

Another problem highlighted through the district office interviews is that there are teachers who are hesitant or refuse to be assigned to a remote location for various reasons. Although some teachers were already assigned to remote areas when they were officially promoted as civil servants, they often tend to later request to be re-assigned to urban areas.

Figure 15. Teacher Absence from School, by School Location and Student-Teacher Ratio (STR)



Source: Teacher Absenteeism Survey, Visit 1, 2013

6.7 Summary

This chapter presented findings on the relationship between system-level policies and practices and teacher absence rates. These aspects of how schools and teachers are organised are influenced by decisions at the district, provincial and central government levels. The school-level data are supplemented with the results of interviews with staff in education/madrasah district offices.

The following system-level policies and practices were found to be significantly associated with teacher absence rates:

- Schools that had supervision visits from the district education/madrasah offices more recently and more frequently were found to have a lower rate of teacher absence.

- Compared to teachers who do not receive any allowance, teachers who received certification, remote area and other types of allowances had lower rates of absence. However, the amount received in allowances did not have a consistent relationship with absence.
- In the current study, the effect of certification on reducing teacher absence remained after accounting for education level and employment status. However, the effect of certification became statistically insignificant when teaching experience was taken into account.
- The influence that salary and allowance policies may have on teacher absence could be hindered by issues in their delivery or implementation:
    - One in five teachers reported not receiving timely salary payments. Those who experienced this had higher absence rates, at 11.9% (± 4.2%), compared to teachers who received salary payments in a timely manner, at 6.5% (± 1.7%).
    - Two-thirds of teachers reported that certification allowance payments were often late, about one-half reported that remote area allowance payments were often late, and about one-third reported that other allowance payments were often received late.
    - Targeting might also be an issue. Around 43% of teachers who reported receiving a form of remote area allowance were found in schools that were categorized by its principal as being in a rural area and close to one-half of teachers who reported receiving a form of remote area allowance were found in schools that were categorized by its principal as being in an urban area.
- Of the different means of monitoring daily attendance that are currently in place within the Indonesian school system, only the use of fingerprinting machines to record attendance was found to be significantly associated with lower rates of teacher absence from school. However, currently only 5.5% of all schools use fingerprint verification machines to record attendance (though this figure varies greatly by sector, with 40% of public madrasah currently using them while less than 0.6% of general public schools do). Subsequent analyses in the report suggest that it is not so much the fingerprinting machines themselves that reduce absence, but rather the fact that such technology reflected district-level attention to a range of factors influencing teacher attendance.
- About 20% of teachers reported that they held a teaching role at two or more schools. This seemed to be linked to the requirement for permanent teachers to have at least 24 hours of face-to-face teaching per week, and at least 37.5 hours of work at school overall. The requirements could not always be filled within one school. However, teachers who teach at more than one school were four times more likely to be found absent from school when they were scheduled to be teaching than teachers who only taught at one school. Of all the factors considered in this report, working at more than one school has the strongest individual relationship with absence from school.
- Certification affected the relationship between teaching responsibilities and absence. It is linked with a higher likelihood of teaching at more than one school among teachers who had less than 24 face-to-face teaching hours at the visited school. Meanwhile, certification did not reduce the likelihood that teachers who taught at more than one school were found absent.
- The Minimum Service Standards (MSS) for Basic Education were introduced in 2010 to reduce disparity by ensuring basic standards across the country in teaching and learning processes, infrastructure and equipment. Based on the school survey data, the majority of schools have achieved the particular MSS indicators analyzed in the study. Among primary schools, all eight of these standards have been met by the majority of schools; the standard that the lowest proportion of schools has achieved is "teachers' rooms have a desk and chair" (50.3%). Among secondary schools the only MSS criterion analyzed in the study that the majority of schools have not achieved is "there is one laboratory for natural sciences" (46.9%).
- Schools which have achieved the particular MSS criteria analyzed through the study tended to have lower rates of teacher absence than schools which had not met the standards. However, there is one exception, namely the maximum number of students in each learning group (32 in primary schools and 36 in secondary). Schools that achieved this standard had a higher rate of teacher absence than schools that had not. This can be explained by the fact that attractive schools in urban areas generally have a higher number of students per learning group than schools located in remote areas.
-

Supporting the conclusion of other studies, the evidence from this study suggests that teacher absence from school is not linked to an overall shortage of teachers within the system. Rather, it is linked to how

teachers are distributed within the system. The stark difference between this study's estimates of a national average student-teacher ratio of 12.6 and an average class size of 24.4 highlights this point. While the first figure suggests that Indonesian schools are very well staffed (and indeed that the staffing is well in excess of the MSS requirements), the second figure indicates that this is not necessarily reflected in students' learning environments.

Teachers in schools with lower student-teacher ratios were significantly more likely to be found absent. This relationship is most pronounced among rural and remote schools. Around 46.4% of teachers in the study indicated that they work less than full-time at the school visited. Considering the high proportion of teachers working at more than one school, this more likely reflects inefficiency within the system rather than teachers' preferences. This distribution problem is greater among secondary schools than among primary schools.

The previous chapter had concluded that the rate of absence among teachers who are civil servants was generally higher than among teachers who are not employed as civil servants. The proportion of teachers who are not civil servants varies widely among regions and types of schools, which is a factor contributing to the high teacher absence in, say, Bali and Nusa Tenggara compared to other regions, and in private madrasah compared to other schools. The rate of teacher absence is to some extent influenced by differences in the number and distribution of teachers who are civil servants, as well as teachers who are not employed as civil servants.

The district offices have tried to assign teachers to areas based on the mapping of the demand for teachers at the school level, the distance between home location and the school, and the duration of the assignment. However, a number of interviewees acknowledged that decisions to assign or move teachers are still predominantly based on teachers' personal requests, such as because their spouse has changed location for job or family reasons, and also often because of support or recommendation from local officials.
Another problem highlighted through the district office interviews is that there are teachers who are hesitant, or even who refuse, to be assigned to a remote location for various reasons. Although some teachers were already assigned to remote areas when they were officially promoted as civil servants, they often tend to later request to be re-assigned to urban areas.

Chapter 7
Teacher Absence from Class

One of the reasons why policymakers and other education stakeholders are interested in the issue of teacher absence is because of the loss of teaching time, and therefore student learning time, that it leads to. The loss of effective teaching time, however, occurs not just when a teacher is absent from school but also when the teacher – although present at school – is absent from the classroom.

This chapter discusses findings related to teacher absence from class. This measure is defined in the current study as the number of teachers who, although present at school, were not in fact in the classroom, expressed as a proportion of all teachers who were scheduled to be teaching during the observation. This type of absence is likely to have a similar impact on student learning as the teacher not being at the school at all.[90]

Teacher absence from class has not been studied nationally in Indonesia, and previous international studies that have looked at teacher absence from class defined it to mean any teacher who was not found in class, without differentiating the two types of absence (i.e. absence from school; and absence from class of those at school). However, these two types of absence may be quite distinct, and associated with different types of factors.

7.1 Rates of Teacher Absence from Class

Of the teachers who were meant to be present at school on the day of the school visit, just over 80% were scheduled to be teaching when the enumerators conducted their observation. Of these teachers, in addition to the approximately one in ten teachers who were found to be absent from school in the current study (see Chapter 3), higher proportions of teachers were actually found at school but not teaching in the classroom as scheduled in Visit 1 (13.5% ± 3.2%) and Visit 2 (11.6% ± 3.2%) – see Table 30.

Although the difference between the two visits was also not statistically significant, the estimates of teacher absence from class were less stable than that of teacher absence from school. Some of the estimates of absence from class within regions, for example, were significantly different. Where this is the case, they are presented separately in Table 30. For the most part, however, data from Visit 1 are presented here.

In general, teacher absence from class varied more widely among regions than did absence from school, ranging from 4.3% (± 2.3%) in Visit 1 in Sulawesi and 7.1% (± 3.8) in Visit 2 in Java to 17.4% (± 6.6%) in Sumatra. At national level the class absence rates were higher than the school absence rates, although in some regions the reverse applied, for example Sulawesi in Visit 1 and Java in Visit 2.

There was only a small difference (of 3 percentage points) between the absence from class estimates for each school level, with the absence rate in primary schools lower than that in junior secondary schools. The absence rate for madrasahs was higher than the rate for general schools at 16.4% (± 8.8%) and 12.7%

90 Castro, et al. 2007

(± 2.4%) respectively. Each of these rates of absence from class was higher than the absence from school rate by school type and school level.

There were interesting differences in absence from class by school status. While the absence rate from school was significantly lower in public schools than in private schools, the absence rate from class for private schools was significantly lower than the rate for public schools at 9.7% (± 3.9%) and 14.9% (± 4.0%) respectively. If both types of absence were considered together as providing an indicator of overall teacher absence, this would show comparable total absence rates for public and private schools, when in fact schools in these sectors were characterized by different types of absence: lower absence from school for public schools, but higher absence from class, relative to private schools.

Table 30. Rates of Teacher Absence from Class, by Region and School Characteristics

	Teacher Absence from Class Rate (%)	SE
National teacher absence from class		
Visit 1 (n=6,526)	13,5	1,6
Visit 2 (n=5,967)	11,6	1,6
Absence from class by region		
Sumatra (n=1,481)	17,4	3,3
Java – Visit 1 (n=2,002)	13,4	2,5
Java – Visit 2 (n=1,370)	7,1	1,9
Bali and Nusa Tenggara (n=1,378)	12,5	2,6
Kalimantan (n=1,116)	11,4	2,2
Sulawesi – Visit 1 (n=1,118)	4,3	1,2
Sulawesi – Visit 2 (n=877)	11,5	1,8
Papua and Maluku (n=1,207)	10,9	2,2
Absence from class by school level		
Primary (n=6,559)	12,5	1,2
Secondary (n=1,743)	15,5	3,3
Absence from class by school type		
General (n=7,217)	12,7	1,2
Madrasah (n=1,085)	16,4	4,4
Absence from class by school status		
Public (n=6,353)	14,9	2,0
Private (n=1,949)	9,7	2,0

Source: Teacher Absenteeism Survey, Visit 1, 2013 and Visit 2, 2014

There were also some interesting differences in regional estimates of absence from class by school status. As noted in Chapter 3, in the Bali and Nusa Tenggara region the rate of teacher absence from school was two to three times higher in private schools than in public schools. The difference in teacher absence rate from class was found to be insignificant in Visit 1 for this region, but in Visit 2 a teacher in a private school in Bali and Nusa Tenggara region was more than three times more likely to be absent from class than a teacher in public school in the region.

Meanwhile, although private school teachers in Java were also more likely to be absent from school than public school teachers, the opposite was true for classroom absence. In Visit 2, 10.1% (± 5.0%) of teachers in public schools and only 1.0% (± 0.8%) in private schools were found to be absent from class in Java. The pattern of this relationship was similar during Visit 1, but the difference in that instance was not statistically significant.

7.2 Factors Influencing Teacher Absence from Class

Some factors that were related to absence from school were also related to absence from class, while others were not relevant. As in preceding chapters, univariate logistic regressions were performed in order to determine the significance of relationships between these factors and the class absence rates. The absence rates used were those that were collected at the same time as the data on the relevant factor were collected. In instances where particular teacher or school factor data were collected twice (for example, principal absence or teacher qualification), absence data from the first visit was used.

7.2.1 Contextual and Demographic Factors

Basic relationships between contextual factors (like school location) and demographic factors (like teacher gender and family arrangements) were examined first. Unlike for absence from school, geographical location did not have a statistically significant relationship with absence from the classroom. Similarly, school size was not significantly related to teacher absence from class, nor was certification or qualifications. Factors that were found to be significant are summarised in Table 31.

Table 31. Absence from Class, by Teacher Background Factors

	Teacher Absence from Class Rate (%)	SE
Gender		
Female (n=5,404)	11,6	1,5
Male (n=2,895)	16,9	2,2
Teaching experience (quartile)		
1 - 6 years (n=1,840)	9,8	1,9
7 - 11 years (n=2,123)	18,4	2,2
12 - 26 years (n=2,193)	12,3	2,3
27 years and over (n=2,093)	12,9	1,7
Mode of transport to school		
Walk or bike (n= 2,154)	9,8	1,6
Public transport (n=731)	7,0	2,2
Private motorised transport (n=5,203)	15,4	1,7

Source: Teacher Absenteeism Survey, Visit 1, 2013

Gender was significantly related to teacher absence from class. Male teachers were 1.5 times more likely to be absent from class than female teachers with 16.9% (± 4.4%) of male teachers absent from class and 11.6% (± 3.0%) of female teachers absent from class during the Visit 1 observation.

