EXPLORING TEACHER QUALITY THROUGH STUDENT-TEACHER INTERACTIONS AND CLASSROOM ENVIRONMENT IN INDIA

A Comparative Case-Study of Primary grades in Private and Government Schools in India

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MA of Philosophy in Comparative and International Education

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Abstract

This thesis has been written as part of the M.Phil. programme in Comparative and International Education at the University of Oslo. The purpose of this research is to study student-teacher interactions and classroom environments in primary grades in the government and private schools in India and explore the quality of teachers in India.

The study is qualitative in nature and the data has been collected through semi-structured interviews, observations, field notes and informal conversations during two months of field work. The frameworks used for this study are UNESCO quality framework, Teaching through Interactions framework and Constructivism. This is a comparative, multi-case study.

The main findings of this study indicate similarities between the government schools and the low-income private schools and their differences with the high-income private school, highlighting segregation between the haves and the have-nots. Teachers’ perceptions show a gap between the intended and the actual practices taking place in the classrooms. National and local context play an important role in influencing what takes place in a class.

A holistic approach is required to ensure national policies and in-school practises are tackled simultaneously. Teachers need to be provided with appropriate support and guidance as they are the key to ensure healthy student-teacher interactions and positive classroom environment.
Acknowledgements

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To my supervisor, Wim Hoppers, my gratitude is immeasurable. Thank you for the constant guidance, quick responses, constructive feedback, suggestions and going above and beyond your role as a guide to keep me motivated through the entire process!

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Ananya Mishra
Oslo, December 2018
Tables and Figures

Table 1: Retrieved from MHRD, State Profile (2008)......................................................... 18
Table 2: Modified Student Teacher Interactions framework (Compiled by the author)........... 32
Table 3: Number of Respondents.......................................................................................... 36
Table 4: Illustration of the coding process (Compiled by the author).................................... 39
Table 5: Modified Student Teacher Interactions framework (Compiled by the author)........ 76

Figure 1: Administrative Structure of India (Compiled by the author)................................. 14
Figure 2: Map of Pune (Provided by Turnkey Software Projects, 2005)................................. 16
Figure 3: Illustration of the level of analysis (Compiled by the author)................................. 23
Figure 4: Modified UNESCO framework (compiled by the author)..................................... 29
Figure 5: Source: Bray and Thomas, 1995............................................................................. 40
Acronyms

ASER- Annual Status of Education report
CLASS- Classroom Assessment Scoring System
CSR- Corporate Social Responsibility
DIET- District Institutes of Education and Training
EFA- Education for All
MDG- Millennium Development Goals
NCF- National Curriculum Framework
NER- National Enrolment Ratio
NGO- Non-Government Organisation
NSD- Norwegian Social Science Data Services
OECD- Organisation for Economic Co-operation and Development
PMC- Pune Municipal Corporation
PCMC- Pune-Chinchwad Municipal Corporation
PISA- Programme for International Student Assessment
RTE- Right to Education
SDG- Sustainable Development Goals
SSA- Sarva Shiksha Abhiyan
UNESCO- United Nations Educational, Scientific and Cultural Organization
## Contents

**Abstract** .......................................................................................................................... vi

**Acknowledgements** .......................................................................................................... vi

1. **Introduction** ..................................................................................................................... 1
   1.1. Background .................................................................................................................. 1
   1.2. Problem Statement ..................................................................................................... 3
   1.3. Purpose ....................................................................................................................... 5
   1.4. Justification ................................................................................................................ 5
   1.5. Significance of the Study ........................................................................................... 6
   1.6. Research Questions ................................................................................................... 7
   1.7. Brief Introduction to Methodology .............................................................................. 7
   1.8. Limitations of the Study ............................................................................................ 8
   1.9. Structure of the Study ............................................................................................... 8

2. **Literature Review** ............................................................................................................ 9
   2.1. Introduction ............................................................................................................... 9
   2.2. The Indian Education System ..................................................................................... 9
      2.2.1. Historical Context ............................................................................................... 9
      2.2.2. Recent Policies and Acts .................................................................................... 10
      2.2.3. Types of Schools in India .................................................................................. 11
      2.2.4. Federal and State Powers .................................................................................. 13
      2.2.5. Teachers in India ............................................................................................... 14
   2.3. Education Landscape of Pune ..................................................................................... 16
   2.4. Importance of Student-Teacher Interactions .............................................................. 18
   2.5. Classroom Environment ............................................................................................ 20
   2.6. Conclusion ................................................................................................................ 22

3. **Analytical Framework** .................................................................................................... 23
   3.1. Introduction ............................................................................................................... 23
   3.2. Constructivism .......................................................................................................... 24
      3.2.1. Constructivism as Epistemology ........................................................................ 24
      3.2.2. Constructivism as a Pedagogy .......................................................................... 24
   3.3. UNESCO’s Quality Framework .................................................................................. 26
   3.4. Teaching Through Interactions Framework ............................................................... 29
   3.5. Summary ................................................................................................................... 32