Years of teaching experience was also significantly related to absence from the classroom. Teachers with the least experience were also the least likely to be absent from class with an absence from the classroom rate of 9.8% (± 3.8%) during the first visit. Teachers with higher levels of experience had similar absence rates, 12.3% (± 4.6%) for teachers with 12-26 years of experience and 12.9% (± 3.4%) for teachers with more than 26 years experience. Teachers with 7-11 years of experience were 1.9 times more likely than the least experienced teachers to be absent from the classroom ($p<0.01$) and recorded an absence rate of 18.4% (± 4.4%).

Interestingly, the mode of transport teachers took to school was also significantly related to absence from the classroom. Teachers who took private motorised transport (i.e. a car or motorcycle) to work were twice as likely to be absent from class as teachers who used other modes of transport, including walking, bike or public transport. This can be contrasted with absence from school, where teachers relying on private motorised transport or walking or a bicycle had higher absence rates than those relying on public transport.

7.2.2 Teacher Roles, Responsibilities and Satisfaction

Teacher roles and responsibilities within the school, particularly for teachers who had additional roles within the school other than general classroom teaching, were elements that the researchers felt could have an impact on teacher presence in the classroom. Teachers working in another school were much more likely to be absent from school, but not from the classroom.

In primary schools there was some relationship between the year levels taught and absence from the classroom (see Table 32). Teachers at higher grades, and particularly at Grade 6, were more likely to be absent from class than teachers teaching at lower grades.

In secondary schools, teachers were likely to be teaching across different grade levels. There was no significant influence of the grade teachers were teaching at and classroom absence (see Table 32). At the secondary level, the subjects taught were also examined for a relationship with teacher absence from the classroom. It should be noted that in some cases teachers taught more than one subject, and were included in the calculations for all of the subjects that they teach.

English teachers had the lowest absence from class rate at 8.8% (± 6.9%) and were around half as likely to be absent from class as teachers who did not teach English. Teachers of subjects other than English, Bahasa Indonesia, mathematics, science, social studies, religion, civics, physical education and art (the "other" category in the survey) were 1.6 times more likely to be absent from class than teachers who did not teach "other" subjects. These were the only significant relationships found in regard to curriculum areas taught.
Only around one in 10 secondary school teachers taught more than one subject in the school visited. Most of these teachers taught a combination of non-core subjects (e.g. physical education, art and so on). Although these teachers had a slightly lower rate of absence from school than teachers who only taught one subject (8.0% and 9.8% respectively, with the difference not being statistically significant), as shown in Table 32, teachers who taught more than one subject at school were considerably more likely to be found absent from class. Their absence from class rate was 20.5% (± 7.0%), compared to 12.9% (± 3.0%) for their colleagues who teach one subject only.

The absence from class rate was also explored for teachers performing additional or other roles within their schools (see Table 32). These teachers were 1.3 times more likely to be absent from class than teachers not holding additional roles but this relationship was not significant at the 95% level ($p = 0.06$). Similarly, although the absence from class rate was high for teachers in school committee advisory/ representative positions at 27.4%, this was not significant due to the small number of teachers in this position and the large error around the estimated rate. Teachers in a vice principal position were 1.8 times more likely to be absent from class than other teachers.

Table 32. Absence from Class, by Grade Taught, Other Roles and Satisfaction

	Teacher Absence from Class Rate (%)	SE
Primary Grade Level		
Grade 1 (n=2,230)	13,1	1,5
Grade 2 (n=2,255)	14,2	1,8
Grade 3 (n=2,409)	14,1	1,4
Grade 3 (n=2,409)	15,5	1,6
Grade 5 (n=2,593)	15,5	1,6
Grade 6 (n=2,549)	17,0	1,6
Junior Secondary Grade Level		
Grade 7 (n=1,292)	15,4	3,0
Grade 8 (n=1,365)	17,3	3,6
Grade 9 (n=1,284)	16,2	3,3

	Teacher Absence from Class Rate (%)	SE
Number of subjects taught (Secondary school teachers)		
Teach 1 subject only (n=7,658)	12,9	1,5
Teach 2 or more subjects (n=644)	20,5	3,5
Additional Roles at School		
No additional role at school (n=4,049)	11,6	1,6
Vice Principal (n=360)	21,5	3,6
School Operational Funds (BOS) administrator/ treasurer (n=586)	15,1	3,3
School committee administrator/representative (n=104)	27,4	8,9
Extracurricular coach/advisor (n=1,194)	13,6	2,7
Homeroom/classroom teacher/wali kelas (n=1,144)	15,0	3,9
Other (n=1,671)	14,8	1,8
Involvement in community health facility/posyandu		
Not a posyandu officer (n=7,449)	13,5	1,6
Involved as a posyandu officer (n=150)	23,4	6,1
Involvement in government program		
Not a facilitator/involved in government program(s) (n=7,425)	13,3	1,7
A facilitator/involved in government program(s) (n=174)	28,2	4,8
Satisfaction with Work		
Very Dissatisfied/Dissatisfied (n=575)	21,0	4,8
Satisfied/Very Satisfied (n=7,024)	12,9	1,5
Non-Teaching Workload Affects Performance		
Does not experience/does not affect performance (n=6,950)	13,3	1,7
Non-teaching workload somewhat affects performance (n=331)	14,8	3,4
Non-teaching workload affects performance (n=155)	13,5	4,5
Non-teaching workload strongly affects performance (n=161)	23,6	5,4

Source: Teacher Absenteeism Survey, Visit 1, 2013

Outside of school, some teachers were involved in the community in a range of official roles. None of these involvements were found to be associated with absence from school. Interestingly, however, the small cohort of teachers who were involved as an official for their community health facility/posyandu or as a facilitator for a government program such as Program Nasional Pemerdayaan Masyarakat/National Program for Community Empowerment (PNPM), Program Keluarga Harapan/Conditional Cash Transfer (PKH) and Proyek Penanggulangan Kemiskinan di Perkotaan/Urban Poverty Project (P2KP) (2.2% and 3.0% respectively, with very little overlap between the two), were found to have higher rates of absence from class than those who were not. This suggests that these roles may require teachers to bring their work with them to school, taking them out of class.

Teacher satisfaction with their job was investigated for a connection with absence from class. The study found that 91% of teachers indicated that they were satisfied or very satisfied with their jobs. Teachers expressing satisfaction were half as likely to be absent from the classroom as their dissatisfied counterparts (Table 32).

Overall teacher satisfaction with their own performance was not significantly related to absence from class. However, teachers were also asked about specific issues related to their teaching job that they think adversely affects their performance, such as low salary, teacher shortages and lack of facilities. Of

these, only one issue was found to be related to absence from class: the extent of non-teaching workload. Teachers who believed that a high non-teaching workload was strongly affecting their performance had a higher rate of absence (23.6% ± 10.8%), than those who did not think this was an issue (13.3% ± 3.4%). In turn, teachers who were a BOS administrator/treasurer and those who were a homeroom/classroom teacher/wali kelas were more likely to agree that a high workload was affecting their performance.

7.2.3 School Environment

The school working environment factors included principal characteristics, leadership and management, community and parent involvement with the school, supervision at various levels of the education system structure and the work norms at the school. The principal's presence and management of the school was an important factor in the working life of teachers. However, the principal's presence was found to have an inconsistent relationship with absence from class over the two visits. While in the first visit, schools where the principal was absent had a lower teacher absence from class rate, this relationship was reversed in Visit 2, making it difficult draw any conclusions about the relationship between principal attendance and teacher absence from school.

Teacher supervision was another component of school practices that was thought to influence teacher absence. For this study, teachers were asked about classroom supervision by different stakeholders, including principals and district education offices. Of these, supervision by the school committee was the only one associated with teacher absence from class. The direction of the relationship, however, was not as initially presumed. As reported in Table 33, teachers in schools where supervision of teachers by the school committee was not always with advance notice had a 20.3% (± 6.6%) absence rate, compared to around 13.3% for teachers in schools with no supervision or supervision always with advance notice. This form of supervision had not been found to have an influence on absence from school.

Table 33. Teacher Absence from Class, by School Committee Involvement in the School

	Teacher Absence Rate di Kelas (%)	SE
Pengawasan pengajaran oleh komite sekolah		
Tidak ada pengawasan oleh komite sekolah (n=6.512)	13,3	1,6
Pengawasan selalu dengan pemberitahuan terlebih dulu (n=301)	13,3	4,0
Pengawasan tidak selalu dengan pemberitahuan terlebih dulu (n=n-497)	20,3	3.3
Keterlibatan komite dalam mempersiapkan anggaran sekolah		
Komite tidak terlibat (n=2.064)	9,1	2,0
Komite terlibat (n=6.055)	14,9	1,9
Keterlibatan komite dalam membangun dan memantau fasilitas sekolah		
Komite tidak terlibat (n=2.112)	10,0	1,8
Komite terlibat (n=6.007)	14,3	1,8
Pelaporan kehadiran kepada komite sekolah		
Sekolah tidak menyerahkan laporan kehadiran kepada komite (n=6..649)	13,0	1,8
Sekolah menyerahkan laporan kehadiran kepada komite (n=1.564))	6,3	1,6

Source: Teacher Absenteeism Survey, Visit 1, 2013, except for ^Visit 2, 2014

Some other specific forms of committee involvement were also found to be related with higher rates of classroom absence (see Table 33). In schools where the committee was involved in preparing the school budget, the teacher absence from class rate was 14.9% (± 3.8%), higher than in schools where they were not involved 9.1% (± 4.0%). This was not found to be associated with absence from school, although committee involvement in monitoring (rather than preparing) the school budget was found to be linked to lower rates of teacher absence from school. Similarly, where the school committee was involved in monitoring school facilities, teachers had a higher absence from class (14.3% ± 3.5%), than where they were not involved (10.0% ± 3.6%).

The reporting of attendance to the school committee was associated with lower absence rate from class (6.3% ± 3.1%), compared to schools that did not report absence rates to the committee (13.0% ± 3.7%) – see Table 33.

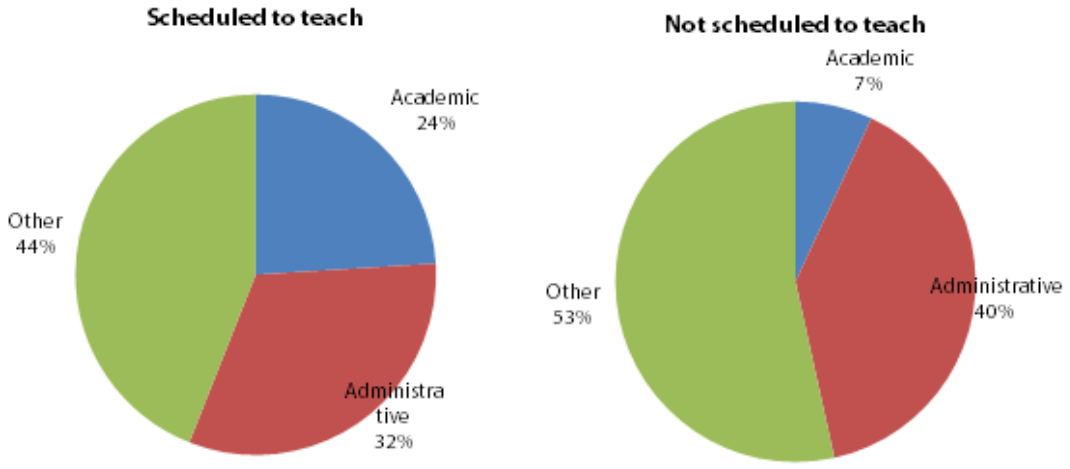
A possible explanation for these contradictory findings is related to the complexity of the nature of school committee involvement. A number of active forms of committee involvement – that require presence of committee members in school, such as to monitor facilities or teaching – were associated with higher teacher absence from class. Meanwhile, a more passive form of involvement – schools submitting reports to the committee – was associated with lower absence. As some findings suggested that non-teaching involvement was associated with higher absence from class, it may be possible that some forms of committee involvement in schools could lead to an increased non-teaching workload for teachers that take them away from their classrooms.

7.3 Teacher Activities during Absence from Class

As they observed teachers who were in school but not teaching as scheduled, enumerators were asked to note what the teacher was doing, placing the activity into one of the following categories: other academic or teaching/learning activity (e.g. tutoring or assisting a student, grading assignments), an administrative activity related to work at the school (e.g. completing forms, collecting data), break/activity not related to school (e.g. meal, smoke break) and an 'other' category that was later largely recoded into the break/activity not related to school category based on the further description provided.

Developing these categories and classifying teachers proved to be challenging. Often it was not quite clear what the teacher was doing and asking them to provide an answer would remove the objectivity of the exercise. At times, enumerators would make assumptions about what type of category a teacher was engaged in based on where they were. The proportion of teachers engaged in these activity categories while they were absent from class are presented in Figure 16, which also provides a comparison with activities that teachers not scheduled to teach were engaged in.

Figure 16. Teacher Activity When in School But not Teaching



Source: Teacher Absenteeism Survey, Visit 2, 2014

Most frequently, regardless of whether or not they were scheduled to teach, teachers who were at school but not teaching were found doing activities that could neither be categorized as academic nor administrative. The most common description that enumerators provided as further information was 'waiting', either for their next class to start or for the end of the school day if they had no more classes to teach that day.

Sometimes they were chatting with other teachers in the teacher room, reading, preparing food or eating. The descriptions that enumerators provided, however, did not subjectively suggest productive work.

The next most frequent type of activity was administrative work. In some instances enumerators provided further information on the activity they observed. This included assisting in the principal's or administration office, keeping guard of the sick room, entering information into the national education database (DAPODIK) and being a teacher on-duty/piket (who, other than being responsible for unattended classes was also sometimes responsible for keeping a look out for students who arrived late or sneaked out of class).
Finally, one in four teachers who were absent from class were found engaged in another academic activity. Some teachers were put into this category because they were in the teachers' room, even though they were not necessarily engaging in teaching and learning-related activities. Other examples included designing assessment materials for upcoming end-of-semester tryouts and grading assignments. Some examples were best described as teaching in another school, as they referred to teachers who were teaching in another school level that shared the same building (for example, a secondary school teacher leaving class to replace an absent teacher from a primary school in the same school complex).

7.4 Summary

This study is the first large-scale survey in Indonesia that looks at teacher absence from class. Very little exists in the literature about factors that influence the absence of teachers from class when they are already at their school. These factors differ from what influences teacher absence from school altogether.

The measure was defined in the study as the number of teachers who, although present at school, were not in fact in the classroom, expressed as a proportion of all teachers who were scheduled to be teaching during the observation. Some key findings of on this measure were as follows:

- Among teachers who were scheduled to teach, 13.5% (± 3.2%) were found in school but not in the classroom in Visit 1 and 11.6% (± 3.2%) in Visit 2.
- A significantly higher proportion of teachers in public schools (14.9% ± 4.0%) were found to be absent from class, than in private schools (9.7% ± 3.9%), even though the reverse was true for teacher absence from school.
- Male teachers were 1.5 times more likely to be absent from class than female teachers. This was a similar pattern as absence from school, though not as strong a relationship.
- In contrast to absence from school, the least experienced teachers were least likely to be found absent from class.
- In primary schools, teachers of higher grades were more likely to be found absent from class.
- In secondary schools, teachers of English were around half as likely to be absent from class than other teachers, while teachers of subjects other than English, Bahasa Indonesia, mathematics, science, social studies, religion, civics, physical education and art (most commonly, local content subjects, for example health or a local language) were 1.6 times more likely to be absent from class.
- Only around one in 10 secondary school teachers taught more than one subject in the school visited. Most of these teachers taught a combination of non-core subjects (e.g. physical education, art and so on). Although teachers who taught more than one subject had a slightly lower rate of absence from school than other teachers, teachers who taught more than one subject were considerably more likely to be found absent from class than their colleagues who taught only one subject.
- Teachers who held other roles within the school, such as a vice-principal role, were more likely to be absent from class, as were teachers who were involved in the community as a community health facility/posyandu officer or facilitator for government programs.
- Teachers who stated that a high non-teaching workload strongly affected their work performance were more likely to be found absent from class.
- Teachers who were satisfied with their job were half as likely to be absent from the classroom as their dissatisfied counterparts.

- Unlike for absence from school, the involvement of the school committee was for the most part associated with higher rates of teacher absence from class. The exception was the relatively passive involvement of the committee receiving reports on teacher attendance from the school, which was linked to lower rates of class absence.
- Much of the time when teachers were at school but not teaching appeared to be spent waiting for their next class or on administrative tasks, rather than on academic tasks.

Overall, the rate of teacher absence from class was less stable, had greater variation and was more difficult to predict than teacher absence from school. There is much more to understand with regard to this type of teacher absence. This study has laid the groundwork in conceptual and methodological terms and identified issues to explore in future research.

Chapter 8
Effects of Teacher Absence

To explore the effects of teacher absence on schools, other teachers and student learning, this chapter discusses the dynamics between absence from school and absence from class, combining findings from teacher observations and classroom observations. Previous studies into the relationship between teacher absence and student achievement scores have posited that the link could be explained by the disruption of learning time when a teacher is absent and not replaced; this study collected information to investigate this issue.

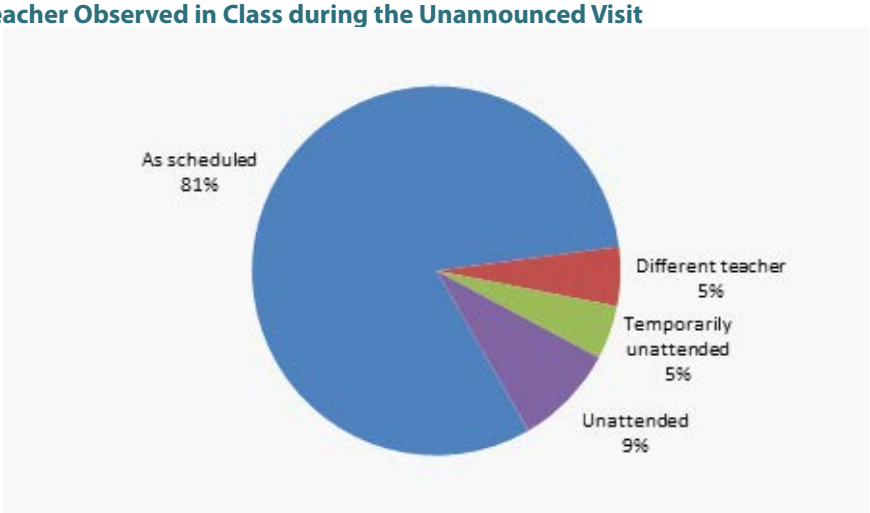
The 2003 Indonesian study, for example, discussed the lower prevalence of teacher replacements (or substitutions) in developing countries compared to more developed countries, and in rural areas of Indonesia compared to more urban areas. However, little data are actually available on the replacement or substitution system to deal with teacher absence. Using results from principal interviews and teacher interviews, as well as direct observations of teachers and classes, this study is able to present in this chapter findings on the school resources available and classroom practices that are in place in Indonesian schools when teachers are absent. The chapter concludes with an examination of the influence of teacher absence on student achievement in mathematics.

8.1 Effects on Instructional Time

This study included a brief observation of classes that were in session during one lesson period of the enumerators' second visit, a total of 6,229 classes around the country. Enumerators spent on average of 3.5 minutes in each class, to check for the presence of a teacher, whether or not it was the scheduled teacher, what general activity was taking place and how many students were absent.

In most (81.1%) of the classes observed, the scheduled teacher was found in the class (see Figure 17). In the rest of the classes, 72.3% were found without any teacher. Enumerators were asked to check these unattended classes again after they had observed all other classes. Two-thirds of the time, the teacher had not returned by the end of this observation time (which mostly took around 10-30 minutes per school, depending on how many classes the school had). Where the teacher had returned, the class is considered only temporarily unattended.

Figure 17. Teacher Observed in Class during the Unannounced Visit



Source: Teacher Absenteeism Study, Visit 2, 2013

Taking into account the duration of the observation, this meant that at the time of the unannounced visit, 9.0% of classes were unattended (for at least the duration of the observation, which took up two-thirds of a lesson period on average) and a further 5.3% of classes were temporarily unattended, for more than the average 3.5 minutes enumerators spent in each class.

Another way of examining the effects of teacher absence on instructional time loss is to combine this information with the scheduled hours of instruction per week. According to the Minister of National Education Decree No 15 of 2010 about Minimum Service Standards for Basic Education, schools are to province 18 hours of teaching and learning time per week at grades 1-2, 24 hours per week at grade 3, and 27 hours per week for grades 4 to 9. In this study, principals reported an average of 20.2 hours per week of scheduled instruction time in primary schools and 25.7 hours per week in secondary schools (Table 34). These average figures are already below what is stipulated in the Decree.

As shown in Table 34, the weekly hours of instruction actually received by students are likely to be even smaller when adjusted by the proportion of unattended classes observed during unannounced visits.[91] Primary schools are estimated to provide an average of only 18.5 hours per week and secondary schools only 23.1 hours per week. When compared to the existing regulation on teaching and learning time, only 54.1% of primary schools are estimated to meet the hours outlined in the Minimum Service Standards (a conservative estimation as the lowest number of 18 hours per week was used as a cut-off) and only 32.3% of secondary schools do.

Table 34. Effects of Teacher Absence on Instruction Time, by Level

	Primary	Secondary
Scheduled instruction per week (hours)	20.2	25.7
Estimated instruction per week received (hours)	18.5	23.1
Scheduled lesson hours meets regulation^ (%)	69.4	39.2
Estimated lesson hours received meets regulation^ (%)	54.1	32.3

Source: Teacher Absenteeism Survey, Visit 1, 2013
Note: ^Regulation hours used were 18 hours per week for primary schools and 27 hours per week for secondary schools.

8.2 Use of Substitute Teachers

Around 30.1% of Indonesian principals reported that it was difficult to find a substitute for an absent teacher. This proportion varied by region and location, with more principals in the Eastern regions finding

91 For each school, the estimated hours of instruction per week was calculated by multiplying the proportion of unattended classes over all classes observed during a lesson period with the weekly hours of instruction figure reported by principals. The assumption made is that the incidence of absence is on average consistent across different times and days in the week. Tests on teacher absence from class rates by the time of day and day of the week of the enumerator's observation found no statistical differences.

this difficult (28.7% of principals in Sumatra, for example, compared with 49.8% of principals in Maluku and Papua region). Confirming the 2003 study, around one-half of principals in remote schools considered this a difficulty, while only one-third in rural regions and one-fifth in urban regions did.

Sometimes schools would schedule on-duty teachers (*guru piket*), defined in this study as teachers who are scheduled to be present at school but not scheduled to a particular class because they function as a standby substitute teacher. Close to one-half of all principals said that in an average school day there was at least one on-duty teacher scheduled – on average two on-duty teachers scheduled per day were reported. Only one in four schools reported having provided specific training on the expectations of a substitute teacher. These took the form of either a directive from the principal or from a meeting of teachers.

Principals, or their representatives, were asked about the policy or common practice at their school when a teacher was absent from school. Their responses are presented in Table 35. Almost all said that absent teachers were substituted, mostly commonly by an on-duty teacher or another teacher who was not scheduled to teach. Two-thirds of principals reported regularly substituting for absent teachers themselves, while one in four reported that another teacher gets asked to substitute even if they are themselves teaching another class. Only one in every ten principals said that absent teachers were not commonly substituted, and only one in twenty said that absent teachers were substituted by temporary / contract teachers.

Table 35. Principal Reports on the Use of Substitute Teachers when Teachers are Absent from School

Type of Substitution Used	Proportion of Principals %
Substitution by on-duty teacher/another teacher who is not teaching	81.1
Substitution by another teacher even if s/he is teaching another class	25.5
Substitution by me/the principal	61.2
Substitution by temporary/contract teacher	5.3
No substitute teacher, students given task	10.9
Do not know	0.3

Source: Teacher Absenteeism Study, Visit 1, 2013

Of the observed classes that did not have their regular teacher, around two-thirds had a substitute teacher assigned to take responsibility of the class. However, contrary to principals' reports that substitutes are teachers who are not teaching, most of these assigned teachers were at the time also responsible for another class. As a result, during the classroom observation components of unannounced visits to schools, less than a third of the classes that did not have their regularly scheduled teachers were found with a substitute teacher in the classroom.

Primary school classes were slightly less likely to be found with their scheduled teacher (80.0%) compared to secondary school classes (87.0%). However, primary school classes were considerably more likely to get a replacement teacher while secondary school classes were significantly more likely to end up without a teacher in the classroom. While among primary schools 55.2% of classes without their scheduled teacher were found with a substitute, among secondary schools only 10.0% were. Furthermore, in the secondary school setting where teachers are subject specialists, around 60.0% of these substitute teachers were found to not be trained in the subject matter of the scheduled teacher.