4. **Methods** .......................................................................................................................... 33
   4.1. Research Strategy ...................................................................................................... 33
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2. Research Paradigm and Research design</td>
<td>34</td>
</tr>
<tr>
<td>4.3. Research Site, Sampling and Participants</td>
<td>34</td>
</tr>
<tr>
<td>4.3.1. Research Site</td>
<td>34</td>
</tr>
<tr>
<td>4.3.2. Sampling and Participants</td>
<td>35</td>
</tr>
<tr>
<td>4.4. Data Collection Tools and Analysis</td>
<td>36</td>
</tr>
<tr>
<td>4.4.1. Semi-Structured Interviews</td>
<td>36</td>
</tr>
<tr>
<td>4.4.2. Observations</td>
<td>37</td>
</tr>
<tr>
<td>4.4.3. Field Notes and Secondary Analysis</td>
<td>38</td>
</tr>
<tr>
<td>4.4.4. Transcribing and Coding</td>
<td>38</td>
</tr>
<tr>
<td>4.5. Fieldwork</td>
<td>39</td>
</tr>
<tr>
<td>4.6. Levels and Units of Comparisons</td>
<td>40</td>
</tr>
<tr>
<td>4.7. Ethical Considerations</td>
<td>41</td>
</tr>
<tr>
<td>4.8. Validity and Reliability</td>
<td>41</td>
</tr>
<tr>
<td>4.9. Limitations</td>
<td>42</td>
</tr>
<tr>
<td>4.10. Summary</td>
<td>43</td>
</tr>
<tr>
<td>5. Findings</td>
<td>45</td>
</tr>
<tr>
<td>5.1. Introduction</td>
<td>45</td>
</tr>
<tr>
<td>5.2. How do the teachers perceive the importance of teacher-student interaction and classroom environment?</td>
<td>45</td>
</tr>
<tr>
<td>5.2.1. Understanding Teachers’ Backgrounds</td>
<td>46</td>
</tr>
<tr>
<td>5.2.2. Understanding of Student-Teacher interactions</td>
<td>47</td>
</tr>
<tr>
<td>5.2.3. Understanding of importance of classroom environment</td>
<td>49</td>
</tr>
<tr>
<td>5.2.4. Summary</td>
<td>50</td>
</tr>
<tr>
<td>5.3. What are the common practices as regards current classroom interactions and classroom environment and how can these be explained?</td>
<td>50</td>
</tr>
<tr>
<td>5.3.1. Emotional Support</td>
<td>51</td>
</tr>
<tr>
<td>5.3.2. Classroom Organization</td>
<td>52</td>
</tr>
<tr>
<td>5.3.3. Instructional Support</td>
<td>54</td>
</tr>
<tr>
<td>5.3.4. Summary</td>
<td>56</td>
</tr>
<tr>
<td>5.4. To what extent private and government schools differ regarding (a) student-teacher interactions (b) teaching practices (c) classroom environment (d) teacher quality?</td>
<td>56</td>
</tr>
<tr>
<td>5.5. Summary</td>
<td>61</td>
</tr>
<tr>
<td>6. Discussion</td>
<td>62</td>
</tr>
<tr>
<td>6.1.1. Teaching and Learning Dimensions</td>
<td>62</td>
</tr>
<tr>
<td>6.1.2. Enabling Inputs</td>
<td>65</td>
</tr>
<tr>
<td>6.1.3. Contextual Dimension</td>
<td>67</td>
</tr>
</tbody>
</table>
6.2. Micro Level: Student-Teacher Interactions and Classroom Environment in the Government and Private Classrooms ................................................................. 68
  6.2.1. Emotional Support ............................................................................. 68
  6.2.2. Classroom Organization and Management ........................................... 71
  6.2.3. Instructional Support ......................................................................... 73
  6.2.4. Summary .......................................................................................... 75
6.3. Exploring Teacher Quality in India .......................................................... 76
  6.3.1. Rote Learning Method Vs Innovative Methods ...................................... 77
  6.3.2. Interactions within Schools ................................................................. 78
  6.3.3. Language Instruction ......................................................................... 79
  6.3.4. Education for the Poor and Teacher Training ...................................... 79
6.4. Summary ............................................................................................... 81
7. Concluding Remarks and The Way Forward ............................................... 83
8. References ................................................................................................. 86
9. Appendices ................................................................................................. 94
  9.1. Teacher Interview Guide ....................................................................... 94
  9.2. Headmaster Interview Guide ................................................................. 95
  9.3. Participants Consent Form .................................................................... 96
1. Introduction

1.1. Background

Education is a powerful tool and is known for its transformative nature in the development of a nation. There has been an increasing focus on primary education in the past few decades by various national and international organizations, especially the provision of education for all the children. In 1990, Education for All (EFA), a global movement was initiated by the United Nations Educational, Scientific and Cultural Organization (UNESCO), with the sole aim to ensure all children receive access to education by the year 2015 (EFA Final Review Report, 2014). The focus of the initiative was to ensure the provision of basic, quality education to all the children with a focus on teacher training, pedagogy, and execution of the six goals. The member countries adapted these goals into their education policies and worked collectively towards the mission and the goals of the program. The developing countries were given primary focus in this movement.