Policies regarding substitute teachers appear to be in need of a major overhaul. According to all the respondents in DEO and the MoRA offices, there was no specific policy relating to the replacement or substitution of absent teachers at the school (Appendix D). The procurement policy on substitute teachers is the absolute responsibility of the principal. The officials also said that they only called schools to ensure that the students were not left without a teacher or that teaching-learning activities were being conducted properly.

8.3 Class Activity during Teacher Absence

Some level of absence is unavoidable. Teachers have a right to sick leave, maternity leave, study leave and other forms of official leave as outlined in national and local regulations. Advance planning and preparation by teachers and schools can limit the loss of learning that results from absences. As the previous section outlined, having a substitute teacher in the class is one way that schools can and do try to manage teacher absences.

Principals were also asked about the common activities or practices of substitute teachers when they were replacing an absent teacher. Their responses are presented in Table 36. Most principals reported that the class of an absent teacher makes progress on that teachers' subject, either by completing a task or receiving materials that they would have experienced if their teacher were present. Otherwise, any of the following three things happen in almost equal frequency: the substitute teacher simply monitored the class to keep student behaviour in check without prescribing a set activity, they set a different type of task (for example, something in their own subject area) or they repeated previously covered materials.

Table 36. Principals' Report of Class Activity under a Substitute Teacher

Class Activity under a Substitute Teacher	Proportion of Principals who Report this Activity%
Set a task or activity similar to that usually set by regular teacher	74.7
Teach material as scheduled in regular teacher's lesson plan	64.8
Ensure student discipline (e.g. students remain quiet) without prescribing set task or activity	33.7
Set a different type of task or activity (including related to replacement teacher's subject)	27.1
Repeat previously covered material	27.0
Other	4.4

Source: Teacher Absenteeism Study, Visit 2, 2013

Though the above findings were from principals' reports of what currently occurs in their schools, it is possible that they were representing what they believe should happen instead. As most substitute teachers are not usually teachers of the same subject or grade level as the absent teacher, the extent to which the first two items in Table 36 could happen is conditional on the level of preparation or compensatory work that the absent teacher put in. In the current study, teachers were asked about how they managed their class the last time they were absent from school to attend training and the last time they were absent for other reasons (official duties, illness, care, etc.). Presumably, absence for training would be scheduled in advance, allowing teachers to make the necessary arrangements to keep their students' learning process on track. Table 37 presents those results.

Table 37. Teachers' Practices or Preparation during Their Last Absence from School

Type of Practice or Preparation	Proportion of Teachers Who Reported the Practice or Preparation	
	When absent to attend training (%)	When absent for other reasons (%)
Prepared in-class assignment and left students with another teacher	79,3	73,4
Prepared in-class assignment and left students without supervision	43,0	35,8
Offered replacement class hours/ lessons	5,2	41,8
Compressed materials to meet scheduled lesson plan	28,1	7,3
Called principal or other teacher and let them decide class activity	8,1	4,1
Did not prepare or do anything/ other	3,6	0,2
Let students out of class	0,8	5,5
Other practice or preparation	3,0	2,6

Source: Teacher Absenteeism Study, Visit 1, 2013

The most common way teachers dealt with absence was to prepare an in-class assignment and leave their students under the supervision of another teacher. This was consistent with the responses of principals. However, compared to principals, a higher proportion of teachers reported leaving their classroom without supervision, which was more consistent with the actual proportion of unsupervised classes of absent teachers that were observed by enumerators.

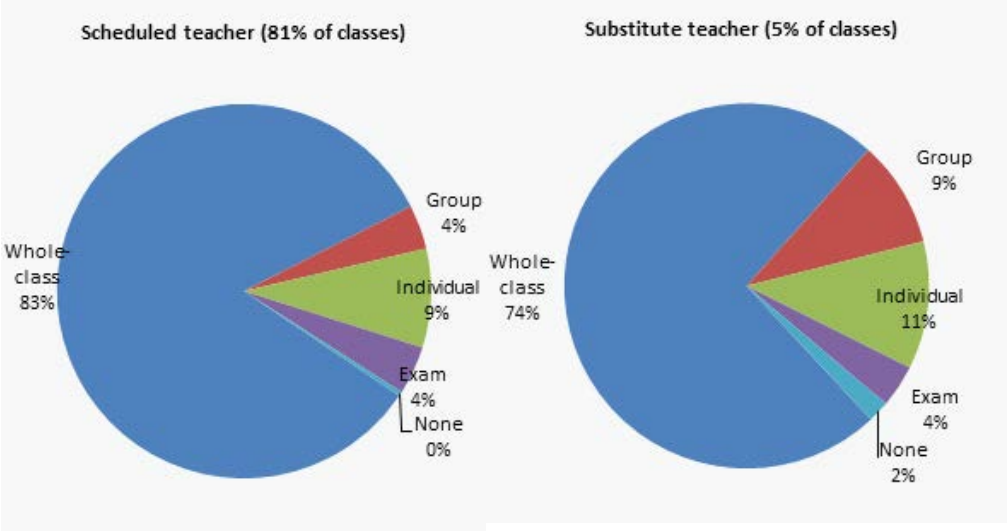
There were other key differences, however, in the way that teachers managed their absence for training and for other reasons. When they were absent for training, teachers were more likely to compress materials to meet the schedule in their lesson plans (28.1% of teachers reported doing this) than when they were absent for other reasons (only 7.3%). Surprisingly, they were also more likely to not prepare or do anything to manage absence for training. When they were absent for other reasons, 41.8% of teachers reported offering replacement class hours or lessons to make up for the classes they missed, compared to 5.2% when they were absent for training. Importantly, 5.5% of teachers reported that the last time they were absent for reasons other than training, their students were let out of class.

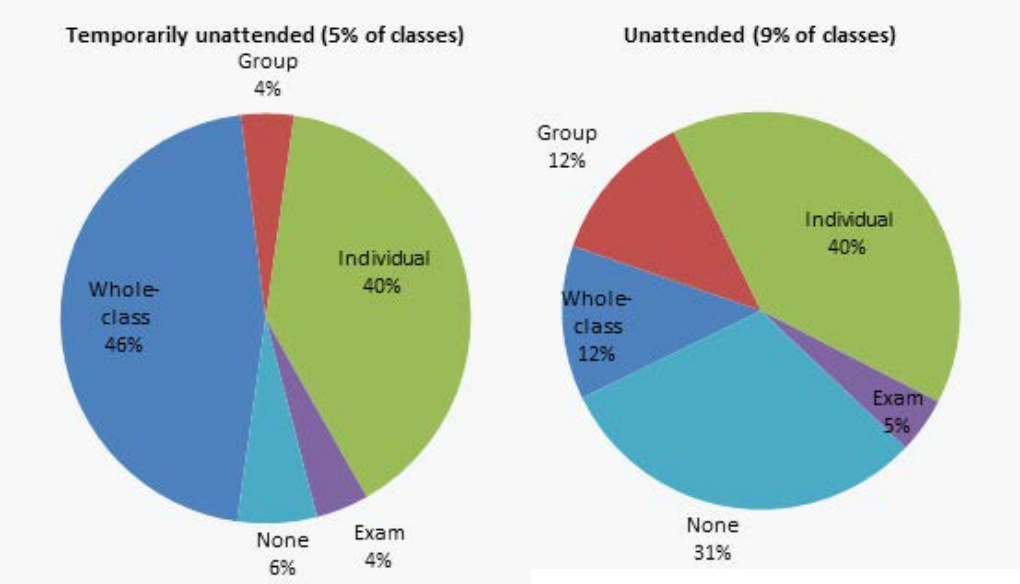
During the classroom observations in the second round of school visits, enumerators also collected information on the type of activity they could see in the classroom: whether students were engaged in whole-class activity which in this context was characterized by a teacher delivering instruction or lecturing in front of the whole class (75% of classes were found with activities categorized here); group work where students worked on a task or activity in groups (5% of all classes); individual work (13% of classes); in-class exam/test (4% of classes); or if there were no prescribed activity (3.5% of all classes).

There were significant differences in the frequency these activities were observed in classrooms across different regions. Just under 90% of classes in the Maluku and Papua region were found with students engaged in whole-class activity. Meanwhile, classes in Java showed the highest diversity of activities: only 70% were engaged in whole-class activities, 16% were engaged in group work, 6.5% were in individual activities and 6% were sitting a test. With regards to the latter, Javanese classes were also where the highest incidence of in-class testing was found. In the Bali and Nusa Tenggara region and in Sulawesi less than 1% of classes were completing a test.

Figure 18 presents the different categories of classroom activity that were observed during school visits, by the teacher found in class.

Figure 18. Classroom Activity, by Teacher Observed in Class



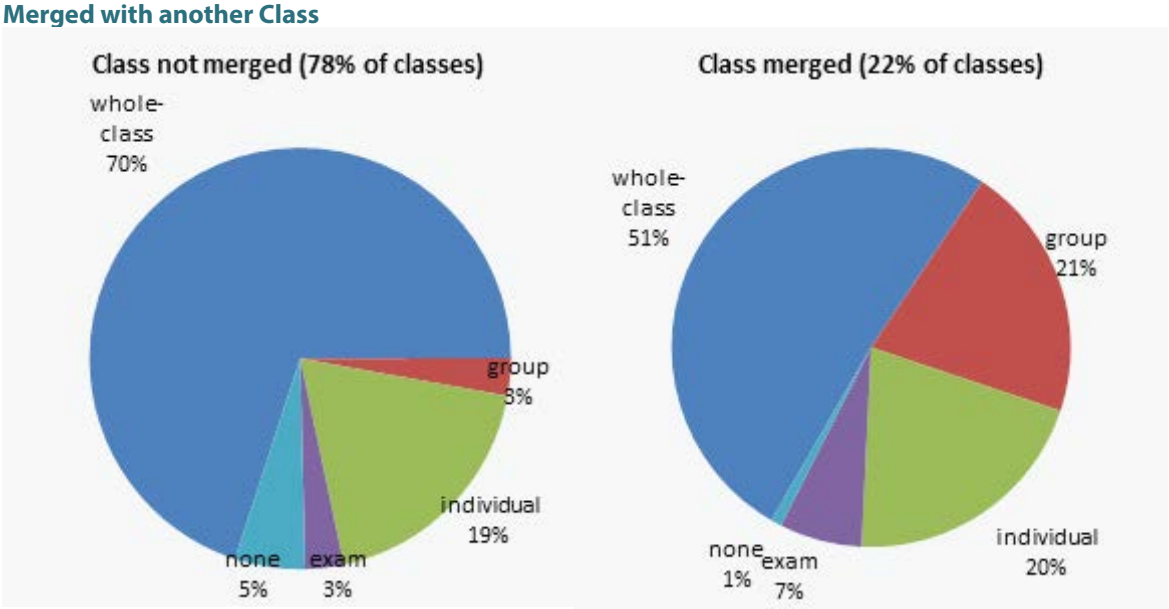


Source: Teacher Absenteeism Study, Visit 2, 2013

The graphs show several notable differences depending on who was observed in class. When there was a teacher in the classroom, the level of activity observed in class did not vary significantly depending on whether the teacher was the regularly scheduled teacher or a substitute. The only notable difference was the higher proportion of group work and free time under the supervision of substitutes. It is promising that only 2% of classes with a substitute had no structured activity. Unattended classes, on the other hand, were commonly occupied by students doing individual work. Where the absence of a teacher was only temporary, they were also likely to be engaging in whole-class activity. Meanwhile, close to one-third of classes that were unattended for longer durations had no prescribed activity. The interviews with District education officials revealed concerns that in schools with a shortage of teachers; especially those located in remote areas, students were often left doing nothing when teachers were absent (Appendix D).

Of the classes without the scheduled teacher present, 22% were found to have been merged with another class. As shown in Figure 19, the classes that were merged were more likely to have a prescribed activity. They were more likely to be engaged in group work than classes that were not merged, and less likely to be in an activity involving the whole-class (i.e. listening to material presented by teacher in a lecture format).

Figure 19. Classroom Activity in Classes without the Scheduled Teacher, by Whether the Class was Merged with another Class



Source: Teacher Absenteeism Study, Visit 2, 2013

Although the information presented in this chapter so far is a step beyond what was previously known about teacher absence in Indonesia, it still only scratches on the surface of understanding the effects that teacher absence has on student learning. Much depends on the quality of teaching, including activities, assignments and tasks, by the substitute teacher as well as by the absent teacher on days when they are present (as the loss of poor quality teaching is less great of a loss). Assessment of teacher quality fell outside of the scope of this study, and enumerators were not recruited to have the knowledge of pedagogy that this would require. However, this is certainly an area worthy of further research.