The EFA Report (2009) highlighted the need to reach out to all children from all backgrounds irrespective of class, caste, gender or economy and ensure that children receive quality education through well-trained teachers, strong curriculum, and clear learning outcomes. The EFA movement puts emphasis on the pedagogical process which takes place in the classrooms, especially in the developing countries. The pedagogical processes are heavily influenced by the school and especially teachers who are responsible for the development of students and their learning. Students and teachers are key players in classrooms and it is necessary to pay attention to both input and output measures. Teachers play an important role in the delivery of education. The teacher’s knowledge, motivations, beliefs, skills are all necessary to ensure achievement of quality education (EFA Final Review Report, 2014).

According to Stephens (1997), developing countries put little emphasis on the pedagogical processes in the classrooms and focused instead on the achievement levels. There is no research on teachers’ skills and knowledge and how that plays out in a classroom. He highlighted the need to collect data in classrooms and formulate national policies accordingly. The reality of classrooms should be considered while designing teacher training modules, policies and curriculums.
India had been struggling to provide quality education for all and used the EFA program to propel the efforts towards the provision of education for all. The program was further strengthened by the Right to Education (RTE) act passed by the Indian government in 2009, making education free and compulsory for all children between the 6-14 years of age (Ministry of Human Resources and Development, 2009). The National Enrolment Ratio (NER) in primary education indicates an increase of school enrolment in India from 113.8 million in 2000-2001 to 132.4 million in 2013-2014, which is an 18.6 million jump, marking an 88.1% improvement in enrolment figures in the span of ten years (EFA Final Review, 2014). There has been an increase in the number of schools and increase in student enrolment of students from lower castes and minority sections of the society. Further, there has been a reduction in school dropout rates and out-of-school children. This signifies a success. However, UNESCO’s focus has been on quantitative rather than qualitative aspects, i.e., inputs in relations to outputs (UNESCO, 2005).

When India took the PISA test in 2009, they were almost at the bottom of the rankings out of the 74 countries in English, Maths, and Science (OECD, 2015). The PISA tests are not being assumed as a quality indicator here but as a starting point for understanding the state of education in India. ASER (2013) carried out investigations in primary schools in India and showed that around 78 percent of children in Standard III and around 50 per cent of children in Standard V cannot read Standard II texts. This sparked debates about the lack of quality of teachers and poor learning levels of the students.

EFA goals or the Sustainable Development Goals cannot be achieved until the learning needs of all the children are met and quality of teachers is highly crucial to achieve it. According to Fenstermacher and Richardson (2000), “quality teaching can be understood as teaching that produces learning”. In 2007, McKinsey carried out a study in 25 top school systems across the globe to understand what makes them the best. The study highlighted that hiring the right people and training them to become effective teachers were the keys to achieve quality classrooms. GMR (2013) predicted that improving quality and learning was likely to be more central to the post-2015 global development framework.

Teaching quality is a broad term and has many definitions. This paper tends to focus on classroom environment and student-teacher interactions as tools to understand teacher quality in India. According to Marzano (2003), “an effective teacher-student interaction may be the keystone that allows the other aspects to work well”. Thus, teacher-student interaction is a key
to a student’s academic growth. Classroom environment is another contributing factor towards student learning. A positive classroom environment enables a child to gain a sense of a safe space, ask questions and express themselves more freely. A positive classroom environment is denoted by positive student-teacher interactions and vice versa. The learning environment is enriched when teachers act as facilitators and students take ownership of their learning. The focus should be on understanding concepts and not just achieving grades.

Thus, it is necessary to look at these contributing factors in understanding teacher quality in India.

1.2. Problem Statement

Teachers are a precondition to the achievement of all the EFA goals and the key to bridging both the qualitative and quantitative targets (EFA, 2015).

There has been an increasing use of test scores to determine teacher quality and learning outcomes of students. Rothstein, Jacobsen and Wilder (2008) insisted that the reliance on ‘test scores’ do not provide an accurate understanding of an effective learning environment and said, “it is surprising that so many education policymakers have been seduced into thinking that simple quantitative measures like test scores can be used to hold schools accountable for achieving complex educational outcomes”. There needs to be an understanding of the classroom practices to understand the learning outcomes and not just rely on large scale test scores.

Hallinan (2008) highlighted that “learning is a process that involves cognitive and social psychological dimensions, and both processes should be considered if academic achievement is to be maximized”. In India, policy makers have been using quantitative data to ascertain quality of classrooms and quality of teachers, but this overlooks several aspects like support provided to the students and teachers, overall development of a child, etc. To understand teacher quality, it is important to be a part of the classroom environment and look at the student-teacher interactions. There is a need for qualitative data from classrooms to understand the different aspects of teacher quality. Instead of looking at achievement scores, one must look at a classroom environment as an “enabler of learning through building knowledge of others” (Watkins, 2005).
Indian schools usually consist of two categories, government schools run by the State Education departments and private schools which charge fees. The private schools tend to be more popular due to better facilities, teacher quality and the preferred language of instruction, English. Several studies have been undertaken comparing private and government schools with a focus on test scores but there aren’t many studies focussed on the quality of teaching in these classrooms.