8.4 Principals' Perceptions of the Effects of Absence

The literature indicated that teacher absenteeism is not widely perceived to be an educational barrier by Indonesian principals. Almost all 15-year old Indonesian students were in schools where the principal believed that teacher absenteeism either does "not at all" hinder learning or does so "very little", according to the 2009 OECD PISA survey.[92] As part of their interview in the second visit for the current study, principals were asked about their perception of the effects of teacher absence at their school. The results are presented in Table 38.

Table 38. Principals' Perceptions of the Effects of Teacher Absence at their School

Effect of Teacher Absence	Proportion of Principals who Agree (%)
Teacher non-attendance is contributing to student disciplinary issues	34.8
Student academic performance is suffering because of teacher non-attendance	30.6
Teacher non-attendance is contributing to a lack of motivation among other teachers	19.5

Source: Teacher Absenteeism Study, Visit 2, 2013

Although the proportions reported in Table 38 were not quite as low as in the PISA survey, around one in three principals thought that teacher absence was contributing to student disciplinary issues, a similar proportion to those who thought that it was influencing student academic performance. Meanwhile, only one in five principals believed that teacher absence was contributing to a lack of motivation among other teachers. Higher teacher absence rates at their school made principals more likely to agree with the above statements. Principals in private schools and in secondary schools were also more likely to agree with them. Across different regions, the only significant difference was between the Maluku and Papua region and all other regions. Principals in Maluku and Papua were about twice as likely to agree with the above statements as principals in other regions.

8.5 Teacher Absence and Student Absence

An Indonesian teacher absenteeism survey in 2008 found a relationship between teacher absence and student absence rates,[93] which was consistent with the theories put forward by other researchers.[94] In the current study, student absence data were collected from schools at both school visits and, as shown in Table 39, the student absence rate at the time of Visit 2 was higher than the student absence rate during Visit 1.

This increase was significant in some regions – namely among schools in Java, Kalimantan and Sulawesi – but not in others. The direction of the relationship was constant across schools types, sectors and levels. It was significant among public schools but not among private schools, among general schools but not among madrasahs, and among primary schools but not among secondary schools – although these were largely because of the smaller proportion of schools that fall into the latter categories, thereby resulting in larger standard errors for their sub-group estimates.

92 Schleicher, 2012
93 Toyamah, et al, 2010
94 Ivatts, 2010

Table 39. Teacher Absence from School and Student Absence Rates

	Student Absence Rate (%)	SE
Study Visit		
Visit 1 (October-December 2013)	7.2	1.1
Visit 2 (January-March 2014)	9.2	1.2
Teacher Absence from School Rates – Visit 1		
No teacher absence or 0% absence rate [n=5,383]	4.9	0.6
Between 0.1% and 19.9% [n=1,768]	5.6	0.8
20.0% or above [n=2,286]	10.0	1.8

Source: Teacher Absenteeism Study, Visit 1, 2013

The study also found a relationship between teacher absence rates and student absence rates in Indonesian schools. As summarised in Table 39, the student absence rate in schools where the teacher absence rate was zero is significantly lower, at 4.9% (± 1.1%), than in schools where the teacher absence rate was above 20%, at 10.0% (± 3.7%). This relationship held in Sumatra, Java, Sulawesi and the Maluku and Papua region, but not in other regions. It also held across different school types and sectors, but although it held for primary schools it was not statistically significant among secondary schools.

It should be noted that, as with the relationships explored so far, the design of this study does not allow for significant conclusions to be made about the direction of relationships between two variables. Instead, the framing of the discussion was informed by the theoretical framework that underlies the study. In this case, the theories that have been put forward around the topic suggest that teacher absence influences student absence by reducing students' motivation to attend school. This was supported by anecdotal evidence from the 2008 absenteeism study. However, the relationship between teacher and student absence is likely to be more complex than this, with a number of contextual and other factors influencing both. For example, student absence rates varied by school location, which was also a significant factor in teacher absence (see Chapter 4). The relationship between teacher and student absence rates, however, held even when school location was accounted for.

8.6 Teacher Absence and Student Achievement

The connection between student achievement and teacher absence is difficult to establish in a study such as this, where data on both absence and student achievement reflected a snapshot of a particular point in time. Student achievement is also influenced by a number of factors that are also correlated with teacher absence, for example socio-economic background of the students and teachers and geographical location, as well as other factors that are not measured as part of this study.

8.6.1 Achievement Tests

For this study, student assessments in mathematics and reading, in Bahasa Indonesia, were administered to a sample of 10 students in Grade 5 in sampled primary schools and Grade 8 at sampled junior secondary schools (see Table 40). The tests were developed separately for each year level but contained some common items between tests, and common texts for the reading test. The students were randomly selected from class lists at each grade level and a random number table.

As noted in Section 2.2, assessments were developed and adapted for use in this study in mathematics and reading (Bahasa Indonesia) each at primary and junior secondary level. Items for these tests were acquired from the previous absenteeism study[95] and from the publically available and published items used in the Progress in International Reading Literacy Study (PIRLS) and Trends in International Mathematics and Science Study (TIMSS). While the assessments contained items from these international studies, they do not replicate these tests in their final form or in administration method, and therefore direct comparisons

95 Usman et al, 2004

between the results achieved on the adapted tests in this study and the results achieved in the international survey assessments are not possible. The tests were administered to students in sample schools during the second visit.

Table 40. Student Test Participation in Mathematics, by Region

Region	Primary Participation	Secondary Participation
Sumatra	1,098	316
Java	1,698	227
Bali and Nusa Tenggara	1,075	282
Kalimantan	909	295
Sulawesi	970	292
Papua and Maluku	788	261
Indonesia (Total)	6,538	1,673

Source: Teacher Absenteeism Study, Visit 2, 2013

The tests were calibrated using ACER ConQuest software to assess the psychometric properties of the test. This was an important step in the process to ensure that the assessments were providing reliable and valid information about student achievement in mathematics and in reading. As part of these analyses, the percentage of students answering each item correctly, and in the case of multiple choice items, the percentage of students choosing each of the distractors or incorrect options for each item were calculated. The analyses also identified the percentage of students who did not attempt each item. Statistics related to the fit of the items to the Rasch model, the item difficulty, facility and discrimination were computed.

These analyses revealed that the reading test was too difficult for the students at the primary level. Tests that are too difficult for the students who sit them provide very limited information about the ability of those students in the subject matter of the test. This is particularly the case for short tests where the content of the test is limited by the length of the test. The primary level reading test also showed an increased incidence of missing responses as the test progressed. That is, students did not complete or attempt the items at the end of the test at the same rate as at the beginning of the test. The first item, for example, showed a missing response percentage of just 1.1%, item 8 in the middle of the test showed a missing response percentage of 2.7% and item 15 at the end of the test had a missing response percentage of 9.3%. Item discrimination on many of the items was poor, meaning that the items did not distinguish well between students of high and low ability. This suggests a high incidence of students guessing on many items.

At grade 8 the reading test better reflected student ability. In general the items performed reasonably well, however there was still some considerable incidence of students failing to complete the test. The missing response percentage for the final three items on this test increased from 5.6% on the third last item, to 6.5% on the second last item, to 10.3% on the final item. It was considered that the uneven performance of the reading tests across the two testing levels and considerable amount of missing data, particularly towards the end of the tests, meant that the reading achievement results were unsuitable to be used for further analysis.

In contrast, the mathematics tests were more suitable, at both grade 5 and grade 8 levels. In contrast with the reading tests, students were better able to complete the assessments in the time allowed. For example, for the final item in the grade 5 tests, only 4.5% of responses were missing and for the final item on the grade 8 test only 5% of responses were missing. The items in the mathematics tests overall showed better discrimination and fit to the Rasch model, however some items were removed from the analyses to improve the quality of the tests. One item was removed from the analysis for the primary level test and four items were removed from the analysis for the secondary level test. The final form of the tests showed good reliability, 0.77 at the primary level and 0.74 at the secondary level. While there were some psychometric problems with the mathematics test, particularly at the grade 8 level, it was felt that the mathematics results would provide a better indicator of student achievement in analyses of the effects of teacher absence on student performance.

8.6.2 Student Achievement by Region

The results of student achievement on the mathematics test are reported in Table 41, in the form of the mean percentage correct. The maximum score possible on the primary test was 14 and the maximum score possible on the secondary test was 11.

The results achieved on the primary level test cannot be compared with the results achieved on the secondary level test, for example a higher mean achievement in the primary level test for a region than in for the secondary level test does not indicate that primary students had higher mathematics ability than secondary students in the region.

Student achievement on the mathematics test varied a little in each region of the study. At the primary level, achievement ranged from a mean of 50.6 (± 8.8) in Papua and Maluku to 63.5 (± 4.2) in Java. At the secondary level, the mean mathematics score ranged from 38.2 (± 10.3) in Papua and Maluku to 52.5 (± 8.0) in Java.

Table 41. Student Mathematics Achievement, by Region

Region	Primary Mathematics Achievement		Secondary Mathematics Achievement	
	Mean	SE	Mean	SE
Sumatra	59.4	3.2	46.1	6.3
Java	63.5	2.1	52.5	4.0
Bali and Nusa Tenggara	52.6	3.0	47.2	3.4
Kalimantan	58.5	2.1	52.3	3.0
Sulawesi	53.9	1.5	44.5	3.3
Papua and Maluku	50.6	4.4	38.2	5.1
Indonesia (Total)	60.1	1.4	49.4	2.8

Source: Teacher Absenteeism Study, Visit 2, 2013

8.6.3 Student Achievement and Teacher Absence

To try to gauge the effect of teacher absence on student achievement, the mathematics achievement was examined against the overall teacher absence rate by school. The absence rate calculated was for the first visit to schools, where a more complete set of background data were collected. It was expected that there would be a negative relationship between math achievement and the school absence rate, that is, as the absence rate increased the math score would decline.

Table 42 shows the mean student achievement by the three levels of absenteeism in schools as used in this chapter. As illustrated in the table here, the lowest mean mathematics achievement was found in schools with the highest teacher absence from school rates in both primary schools and secondary schools. Among primary schools, however, there is no difference between schools with no absent teachers and those with absence rates from school below 20%.

Table 42. Teacher Absence and Student Mathematics Achievement

	Mean Mathematics Achievement	SE
Teacher Absence from School – Primary Schools		
No teacher absence or 0% absence rate (n=512)	61.1	1.7
Between 0.1% and 19.9% (n=160)	61.2	2.1
20.0% or above (n=221)	56.2	1.7

Teacher Absence from School – Secondary Schools		
No teacher absence or 0% absence rate (n=512)	52.6	3.1
Between 0.1% and 19.9% (n=160)	48.3	4.8
20.0% or above (n=221)	42.8	3.3
Teacher Absence from Class – Primary Schools		
No teacher absence or 0% absence rate (n=559)	60.4	1.7
Between 0.1% and 24.9% (n=163)	60.9	1.4
25.0% or above (n=171)	58.5	2.0
Teacher Absence from Class – Secondary Schools		
No teacher absence or 0% absence rate (n=559)	49.2	3.1
Between 0.1% and 24.9% (n=163)	57.2	3.9
25.0% or above (n=171)	46.2	4.7

Source: Teacher Absenteeism Study, Visit 1, 2013

With regards to teacher absence from class, student achievement in mathematics was lowest among schools where 1 or more out of every 4 teachers were absent (the median among schools where there is absence from class). This was the case for primary and secondary schools. However, these differences were not statistically significant.

It is important to note that these results do not take into account all the circumstances in which teacher absence may affect student achievement. The teacher absence rate measure used here is comprised of several different kinds of absence - intermittent absence due to illness or exceptional circumstances in the life of the teacher on that day and extended ongoing absence recorded at only one point in time; absence that was covered by a substitute teacher or another teacher at the school and absence that was not covered at all so that students receive no instruction on that day.

The effect that teacher absence can have on student achievement is also conditional on the quality of teaching that students receive when teachers are present, as it speaks to the quality of the 'loss' that students experience when a teacher is away. Teaching quality is an element that is worth further study to complete this picture. Nevertheless, when read together, the results presented in this chapter indicate the complexity of the effects of teacher absence.

Exploratory multivariate analyses indicate that, after controlling for a range of variables and district fixed effects, teacher absenteeism from school negatively influences student achievement in mathematics for the overall sample. The model explored the impact of teacher absenteeism on students in mathematics, given a range of other potential influences on achievement able to be captured by the study. The analyses are exploratory in that not all of the potentially important influences on achievement – including student's home background, and the quantity and quality of teaching in their mathematics classes through their schooling experience – were able to be measured in this particular study. The details of these analyses and the results are presented in Appendix E and are intended to act as a guide to further research, given the limitations noted.

The study shows that, in general, teacher absence adversely affected the conditions within schools that help shape student learning, including through the fact that large numbers of classes did not have substitute teachers, and where substitutes were used they were often not experienced in teaching the grade level or subject matter concerned.

8.7 Summary

This chapter presented findings that examined the effects of teacher absence on schools, other teachers, and student achievement. It started with a discussion of the estimated effects of teacher absence on instructional time, then followed with an exploration of what took place when scheduled teachers were not present. Some of the key findings were as follows:

- Of classes that were in session during the unannounced visits, 9.0% were unattended for the duration of the class and a further 5.3% of classes were temporarily unattended, with the teacher later returning to class.
- When unattended classes are taken into account, primary schools are estimated to provide an average of only 18.5 hours teaching per week and secondary schools only 23.1 hours per week. These are significantly below the stipulations in the Decree on Minimum Service Standards.
- The most commonly used way that schools reported dealing with absence was for the absent teacher to assign an in-class activity or task and a substitute teacher was then assigned responsibility for the class.
- Schools faced greater difficulty in finding appropriate substitutes for absent teachers than principals initially presented.
- Around 60% of classes without their regularly scheduled teacher had a substitute. Most substitutes were assigned to more than one class during one lesson period.
- Almost half (47.1%) of classes without their scheduled teachers were found to be unattended for the duration of enumerators' class observation (on average 23 minutes). A further 25.1% of classes were unattended temporarily (at least for the duration of an enumerator's average stay of around 3.5 minutes per class), with a teacher returning by the end of observation period.
- In secondary schools, only about one-third of substitutes were teachers of the same subject matter as the regularly scheduled teacher.
- Whether a scheduled teacher or a substitute teacher was present, there was little apparent difference between the types of activities students were engaged in.
- However, in unattended classes students were considerably more likely to be left without a prescribed activity.
- Although these findings go beyond what is previously known about school practices during teacher absence, the influence of the changes in classroom activity due to teacher absence is conditional on the level of teaching quality overall, both of the substitute and absent teachers. The study also attempted to gauge the influence of teacher absence on student achievement, using a short mathematics assessment. The key findings were:
- Exploratory multivariate analyses indicate that, after controlling for a range of variables and district fixed effects, teacher absenteeism from school negatively influences student achievement in mathematics for the overall sample and for primary schools, although not at the junior secondary school level.
- However, overall the study did not find a strong relationship between student achievement in mathematics and the absence rate of teachers in schools.
- Student performance reflects a range of home background and school contextual factors, and identifying the particular impact of teacher absence within the context of the teaching and learning practices in schools is a complex issue. The effect it can have on student achievement is conditional also on the quality of teaching that students receive when teachers are present and how different it is to what students receive when teachers are absent.

Future studies would benefit from a longitudinal design to investigate these important relationships, particularly through measuring the extent and impact of long-term or repeated teacher absences on student learning and motivation during students' time in schools.

Chapter 9
Towards an Understanding of Teacher Absence

This chapter examines the influence of different factors on teacher absence from school in Indonesia. The variables that are used in building the model are based on the correlates of teacher absence from school presented in earlier chapters. The model recognises that teachers work within schools that are located in districts and which in turn are located in provinces. The factors that influence absence can therefore be expected to operate at different levels, and therefore be potentially shaped by different types of policies.

9.1 Analyses

Table 43 presents estimates of the variation in teacher absence that can be 'explained' at different levels. The methodology was based on that used in a study of teacher absence in India[96] . The table shows that around 2.3% of the variation in teacher absence in the sample is 'explained' at the province level, 3.4% at the district level and 18.4% at the school level, with the rest of the variation being across individual teachers. The results suggest that what happens at the school level is a particularly important influence on teacher absence.

Table 43. Province, District and School Fixed-Effects Analysis of Teacher Absence

	Province Fixed Effects	District Fixed Effects	School Fixed Effects
R-Squared	0.027	0.043	0.2953
Adjusted R-Squared	0.023	0.034	0.1841
Observations	6,518	6,518	6,518
Number of "Fixed Effects"	25	64	893

To identify which particular factors at these different levels can explain the current rates of teacher absence, multiple regression models were fitted using Stata. A summary of the model with and without district fixed effects is presented in Table 44. While the former analyzed the effects of explanatory factors on teacher absence across Indonesia, the latter restricted the analysis to the effects on individual teacher absences within districts. These explanatory variables were collected at the individual teacher and at the school level. The changes in the model with the introduction of district fixed effects (in the final column of Table 44) were used to obtain a picture of the factors that may explain differences in teacher absence at the district level, for example whether the policy on school inspections was implemented effectively or not, or whether the impact of some factors was concentrated in particular districts.

As with previous analyses presented throughout this report, the models take into account this study's complex sample design, specifying the probability weights, stratification by region and clustering of teachers within schools and schools within districts. This resulted in a conservative estimate of standard errors and therefore statistical significance.

96 Kremer et al., 2005.

The final model used data from the observation of over 5,700 teachers in Visit 1. The dependent variable in these models was teacher absence from school, which took the value of 0 when a teacher was present and 1 when the teacher was absent when they were scheduled to teach. In line with the discussions in preceding chapters, the figures presented for each variable were its odds-ratio and standard error, with notations on whether the variable was a statistically significant predictor of teacher absence in the model. The closer the value of the odds-ratio for a variable was to 1, the smaller its effect on teacher absence. The inclusion of the symbols * or ** denotes that the effect of the factor concerned was statistically significant. For example, Table 44 shows that teachers in madrasah schools are 2.4 times more likely than teachers in non-madrasah schools to be found absent from school (without district fixed effects). In other words, when all the factors in Table 44 were held constant, teaching in a madrasah school still had a large, positive effect on whether a teacher was likely to be absent. The discussion in the rest of the chapter focuses on factors that were found to be statistically significant predictors of teacher absence from school.

Table 44. Regression Analysis of Factors Influencing Teacher Absence, With and Without District Fixed Effects

Variable	Without District Fixed Effects Odds Ratio	With District Fixed Effects Odds Ratio
	(SE)	(SE)
School location	1.064	1.077
(1=remote, 2=rural, 3=urban)	(0.265)	(0.345)
Private status	0.552	0.537
(0=public, 1=private)	(0.180)	(0.238)
Madrasah sector	2.385*	1.815
(0=general, 1=madrasah)	(0.860)	(0.897)
Secondary level	0.818	0.859
(0=primary, 1=secondary)	(0.202)	(0.256)
Student-teacher ratio	0.975	0.956*
(Adjusted for full-time equivalent teachers)	(0.019)	(0.022)
School facility index	0.855	0.845
	(0.150)	(0.157)
Committee involvement index	0.657*	0.677
	(0.125)	(0.138)
Indeks keterlibatan komite	0.694	0.650
	(0.152)	(0.201)
Inspected recently	0.662*	0.740
(within 43 days of visit)	(0.135)	(0.168)
Attendance taken daily by fingerprinting machine (0=No, 1=Yes)	0.242**	0.188
	(0.112)	(0.191)
Teacher is male	1.653*	1.502*
(0=No, 1=Yes)	(0.327)	(0.280)
Teaching experience	0.970	0.884
(quartile)	(0.126)	(0.124)
Hold S1/bachelor's degree	1.268	1.251
(0=No, 1=Yes)	(0.336)	(0.359)
PNS teacher	0.843	0.806
(0=No, 1=Yes)	(0.333)	(0.367)

Variable	Without District Fixed Effects Odds Ratio	With District Fixed Effects Odds Ratio
	(SE)	(SE)
Certified teacher	1.319	1.203
(0=No, 1=Yes)	(0.298)	(0.287)
Have child under 5	1.181	1.129
(0=No, 1=Yes)	(0.273)	(0.282)
Born outside of school province	0.605	0.747
(0=No, 1=Yes)	(0.281)	(0.432)
Time between home and school	1.002	1.001
(minutes)	(0.006)	(0.006)
Hours teach at this school per week	1.017	1.015
	(0.018)	(0.022)
Satisfaction index	1.121	1.075
	(0.174)	(0.183)
Teach at other school(s)	3.135**	3.351**
(0=No, 1=Yes)	(1.012)	(1.195)
Log of monthly total salary	0.860	0.935
(Rp million)	(0.145)	(0.177)
Constant	0.165*	0.252
	(0.118)	(0.242)
Number of observations	3,923	3,456

Notes: The dependent variable is absent from school (0 = teacher is present, 1 = teacher is absent) among teachers who were scheduled to teach during the observation.
** p < 0.01, * p < 0.05

9.2 Discussion of National Results

The adjusted student-teacher ratio was calculated by dividing the number of registered students in a school by the number of registered teachers, adjusted by the proportion of hours teachers work in school to calculate the number of full-time equivalent teachers. While a higher student-teacher ratio was found to be associated with lower teacher absence, the magnitude of the effect was quite small. This is consistent with the findings of the study of teacher absence in India[97]. In that study, this relationship was attributed to the number of parents who could potentially monitor teacher performance. Other explanations are possible in the current context. At around 14 students per teacher in primary schools and 12 students per teacher in secondary schools, the student-teacher ratio figures in Indonesia are already low. A high number of registered teachers could instead reflect a reliance on contract or honorary teachers instead of a stable roster of permanent teachers. Such a scenario may in turn be linked to teachers having limited scheduled teaching hours at the school and engaging in concurrent employment elsewhere.

A principal leadership variable was constructed to reflect the school principal's presence and leadership qualities as perceived by teachers. It takes the value of 0 if the principal position was vacant, 1 if the principal was absent, 2 if the principal was present, and 3 if the principal was present and was considered by teachers at that school as setting a good personal example. This variable was found to be significantly associated with teacher absence from school. Teachers in schools with a higher value on the principal leadership index were only about two-thirds as likely (65.7% in column 1) to be absent as teachers in schools with a lower principal leadership value. However, this effect was no longer significant when district fixed effects are introduced (column 2), which suggests that principal leadership quality was more consistent within districts.

97 Kremer, et al., 2005.

Being in a school that was recently inspected was also associated with a lower teacher absence rate. During the study visits, principals were asked for the last time their school was inspected (most often by district education officials). The median duration between an inspection and the study team's visit was 43 days. Teachers in schools that were visited by inspectors more recently than this were less likely (66.2% in column 1) to be found absent than teachers in other schools. However, this effect is no longer apparent after district fixed effects were introduced into the model (see the final column of Table 44). This suggests that the effect of school inspections is a characteristic of district-level efficiency, which is unsurprising considering these visits are conducted mostly by district-level officials.

The use of a biometric verification of attendance – in this case a fingerprinting machine – was found to be strongly associated with lower teacher absence from school. Teachers in schools that used these machines were about a quarter as likely (24.2% in column 1) to be absent as teachers in schools without such machines. Like the case with school inspections, this effect became insignificant with the inclusion of district fixed effects. This reflected the fact that the use of fingerprint attendance machines was concentrated in several districts, and in turn suggested that the use of this technology was a proxy for district-level attention to teacher performance or overall district efficiency rather than the effectiveness of the fingerprinting machines themselves.

A number of individual teacher characteristics were also found to be associated with teacher absence after accounting for key school-level differences in the model. Male teachers were around 1.5 times more likely to be found absent from school than female teachers, other factors equal. This was a statistically significant effect that was consistent across districts.

The strongest teacher-level factor on teacher absence in the model was whether a teacher worked at more than one school. Those who taught at two or more schools were over three times more likely to be found absent from school when they were scheduled to teach than those who only taught at one school; the impact of this variable was evident with and without district fixed-effects.

9.3 Results by School Type, Level and Sector

The Indonesian education system is large and diverse. This diversity is reflected in the differences between school types, levels and sectors that is evident in Table 45. The same model that had been developed using the national data (in Table 44) was also run to produce results at these levels. This analysis was performed without district fixed effects. It is important to note that the sample design had not been constructed to identify overlapping categories (e.g. analysis for public secondary schools, or for private madrasahs). However, the distinctions presented here go some way in illuminating how the complexity in the Indonesian system can mean that different factors may influence teacher absence in different ways.