This paper will focus on Pune, Maharashtra. Pune is known as the ‘Oxford of East’ and is home to some of the best schools and universities. The city has strong cultural and traditional values and has been home to some of the modern thinkers in the field of education in India since the 18th century and has also been a hub of social reforms during the 19th century. The literacy rate of Pune is 77.3%, which is higher than the national average of 74.4% (MHRD, 2017). It is cosmopolitan in nature and attracts students from all over India and abroad, especially known for its engineering institutes. Students in this city tend to receive top grades in the national examinations. Due to the enactment of RTE and EFA, more than 90% of children are enrolled in schools in Pune (MHRD, 2016). The focus of the government has now shifted towards quality of teachers and learning outcomes of students.

The traditional approaches of student–teacher interactions in Pune have been primarily of the teacher being an authority, instructor or knowledge provider and responsible for disciplining children. The classroom environment revolves around a teacher transmitting knowledge and students receiving that knowledge. This practise is still very dominant in the Indian education system. Most of the teachers focus on ensuring the children are quiet and disciplined in the class and achieve high ranks in the school examinations. The focus of the teachers and the schools in general, is to ensure that students achieve good grades instead of overall development and actual learning. Some private schools in Pune are slowly moving towards a co-learning space in classrooms where the teachers act as facilitators and students are encouraged to create their own learning space. This trend has started in high-income private schools which charge high fees and parents hold them accountable and expect their children to gain something at the end of the day.

Hence, it is necessary to study if there are new emerging trends in teacher-student interactions and the classroom environment in primary grades in the schools here or the schools are still following traditional approaches. The comparison between government and private schools will
also shed light on the difference in practices and the environments and the role a teacher plays in these schools.

1.3. Purpose

The introduction and the problem statement have pointed out several issues which have guided the purpose of this thesis. There is a need to understand the pedagogical practices taking place in the classrooms. Meyer and Turner (2002) illustrated this through examples showcasing the importance of teacher-student interactions. Their study propagates the need to understand these interactions in depth and look at classroom environment as a contributing factor to understand how it leads to a greater degree of learning. As Fuller and Clarke (1994) mention in their paper that there is a lack of evidence of teaching behaviours and classroom factors that affect student learning outcomes in the developing world. There is a need for understanding the pedagogical practices taking place in the government schools and private schools.

Thus, the purpose of this research is to study the student-teacher interactions and classroom environments in the primary grades of government and private schools in India. The overall purpose of the thesis is to explore the quality of teachers in the government and private schools in India.

1.4. Justification

There is enough literature to indicate that strong and positive interactions between students and the teachers are essential for the development of the students. Hamre (2006) suggested that a positive relationship allows students to be independent. The interactions in the classroom are crucial as they create a positive environment resulting in the academic growth and overall development of a child.

Hamre (2006) also highlighted that even though a lot of empirical data have been collected to understand this phenomenon, there is a need for in-depth observations in the classrooms to understand the various aspects which create a positive classroom environment. It is important
to focus on teachers’ attitudes and beliefs about children to have an in-depth understanding of teacher quality. (Pianta, LaParo, Payne, Cox, & Bradley, 2002).

Downey (2008) explained that “teachers need to know how their daily work in classrooms can be infused with interactions and instructional strategies that research has shown can make a positive difference in the lives of students who are at risk of academic failure”.

Thus, this paper will be an important step towards understanding the quality of teachers and the factors that are necessary in classrooms for the development of a child.

1.5. Significance of the Study

Since the 1990s, the discussions on quality of education have shifted towards process factors rather than outcome measures. The focus is now on effective teaching and pedagogical practices as the key to quality education in developing countries (Clarke, 2003; Colclough with Lewis, 1993; Levin and Lockheed, 1993). Unfortunately, there is a dearth of data on how teachers actually teach or what actually happens in classrooms, bringing the discussion to the fore that there needs to be more research to bridge this gap. In order to formulate strong policies, it is important to understand the current reality. Interpretation and understanding of the classroom practises is necessary for further discourses and dialogues on teaching and learning.

Downey (2008) asserted that a teacher’s personal interactions with the students could make a significant difference to the students. It is imperative for a teacher to learn the students’ style of learning and what they require for effective learning. The researcher would like to observe this at depth through case studies and comparative study of government and private schools in India.

The goal of the researcher is to provide specific instances of student-teachers interactions taking place in the classrooms and also ascertain the kind of classroom environments being created in the government and the private schools in India. It is also important to observe and understand the role of a teacher in these classrooms. Although ‘research is growing in this area, more empirical evidence is needed on aspects of teacher-student interactions and classroom
environments in order to better effectively integrate this skill into existing teacher programs’ (Hamre & Pianta, 2006; Sarason, 1999; Crosnoe, Johnson, & Elder (2004).

This will create a platform for these discussions and qualitative study will provide rich stories which can shed light on the state of classrooms and teachers in India. The literature will also help different research groups and NGOs working in the field of education and particularly the state governments to ascertain the kind of policies required or the teacher training programs required to reduce the current gap.

1.6. Research Questions

a. How do the teachers perceive the importance of teacher-student interactions and classroom environment?

b. What are the common practices as regards current classroom interactions and classroom environment and how can these be explained?

c. To what extent private and government schools differ regarding (a) student-teacher interactions (b) classroom environment (c) teacher quality? What are the differences and similarities in teaching practice among teachers in high and low performance schools.