To aid the discussion, only the results that were found to be statistically significant are included in Table 45. Among secondary schools, teachers in madrasah schools were more likely to be found absent. Whether or not a teacher works at another school was a strongly significant predictor of absence from school among private schools and among schools in the madrasah sector. Taking these two findings together may suggest that madrasah schools are particularly adversely affected when teachers work in more one school.

Table 45. Regression Analysis of Factors Influencing Teacher Absence, by School Type, Level and Sector

	School Type		School Level		School Sector	
	Public	Private	Primary	Secondary	General	Madrasah
School location						
Private status	.	.				
Madrasah sector				6.310**	.	.
Secondary level			.	.		
Pupil-FTE teacher ratio						

	School Type		School Level		School Sector	
	Public	Private	Primary	Secondary	General	Madrasah
Facility index						
Principal index			0.600*		0.656*	0.596*
School committee index				0.380*	0.661*	
Recently inspected				0.280**		
Attendance by fingerprinting		0.013*		0.062*		
Teacher is male					1.703**	
Teaching experience	0.664**				0.668**	
Hold S1/bachelors degree						
Civil service teacher						
Certified teacher						
Have child <5 years old						
Born in another province						
Time between home- school				1.018**		
Hours teach/week						
Job satisfaction score						
Teach at other school(s)		7.398**		5.620**		9.910**
Log of total salary			0.611*			
Number of observations	3,161	769	3,205	725	3,405	525

Note: ** p<0.01, * p<0.05. Sample sizes within each group do not allow for reliable analysis with district fixed-effects. Effects that were not statistically significant were suppressed for readability.

Strong principal leadership had a negative relationship with teacher absence across most school categories, to a similar degree. This is notable as it indicates that the effect of exemplary principal leadership is consistent across the country. Similarly, the direction of the relationship between school committee involvement, use of fingerprinting machines, and teacher gender with teacher absence was consistent across multiple school categories and with the national results.

9.4 Results by Region

The design of this study also allows for results to be produced for six different regional levels. As shown in Table 46, the regional results reflect differences between these regions. This analysis was also performed without district fixed effects.

The factors that were a significant predictor of teacher absence nationally were generally consistent across regions. For example, the analyses indicate that exemplary principal behaviour had a consistent relationship with teacher absence across different regions – Java, Bali and Nusa Tenggara and Sulawesi. In these regions, with all other factors in the model taken into account, stronger principal leadership was significantly related to lower teacher absence rates. School committee involvement had a negative relationship with teacher absence consistently in Sulawesi and in Papua and Maluku.

Teachers who were born in a different province were substantially less likely to be absent in Sumatra and in Maluku and Papua. The effect of teaching in more than one school was also consistent. In three of the six regions, teachers who worked in another school were between three and just under six times more likely to be found absent from the visited school.

However, there were some differences between regions. Madrasah teachers in Sumatra were much less likely to be found absent while in Java and Papua and Maluku they were much more likely to be found absent. Interestingly, the use of fingerprinting machines was strongly associated with a much lower likelihood of teacher absence in Java (the region with the highest rates of use; 9.2% of schools use these

machines to record attendance) but it was strongly associated with a dramatically higher likelihood of absence in the Papua and Maluku region (with the second highest rate of use, at 5.1% of schools). The reason behind this is unclear. In the 2008 teacher absenteeism study in Papua, the use of an attendance monitoring book was associated with lower teacher absence rates. It is an issue worth exploring further.

Other factors were significant in one or more regions, but not at the national level. For example, in Java and Sulawesi, teachers in private schools were less likely to be found absent than their peers in public schools. In Kalimantan, secondary school teachers were much more likely than primary school teachers to be found absent.

Table 46. Regression Analysis of Factors Influencing Teacher Absence, by Region

	Sumatra	Java	Bali & NT	Kalimantan	Sulawesi	Papua & Maluku
School location						
Private status		0.268*			0.134**	
Madrasah sector	0.197*	4.819**				43.352**
Secondary level				10.883**		
Pupil-FTE teacher ratio						0.668**
Facility index						1.961*
Principal index		0.529*	0.541**		0.582*	
School committee index					0.312**	0.197**
Recently inspected				0.089*		
Attendance by fingerprinting		0.069**				16.864*
Teacher is male	2.162*					
Teaching experience						0.613**
Hold S1/bachelors degree					2.142*	
Civil service teacher						
Certified teacher						
Have child <5 years old						
Born in another province	0.000**					0.073**
Time between home- school						
Hours teach/week		1.059*		1.163*		1.154**
Job satisfaction score						
Teach at other school(s)	3.087**	5.162**			5.851**	
Log of total salary						
Number of observations	760	1,106	436	529	573	458

Note: ** p<0.01, * p<0.05. Sample sizes within each group do not allow for reliable analysis with district fixed-effects. Effects that were not statistically significant were suppressed for readability.

9.5 Summary

The analyses presented in this chapter identified a number of key school- and system-level levers that may be used in an effort to reduce teacher absence from school in Indonesia. These were:

- Strengthening district practices including more frequent visits to provide support and supervision of teaching and learning practices in schools, as well as increased focus on monitoring teacher attendance levels, including through the introduction of biometric systems such as fingerprinting to independently record and monitor attendance;
- Strengthening principal leadership, particularly focusing on how principals model the behaviours that are also expected from their teachers (e.g. presence in school, providing encouragement, and involving teachers in decision making);
- Strengthening the involvement of school committees, particularly in monitoring budgets and connecting parents with schools;

- Reducing the incidence of teachers working in more than one school, an issue that seems to be strongly influenced by teacher salary levels and gender; and
- Making schools more appealing workplaces based on the experiences of districts that are attracting teachers from other provinces.

When the data are analyzed in terms of different school type categories the above factors generally remained consistent across one or more different types of schools. There were a couple of significant regional differences, however, highlighting the importance of understanding the complex contextual settings within Indonesia's diversity. These notable differences were:

- Madrasah teachers in Sumatra were much less likely to be found absent than teachers in non-madrasah schools, while in Java and in Papua and Maluku they were much more likely to be found absent.
- The use of fingerprinting machines was strongly associated with much lower likelihood of absence in Java (the region with the highest rates of use) but it was strongly associated with a higher likelihood of absence in the Papua and Maluku region (with the second highest rate of use among regions). This suggests that there are other regional-level factors that are having an influence, over and above the use of finger-printing machines.

Chapter 10
Policy Implications

This report has documented one of the most comprehensive and large-scale studies of teacher absenteeism undertaken anywhere in the world. The fact that the Government of Indonesia has identified teacher absenteeism as a high priority issue, and supported this substantial research through the ACDP, underscores the importance attached to better understanding the factors involved with absenteeism and how they can be addressed in the interest of all those concerned with Indonesian education, most particularly the students enrolled in schools.

The study was conducted with a much larger sample of schools and teachers than had been used for previous studies of teacher absence in Indonesia, or indeed in most other countries The final sample over the two visits comprised 880 primary and junior secondary schools across six regions– Sumatra, Java, Bali and Nusa Tenggara, Sulawesi, Kalimantan, and Papua and Maluku – and included 120 of the 146 primary schools involved in the 2003 teacher absenteeism study. In all, data were collected from over 8,300 teachers and 8,200 students.

The study was conducted over two school visits, Visit 1 occurring in late 2013 and Visit 2 in early 2014. The two visits provided an opportunity to examine the stability of the absence rate. Specially trained field teams made two unannounced visits to each of the sampled schools to collect information on teacher absence, observe classes, conduct interviews with principals and teachers, and administer short assessment tests to samples of students. Interviews were also conducted with district-level officials. In a significant advance on other studies, the research was able to examine not only teachers' absence from school, but also any absence from class of teachers who, although present at school, were not teaching as scheduled.

Overall, around one in ten teachers in Indonesia were found to be absent from school when they were scheduled to be teaching. During the first visit 9.7% of teachers were found to be absent and 10.7% were absent at the second visit. In the primary schools from the 2003 sample that were revisited for this study, the absence rate had dropped from 19.0% to 9.8% in 2013.

These are generally encouraging results for Indonesia. There appears to have been a substantial decline in teacher absence rates over the past decade. Furthermore, the estimate of teacher absence from school for Indonesia in 2013 is generally lower than estimates of absence rates in a range of other developing countries.[98]

The decline in teacher absence rates over the past decade reflects the cumulative effects of a wide range of policy initiatives, as well as changes in the wider society. Nevertheless, the findings are not grounds for complacency. A 10% rate of teacher absence from school is still high, and in many schools the rate of teacher absence from class is even higher than this. Teacher absence rates were found to vary widely among different types of teachers, and among regions and different types of schools. In addition there was evidence that a number of teachers – although present at school – were not teaching in class as scheduled. The fact that absence rates differed among schools with different types of characteristics suggests that policies which seek to change the conditions of schools can be effective in reducing absenteeism.

98 Caution is needed in comparing international studies due to differences in time periods, levels of education, and research methodologies. See the literature review in Chapter 1 and the annotated bibliography in Appendix A.

In some schools, the existence of an 'absence culture' appears to be real: schools with a high teacher absence rate were more likely to also have an absent principal and had higher rates of student absence. Some findings in this report suggest that some existing policies and practices in the education system as a whole may contribute to this absence culture. At the very least, these policies and practices do not put value on the time that teachers spend with their students. This means, however, that a number of changes at different education policy-making levels could be identified to reduce teacher absence levels in the future and assist schools in managing them.

This chapter discusses the policy implications of this study's findings. The discussion is structured in terms of implications for different levels of the education system. The chapter also discusses the limitations of the current study and provides some suggestions for future research on teacher absenteeism.

10.1 Policy Implications

10.1.1Policy Implications at the National Level

First, reconsider current national policies on teachers' working hours. One in every five teachers reported working at more than one school, which is permissible under current laws. However, because teachers who work at more than one school were on average four times more likely to be found absent from school when they were scheduled to teach, this provision is worth revisiting. Furthermore, policies based on minimum teaching hours create incentives for teachers to continue this practice. The existing regulation stipulating that teachers are required to have 24 to 40 hours of face-to-face teaching in a week is, in the context of the myriad of roles expected from teachers, a relatively blunt instrument. Teachers in smaller schools, particularly teachers of certain subjects in secondary schools, face difficulty in meeting the minimum requirement within the one school.

When other policies add to this requirement, the incentive to teach at more than one school becomes stronger. Certified teachers, for example, are more likely to teach at more than one school if they have fewer than 24 hours of teaching time at the visited school than their uncertified peers with similar workload.

Second, expand the current standards describing the expectations of teachers to include their non-teaching time and responsibilities. The national regulation that outlines teaching hours requirements makes no mention of the expectations for the time teachers are to allocate for their non-teaching responsibilities. This is in contrast with many other countries which specify both teaching and total working time. In some OECD countries such as Denmark, Iceland and Japan, for example, the percentage of teachers' working time to be spent teaching are stipulated to be less than 40%.[99] Meanwhile, in this study, Indonesian primary school teachers stated that they spend an average of 79.2% of their working time teaching and for secondary school teachers the average was 75.0%. A higher proportion of working time spent on teaching may indicate that less time is being spent on other important tasks such as lesson preparation, student assessment, coordination between teachers, and planning and development. On average, teachers stated that they spent just over seven hours a week on such types of non-teaching work.

Currently, Law No 74 Year 2008 stipulates that teachers are required to have at least 24 hours and at most 40 hours of face-to-face teaching in a week while the Minister of National Education Decree No 15 of 2010 about Minimum Service Standards for Basic Education and the Regulation of the Director General of Islamic Education Number 1 Year 2013 concerning Teachers' Attendance Discipline in Madrasah Environment stipulate that a permanent teacher is to work 37.5 hours, which is to include lesson planning, teaching, assessment and student guidance. Combining the two sets of regulations, an assumed, but officially unstated, expectation is for teachers to spend around 13.5 hours per week on non-teaching tasks. Based on how teachers reported their hours in this study, however, most do not seem aware of this.

The implication of this lack of clarity around teachers' non-teaching roles and workload was also apparent in how teachers were observed spending their time at school. Of the teachers who were scheduled to

99 OECD. 2011. "How much time do teachers spend teaching?", Education at a Glance.

be present at school on the day of the unannounced visit, 19.6% were not scheduled to teach during the observation. However, only 7% of the teachers who were not scheduled to teach were engaged in pedagogically-related activities such as working on lesson plans, grading assignments or providing academic assistance to students. Most teachers who were at school but not in class were undertaking activities that could not be categorized as preparatory, developmental, or administrative. Rather, they were often described as merely waiting for their next class to start or for the end of the school day. It is apparent that there is room for the expectations of the non-class teaching role of teachers to be clarified and for the environment of schools to better encourage and support teachers to use their time outside of class in ways that are more rewarding for students.