1.7. Brief Introduction to Methodology

A qualitative, comparative multiple case study has been carried out in two government schools and two private schools in Pune, India. Semi-structured interviews, casual conversations, fieldwork notes, and observations were used to collect data. Teachers and headmasters were the main participants of this study. The data collection took place during the eight weeks of field work as outlined in the program. The primary focus has been to understand teachers’ and headmasters’ perceptions of student-teacher interactions and classroom environment, and the actual practice taking place in the classrooms. The analysis has been guided by UNESCO’s quality framework, teaching through interactions framework and constructivism.
1.8. Limitations of the Study

The purpose of this study is to explore teacher quality in the primary grades of government and private schools. The focus is on the inputs, i.e., classroom practices and not the outputs. There is no measurement of the impact, but this study, along with a quantitative study, would be effective to help formulate strong policies.

The other limitation of this study is that even though students are the core of the discussions, they are not the dimension this study focusses on. The focus is instead on teachers and headmasters. Due to the scope of the study and the limited time, students were not interviewed as they would also entail a larger sample. Due to the same reasons, fewer schools participated in the study resulting in fewer units of comparison for this multiple case study. This helped to provide a rich, in-depth study of these cases instead of a generalization.

1.9. Structure of the Study

Following the Introduction of the thesis, Chapter 2 will present the background of the Indian Education system, education landscape of Pune and a brief literature review on student-teacher interactions and classroom environments. Chapter 3 introduces the analytical frameworks of this study which provides guidance for classroom observations and also provides structure to present the findings and the analysis. Chapter 4 is Methods which will highlight the process of data collection, research design, reliability and validity and the process of transcription of data. Chapter 5 is the presentation of Findings and is presented under the research questions and is followed by Discussions in Chapter 6. Lastly, Chapter 7 presents the concluding remarks and recommendations for effective teacher practices.
2. Literature Review

2.1. Introduction

The literature review aims to shed light on the understanding of the education system in India and the education structure in Pune. This macro-level perspective will assist in exploring the current education scenario in India and also explore teacher quality. This will be followed by discussions on student-teacher interactions and classroom environment. Many studies have been conducted across the world to understand the importance of teacher-student interactions and classroom environments in primary grades. Although there is a literature gap for understanding teacher-student interactions in classrooms and classroom environments in India, a plethora of literature is available on similar themes. These discussions will also help to understand the analytical frameworks that will be introduced in the next chapter.

2.2. The Indian Education System

2.2.1. Historical Context

India is an emerging economic power to reckon with. Over the past few decades, the country has faced a paradox. One the one hand, the economic growth of the country has been significantly high, and India is looked at as a strong economic player. While on the other hand, the development of the country is at an unsatisfactory pace. There is a big divide between the rich and the poor. A large number of children are still out of school (UNHDRWB, 2004). After independence, India gave high priority to education as a tool for nation building and economic development and growth (Kumar, 2006).

In 1950, the constitution declared, “The State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years” (Constitution of India, article 45). There were no clear guidelines on how to impart free education for all and India was reeling under poverty and threats from other elements, hence primary education remained low on priority (Kumar, 2006). The first National Policy on Education was a legacy of the British government (Ministry of Human Resource Development, 1968). It aimed to create a uniform education
system across the country. It divided the educational activities under the Centre and the States. The act strived to develop strong human capital for an industrialized India.

In 1986, the government aimed to review the policy and bring about a new education Policy. This was driven by the need to adapt to the global scenario and be a part of the global competitiveness.

2.2.2. Recent Policies and Acts

India has played a key role in universalizing primary education and has been a key member of the Education for All movement (EFA, 1990), Millennium Development Goals (MDG, 2000) and the Sustainable Development Goals (SDG, 2015) (Kainth, 2016). It aims to ensure “inclusive and quality education” to all by 2030 (UNESCO, 2015). The focus of the SDG is currently on the learning outcomes and not just enrolment and access.

In order to achieve these goals, the Indian government launched several programmes like the Sarva Shiksha Abhiyan (Campaign for Education for All) in 2002 and the Right to Education Act in 2006. The Act mandates specific student-teacher ratios and emphasizes teacher quality. These acts and programmes charted out the roles of the parents, teachers, schools to meet the needs of the students and ensure free and compulsory education to all children between the ages of 6 and 14. The state was under legal obligation to provide free and compulsory education and were held accountable (Bajpai, 2004). These programmes were funded by both the national and state governments.

The Indian government has been taking various measures like mid-day meals, public-private partnerships, and joint actions with NGOs, to reform the education system. The aim is “meeting the changing dynamics of the population’s requirement with regards to quality education, innovation and research, aiming to make India a knowledge superpower by equipping its students with the necessary skills and knowledge and to eliminate the shortage of manpower in science, technology, academics and industry” (MHRD, 2017). These national goals, when implemented will target around 260 million school-going students and 1.52 million schools (National University of Educational Planning and Administration, 2016).
2.2.3. Types of Schools in India

There are different types of schools in India catering to different regions, religions and demographics, different income groups and these are funded by either the public or private sectors, NGOs or public-private partnerships. These schools have their own sets of values, curriculum, staff, and educational practices and can have different levels of influences, for e.g. the local, state or national.

Primarily, there are two main types of schools- government-funded and private. The government-funded schools are financed and run by the state governments. They receive yearly grants from the State education department. The curriculum is designed and provided by them. They recruit and train teachers as per their requirements. The support and the intervention by the government in these schools varies from school to school. These schools are free of cost. The schools provide students with books, uniforms, free transport and mid-day meals. Whereas, private schools are run by corporates or private entities. They manage and support everything, right from the recruitment of staff, fees, curriculum, to everyday school processes. The private schools usually offer English as the medium of instruction. The comparatively higher fees mean that the school facilities and resources are superior. However, this doesn’t necessarily mean that the private schools are of better quality than the government ones.

Among private schools, there are different categories. The first type is the Low-income Private schools. They cater to children from low-income families. They provide English medium instruction and charge a low fee. The teachers have a poor income and usually sustain themselves by offering private tuitions after school. These schools usually have small number of students and are run for profit. They are at par with government schools and fight for children from the same communities. Even though the government schools are free, their reputation is poor, so the parents usually opt for the low income private schools instead, even though they are struggling financially.

The next category of private schools are the ones that cater to students from middle and upper-class backgrounds (Muralidharan and Kremer, 2006; Shukla and Joshi, 2008 and Shiva Kumar et al, 2009). The fees are usually very high. Some even provide swimming pools and air-conditioned classrooms and transport facilities. The salaries of the teachers are also very high. These schools are very competitive and most of them are for profit. However, in these cases, the schools, not the students, have the option to select students. Students have to sit for entrance exams and interviews to get admission in the schools. Often, parents have to sit for interviews during admission process as well. The hallmarks of these schools are quality and reputation.
The schools are very selective and perform stringent screening with a view to admitting students from the privileged section.

The third category is that of the international schools, which offer multiple foreign languages, IB-trained teachers, international study trips, student-exchange programmes etc, and cater to foreigners, children of embassy staff and select families of high standing. They are particular about their ‘exclusivity’. They charge high fees that the lower strata of the society can never afford them.

Some of the private schools are religion-oriented; they are run by Catholic missions, Hindu reformists or Muslim boards. Along with regular education, these schools also impart religious education.

The other level of segregation is between rural and urban schools. Schools in rural areas and small towns do not of sufficient funds and resources to cater to the needs of the students, leading to an increasing gap between students from cities and students from villages. This phenomenon has led to migration to bigger towns and cities in search of better job and educational opportunities.

There is a perceived hierarchy among the schools. Parents usually prefer private over government school in India as they perceive them to be of better quality in terms of teaching, learning and the resources/ facilities available. Subrahmanian (2006) calls this “culturally hegemonic language around the failure of government schools”. The government schools cater to the underprivileged sections of the society. These distinctions among the schools set up students on an unequal path from the very beginning. They are segregated not on the basis of merit but their economic and social backgrounds most of the times. The elite do not choose government schools and there is an immediate understanding that the government schools only cater to the underprivileged. As Mooji (2011) explains, there was an elite flight which led to the departure of well-to-do, educated parents from government schools. They were the ones who could have monitored the school quality and complain when dissatisfied, keeping the government schools in check. The poor quality of the government schools also leads to this ‘elite flight’.

There has been a call for a common school to reduce the differences between the privileged and the non-privileged classes. Kothari Commission (1966:10) stated that “it is the responsibility of the education system to bring the different social classes and groups together and thus promote the emergence of an egalitarian and integrated society. But at present instead of doing
so, it is tending to increase social segregation and to perpetuate and widen class distinctions. …What is worse, this segregation is increasing and tending to widen the gulf between the classes and the masses…” To reduce stark differences between the government schools and the high-income schools, the Kothari commission recommended a system of common schools that would provide quality education to all children in the same fashion and would be based on the ideals of the constitution of India. But the call for such a system has not been heard yet and the gap is increasing every day.

2.2.4. Federal and State Powers

India has three levels of administrative influence on education: centre, state and the local. The local is further categorised into municipalities, corporations, village panchayats, etc. (Shukla, 1983). The government structure is decentralized. The centre created the Ministry of Human Resources development, whose key function is to draft education policies, execute and implement these policies and chart out the budget allocation for the states. The ministry also plays the role of advising the state boards. The acts and policies, designed and implemented by the ministry are executed by the state governments. The centre also plans out the national curriculum and teacher training guidelines.

Each state has their own training institutions for teachers, state boards, curriculum and examinations. Every state has schools with either central or state curriculums. The schools can choose for themselves. All the government schools usually select the state level curriculum whereas the private schools can choose between any of the curriculums. The local bodies receive directives and the education expenditures from the state governments. They have their own education departments working on the execution of the acts implemented by the state governments.