Third, continue to address the broader issue of the distribution of teachers in the system. Teacher absence from school was not found to be caused by teacher shortages. Instead, as this and other studies have concluded, it is one of the symptoms of a broader challenge of the inequitable distribution of teachers in the Indonesian education system. This study identified that the system relies strongly on part-time teachers which, considering such a high proportion of teachers work at more than one school, cannot be attributed to teacher preferences for part-time work. Teachers with fewer hours at a school and those who work at more than one school were significantly more likely to be found absent when they were scheduled to teach.

Specific policies that aim to redress failings in the distribution of teachers among schools have been suggested by prior studies. These range from not replacing retiring teachers[100] to funding schools on a per student basis and having schools (rather than the central government) pay teacher salaries, allowing them to hire the number of teachers they believe they need.[101] This would also create an incentive for schools to strongly monitor and address teacher absence to ensure the efficient use of their resources. As such policies would also devolve new responsibilities to schools and district offices (who would have to approve schools' requests) they will need to be supported with more training in school-based management and teacher workforce management, as well as on establishing and managing reliable data on teachers.[102] (Issues to do with principals' preparation are discussed further below in the section on school-level implications.) As remote schools face particular challenges in attracting teachers, the implementation of the Remote Area Allowance, which has been identified as a tool to address teacher distribution issues, needs to be assessed as this study found that some teachers who received this allowance were actually in schools that were categorized by their principals as being in or near a large town.

Fourth, the provincial level is where much of the coordination between national and district governments to address these issues will need to take place. Provincial bodies would also be responsible for managing and monitoring the performance of districts. This includes their performance in identifying and addressing teacher absence. For example, this study found a relationship between checking attendance with a fingerprinting machine and teacher absence which is likely to be an indicator of a high-performing district rather than the direct effect of the machine itself on absence. The provincial government would be best placed to explore and identify districts that are performing well in their province and ensure that the lessons from these districts are shared more widely among other districts, and that all districts receive the necessary support to reach acceptable standards. This would include also working with provincial and district agencies within the madrasah sector.

10.1.2Policy Implications at the District Level

First, strengthen support and supervision of the teaching and learning process. Around one-third of schools were visited by a school supervisor or district-level official within 30 days of the study team visit. Importantly, principals were asked specifically about visits by district officials that were focused on improving teaching and learning. There is evidence that these visits do influence teacher absence rates, and help reinforce the message about the importance of teachers' work. More generally, though, regular and focused visits by district-level officials indicate an efficiently operating district in which a range of actions that directly and indirectly encourage teacher attendance are underway.

100 World Bank. 2010.

101 del Granado et al., 2007.

102 World Bank. 2010.

Second, increase the focus on supporting schools in recording and tracking absence levels. This study found that the use of a fingerprinting machine to record and track attendance has an effect on teacher absence rates. As the statistical significance of this effect is not apparent when district fixed effects are introduced, however, this can be attributed more to differences between districts than within districts. In other words, being in a district that provides fingerprinting machines as part of a more comprehensive approach to reducing absence is what distinguishes these schools. A focus, therefore, should be on the districts' role on supporting schools more broadly, including in recording and monitoring attendance levels. A fingerprinting machine is only one way to do this, and the introduction of such machines without broader changes at the district level is unlikely to achieve the desired result.

10.1.3 Policy Implications at the School Level

As shown in Chapter 9, more of the variance in teacher absence can be explained by differences between schools than between provinces or between districts. Accordingly there were a number of teacher absence explanatory factors that have implications at the school level.

First, principal leadership is a key to promoting a "presence and engagement culture". This study identified a strong relationship between principal absence, teacher absences and student absences. Both teacher and student absence rates were higher in schools where the principal was absent at the time of the unannounced visits. Much research in Indonesia and elsewhere has shown that the principal has a key role to play in developing and retaining high-quality teaching staff, and lifting student achievement through effective teaching and learning. The study's findings on the critical influence that principals have in lifting teacher attendance reinforce the importance of initiatives such as the Principal Preparation Program (PPP) which was introduced in Indonesia in 2010 to help identify outstanding prospective leaders, and to prepare and certify them for the principal role across a range of competencies.[103]

Second, schools need a clear policy on how to manage teacher absences. Some level of absence is unavoidable and, like in other occupations, teachers have the right to take leave from their job for sickness, to attend to official duties and further their professional development. Interviews with district education offices found, however, that very little exists in terms of policies that outline how teacher absences should be managed by schools in ways that minimize disruption and adverse effects on student learning. This study found that schools were facing serious challenges in deploying appropriate substitutes for absent teachers. Most classrooms without their scheduled teacher were found unattended, many for long durations. The evidence suggests that teacher absence does lead to a loss of effective learning time, thereby reducing students' opportunities to achieve. What was commonly expected of substitute teachers was the monitoring of student behaviour while completing a task set by the absent teacher. However, most schools do not have a policy that made it clear to substitute teachers what they are expected to do. Additionally, although principals reported that substitutes are most commonly teachers who are not scheduled to teach another class, observers found that in reality most replacement teachers were also responsible for more than one class. There is a clear need to strengthen the capacity of principals and teachers more generally to manage absences and substitute teachers in ways that minimize the impact on students.

Third, principals and school leadership need more support in improving the management of school schedules and teacher roles to make the most of teachers' time. A source of system-wide inefficiency that has been identified by past studies is the regulation that teachers can only be certified to teach a single subject, preventing many of them from having full workloads.[104] Teachers with a full-time load (at least 24 hours per week in the visited school) were in fact significantly less likely to be found absent from school in the univariate analysis. While hours taught at the school per week was not significant in the multivariate model, teaching at other schools, also indicative of a less than full-time load at the visited school, was significant. This study also found that although teachers who teach more than one subject were only slightly (and not significantly) less likely to be absent from school, they were significantly more likely to be found absent from class when they were meant to be teaching. This, combined with the finding that most teachers who were not scheduled to teach were just waiting for their next class to start, suggests that schools are not managing their schedules to make the effective use of teachers' time – or to provide

103 The ACDP initiated a major evaluation of the PPP in 2014, to report in late 2015.

104 World Bank. 2010.

the encouragement and support for teachers to see the need to use their non-teaching time effectively. Therefore, while training teachers to teach more than one subject may well improve teacher distribution and reduce teacher absence from school, without improvements to how their responsibilities within school are managed it could adversely influence instructional time by creating more absences from class. School leaders, including principals and vice principals for academic affairs, need management training that addresses teacher scheduling and how they can engage teachers in activities that improve teaching and learning, including outside of their face-to-face teaching time.

Overall, a key implication of this study is that policies and programs to improve teacher absence need to take into account the complexity of the school environment and the roles of teachers and school leaders. This can be achieved in part by addressing characteristics of the current system that, in effect, perversely provide teachers with incentives to take on responsibilities that take them away from their core teaching and other educational responsibilities, as well as making the expectations for teachers and school leaders more explicit. Schools also require more assistance in managing unavoidable teacher absences.

Fourth, schools would benefit from more constructive engagement with their communities. The study suggests that strengthening the involvement of school committees in monitoring the school budget and connecting parents and schools can reduce teacher absence rates. However, the results also suggest that school-community engagement strategies need to be very carefully designed, targeted and implemented. High parental and community involvement in monitoring student achievement, for example, were surprisingly found to be adversely related to teacher absence from school. This is worth examining further, but one possible explanation is that it may indicate the lack of access that parents and school committees have to reliable information on the factors within their school that are associated with student performance.

Fifth, efforts should be made to hold meetings and training days outside of regular school teaching hours. While half of the teacher absences from school were attributed to reasons other than those allowed for in teachers' employment contracts (e.g. official duties, sickness or study), the single most common reason nationally for teacher absence from school was official teaching-related duties (26.4% of absences from school were attributed to this). These mainly referred to attending meetings and training. This is a somewhat positive sign in the sense that such activities are presumably contributing to the overall operation of the school system and teachers' professional development. Nevertheless, unless such absences are well managed, they can impinge on students' learning time and the work of other teachers.

The study found that almost two-thirds of teachers who had ever attended an in-service training and workshop said that at least part of the program was held during regular school hours. The routine scheduling of teacher development programs during school hours may be sending a message that the devalues the time teachers spend with students. A change to this practice – which would involve cooperation among all levels of governments and agencies that conduct teacher training and meetings as well as teachers themselves – could substantially reduce current levels of teacher absence, and thereby help lift student achievement.

10.2 Limitations of the Current Study

This study faced logistical challenges that are part and parcel of a study of this size in an environment as complex as Indonesia. These issues, their implications and how they were managed have been outlined in the methodology chapter. A number of other factors, however, need to be kept in mind when interpreting the results of the study.

The design of the study was largely based on two unannounced visits to a systematic sample of schools. This allowed for comparisons to be made with earlier studies of teacher absence in Indonesia, which utilised a similar design. This approach, however, did not allow for the collection of independent estimates on the duration of absences, although this information was gathered from principals' reports. While the sample size was considerably larger than previous studies, and allowed for relevant differences between six regions to be noted in the findings, it still did not provide enough cases to make meaningful statistical analyses of individual districts and provinces – where education policies were largely enacted.

Although the study used trained teams and structured observation instruments for the school visits, it was inevitable that much of the complexity of schools was not captured. In particular, it was possible to run only a fairly limited assessment of student achievement and the impact of the wide range of factors that affected the quality of student learning.

10.3 Suggestions for Future Work

As is the case with other studies, this study had a finite budget and a prescribed timeline. Within these constraints, the study collected and analyzed a large amount of data, the main findings from which are presented in this report. Importantly, some schools from 2003 were revisited in 2013. This allowed for an examination of the changes in absence rate by selected districts and an exploration of the changing context for schools and teachers, presented in the report. It also provides an opportunity for a further study that links the schools over the two time periods. More generally, understanding of the range of influences on teacher absenteeism, and the implications of absenteeism for student learning, would be enhanced by more opportunities for longitudinal designs.

By collecting national school and teacher ID information, the data collected from this study could also potentially be linked to national education databases such as the Data *Pokok Pendidikan*/DAPODIK. The identification of school sub-district, district and provinces could also ease linking with district, provincial- and national-level databases, for example to provide information on poverty rates and other socio-economic measures that it was beyond the scope of this study to investigate.

Additionally, many important topics fell outside of the scope of this current study. Three key issues would benefit from further research and evaluation.

The first is the way that parents and communities (both through school committees and otherwise) can be involved in schools to improve performance. This study's findings contribute to the mixed evidence on parent and community involvement in schools internationally. Most of the components that characterize effective parent and community involvement are difficult to define and quantify, including the extent to which parents and communities have access to reliable information on factors that contribute to student performance and how they are able to exert pressure for action to be taken based on that information.
The second key area for further study is the quality of teaching in Indonesian schools. The effects of absence on student learning are conditional on the both the quality of the teaching and learning students receive at times of teacher absence and as well as during regular class time with their scheduled teachers. This topic deserves dedicated and well-designed mixed-methods studies that complement analyses of student performance with thorough explorations of how teaching is practiced in Indonesian schools, the factors that influence who enters and remains in the teaching profession, and the conditions that support high quality teaching and learning.

The third key area for further work involves continuing to monitor the levels, causes and consequences of teacher absenteeism in Indonesia, and conducting research on the relative cost-effectiveness of various policy options to reduce its incidence and effects. The fact that this large-scale study was commissioned signifies that policymakers in Indonesia view teacher absenteeism as a key concern for the quality of Indonesian education. Although the results suggest an encouraging decline in absenteeism over the past decade, absenteeism rates are still high in a number of regions and schools, and reducing the level and variation of teacher absenteeism is sufficiently important for it to be a central feature of Indonesia's monitoring, research and policy development agenda.

In considering the design and implementation of policy responses to the findings of this study, it is important to carefully consider the relative benefits and costs of different policy options. For example, while introducing higher salaries for teachers may reduce the pressure to take on more than one job, this may not be as cost-effective a strategy as say, the strengthening of school principal selection procedures and building principals' competencies. In a country as large and diverse as Indonesia, there is much to be gained from carefully designed pilot studies before widespread implementation. There is also much to be gained by ensuring that principals and teachers support the policy directions that are being undertaken. After all, they are the main ones who have to ensure that the policies are effectively implemented, and

they – along with their students – have the most to gain from ensuring that teacher absenteeism rates are as low as possible.

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