Below is the representation of administration responsibilities in India:
2.2.5. Teachers in India

With the EFA goals coming into focus, there was an impact in the access of education but not on the quality of education. There was a drawing realization that increase in enrolment and attendance was not leading to gains in literacy and maths skills. Compared to international benchmarks, the test score results were very poor. This lead to a realization that the focus needs to shift from outputs to inputs. Quality of teachers has become central towards ensuring quality of education. Darling-Hammond (2006) stressed that teacher quality was of utmost importance when it came to student achievement. There has been a stress on the role of effective teaching in developing the quality of primary education, especially in the developing countries. Even after focussing on different components of schooling, teacher quality remains the most important aspect of effective schooling and student learning. Many studies taking place in India have been focussing on test scores but there is a lack of study of teaching within classrooms. The focus of these studies has been to understand teacher quality on the basis of achievement scores and not on teaching behaviours or interactions within the classrooms. These studies though, highlighted that teachers have the highest impact on student learning outcome (Hattie, 2012). OECD (2015) stated ‘raising teaching performance is perhaps the policy direction most likely to lead to substantial gains in student learning’.
Teachers in the developing countries usually have the pressure of completing the syllabus and are the sole authorities in the classroom leading to lack of student ownership. The teacher is seen as the transmitter of knowledge and students are the absorbers of the knowledge. Many countries have enacted acts to support teacher education and improve the quality of teachers. The RTE act laid down guidelines for establishing more teacher training institutes and change the teacher education curriculum (MHRD, 2006). The Act also empowered district institutes to increase teacher training in the schools and have regular inspection to monitor the effectiveness of the state programs.

Currently, India is facing a dearth of teachers in India. There is a huge percentage of teacher absenteeism and a lack of teachers in schools in India. It is a chronic problem in India especially in government schools. The teachers have to travel long distances to the schools, leading to less interaction with students. This also leads to classes with large numbers of students for teachers. There is also a huge demand-supply gap. There is a dearth of teachers, but the government is not hiring full-time teachers as the budget will increase. They hire part-time or contract teachers who get paid less. These teachers are constantly rotated leading to instability in the schools. According to the annual ASER reports (2016), the teachers’ attendance was 85.4% at primary level. The main reasons of teacher absenteeism included illness in the family, residence far away from school, health reason, engaged in other economic activities, lack of transport, social or political influences etc.

Teachers in government schools have quite a lot of administrative work beside teaching, which include opening bank accounts, conducting health camps, election monitoring, promoting government run schemes, recording the quality of mid-day meals, etc. This leads to lesser focus on classwork and low motivation to continuing as teachers. Most of the schools in rural areas do not have regular supervisions, so the teachers are not held accountable, resulting in laxness of attitude in teachers. This in turn demotivates students, who lose interest in attending schools, leading to high drop-out rates prevalent in rural areas and small towns.

The other issue is the need for capacity building of teachers in the teacher-education institutes. The diversity in class levels and student quality requires teachers to be equipped with certain amount of skills and knowledge. The teacher-education institutes need to provide appropriate training to the teachers. Teaching is also not looked upon as a lucrative profession leading to a drop in the number of highly qualified candidates taking up the profession. This also stems from the low teacher accountability in the country. There is high level of corruption present in
government schools, and coupled with teacher unions, low salary structure, and additional service, it is of little wonder that these schools get few well-qualified, dedicated teachers.

In recent years, India has played a key role in the development of teachers and teacher-institutions in the country. It has introduced various innovative ideas to tackle the prevalent issues such as the Sarva Shiksha Abhiyan (SSA) program, which laid a directive that teachers should have a compulsory twenty days in-service training program along with regular professional development trainings in school. There have been various public-private partnerships to strengthen teacher-training institutions. There have been recent proposals to restructure the District Institutes of Education and Training (DIETs). This will help to improve the support for teachers and the school as well as regular training and professional development projects (MHRD, 2017). Many NGOs have entered this field working towards providing leadership skills and professional development of the teachers.

2.3. Education Landscape of Pune

![Map of Pune](Provided by Turnkey Software Projects, 2005)

Pune city falls under the jurisdiction if the Maharashtra state government and is managed by two municipal corporations. The two corporations are Pune Municipal Corporation (PMC) and Pimpri-Chinchwad Municipal Corporation (PCMC). The municipal corporations have their
education departments called Shikshan Mandal Karyalaya which administer the education at the local level. The state government provided grants to run the vernacular medium government schools whereas the English medium government schools are funded by PMC and PCMC.

The education structure of the city is similar to the rest of India, i.e., 10 years of primary schooling, followed by a national exam, two years of upper secondary, followed by another national exam and then three years of undergraduate studies at university. Thus, the pattern is 10+2+3, 15 years of schooling to receive a degree. The municipal corporation is further divided into fourteen wards, each ward headed by a ward office who reports directly to PMC. For this study, schools have been selected from four different wards.

The Shikshan Mandal Karyalaya works towards maintaining and providing necessary facilities to existing schools. The department opens new schools depending on the demands and the necessities. The qualifications, salary and other perks of the teaching and non-teaching staff at the schools are determined and provided for by this department. The department also facilitates the provision of mid-day meals, books, stationary supplies, clothes and health check-ups in the government schools. They can also advise the state government on matters of education and work towards modifying the state curriculum to the local context (Joshi, 2004). Recently the Maharashtra government has over the years, launched several initiatives to improve the education in Pune. It recently announced that 15 government schools would be selected to give the PISA tests in 2020. The teachers will be trained accordingly, and the schools would be supported by the government to ensure high student achievement results. The plan is to transform the schools according to ‘international standards’, but the standards have not been defined. Again, the focus is on learning outcomes rather than pedagogical processes.

Below is a table denoting the number of primary schools in Pune, the students enrolled and the number of teachers according to MHRD (2005). The ratio of students to teacher comes to around 55 students per teacher. Teacher absenteeism is prevalent in Pune and the causes are similar to as mentioned afore.

| School Statistics Pune District, 2005 |
|-------------------------------|-------------------|
| Number of Primary schools in Pune | 2,953 |
Table 1: Retrieved from MHRD, State Profile (2008)

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>Student Enrolment in Primary School</td>
<td>7,91,289</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Teachers in Primary school</td>
<td>14,225</td>
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2.4. Importance of Student-Teacher Interactions

Discussions on student-teacher interactions in the classroom environment began in the early 1930s. According to Dewey (1938), an educator is responsible for understanding the different attitudes that are conducive to the growth and development of the child and ensuring appropriate educational experiences for students. He even mentioned that “teachers are the agents through which knowledge and skills are communicated and rules of conduct enforced”. He focused on the importance of the immediate surroundings of a child like the classroom, and the impact it has on students. As we are all social animals, interactions are truly crucial and thus teachers can use this tool to create lifelong learners. Thus, education has been labelled a “social process”.

By the 1980s, many educators were turning their attention to cognitive development and how it was formed. Vygotsky (1978) believed that cognitive development was carried through dialogues between a teacher and a learner. This dialogue could lead to moulding of a child’s thinking process. He mentioned that tests were not the real measurement of a child’s learning but instead the focus should be on the development of the mind through interactions in a positive environment. He emphasized on the needs of interactions for the way to sharpen the reasoning skills and focus on thinking skills.

Lately, many studies and research have been conducted across the world to understand the different components which can explain teacher quality. According to Hamre et al (2013), effective teaching usually includes teacher knowledge, teacher practices, teacher beliefs, student beliefs, student practices, student knowledge and the relationship between the teacher and the students. There are many advocates for student-teacher interactions and relationships and they emphasise the importance towards student motivation, their academic achievement and their all-round development (Hamre and Pianta, 2001). Studies have been conducted all
over the world to study student-teacher interactions in various countries at different levels of education. Each of them highlights the crucial role of teacher student interactions and relationships in education. The relationships are formed due to the daily interactions in the classrooms (e.g. Wentzel, 2009). Meyer & Turner (2002) highlighted that “through studying student-teacher interactions, conceptualization of what constitutes motivation to learn increasingly has involved emotions as essential to learning and teaching”.

In 2008, The Classroom Assessment Scoring System (CLASS) was created to assess the salient features at work in a classroom environment. The empirical work pointed towards the importance of student-teacher interactions in a classroom. Downey (2008) reasserted that interaction between a student and the teacher results in a greater degree of learning in the classroom. “Developmental theory and research provides strong support for the idea that it is the daily interactions that children and adolescents have with adults and peers that drive learning and development” (Bronfenbrenner & Morris, 1998). Research by Borich (1996) suggested that the student-teacher interactions accounted for major difference in the learning outcomes of the students, despite the same curriculum and teaching methods.

Marzano and Marzano (2003) assert that "research has shown…teachers' actions in their classrooms have twice the impact on student achievement as do school policies regarding curriculum, assessment, staff collegiality, and community involvement". A lot of research has taken place on understanding the direct impact of teacher’s interactions with students and found that, "the degree and frequency of praise, use of classroom time, and the amount of attention given to groups or individuals have significant positive correlations to a learner's ability to learn" (Cano, 2001). It is essential to create a positive relationship between a student and a teacher and communication between the two is very important to create that positive relationship.

Over the years, the research on classroom interactions has taken place primarily in the developed parts of the world like USA and Europe. Most of the research into the discourse of classroom interactions has been focused in the industrialised world. Studies of whole class teaching processes from these countries gave birth to the ‘recitation script’ terminology. As Tharp and Gallimore (1988) explain, teacher-led recitation consists of three stages: “an initiation, usually in the form of a teacher question, a response in which a student attempts to answer the question, and a follow-up move, in which the teacher provides some form of feedback to the pupil's response” (Sinclair and Coulthard, 1975). This structure is highly prevalent in classrooms where teachers use closed questions and are sole distributors of
knowledge. The students give brief answers and are in turn provided with praise instead of a valuable feedback. The emphasis is usually on recalling instead of understanding or application of the concept. The answers to the student questions are usually predictable and don’t push the students to explore the concept more. Many studies carried in the Indian primary schools (Alexander, 2000; Clarke, 2003; The Probe Team, 1999; Sarangapani, 2003; Shotton, 1998) show the ‘recitation script’ taking place in the classroom. The pedagogy is usually teacher dominated and is based on memorization and rote learning. Alexander (2000) revealed that among the five countries he compared in his book, India shows a highly ritualized classroom discourse.

There are many evidences and literature available on the classrooms but there is a lack of study in the developing world. Heneveld & Craig (1996) highlighted the need for carrying out research in developing countries and to understand the importance of teacher effectiveness in the primary classrooms.

2.5. Classroom Environment

The classroom environment plays a pivotal role in the learning outcome of a student. It is a space which can help a student reach his/her potential. Many studies have highlighted that the classroom environment has a direct impact on behavioural and academic outcomes. It is a broad term and research has shown many different explanations and definitions, both in theory and practice. It is not a single entity and comprises of different factors such as physical environment, time management, behaviour management and teacher effectiveness (Stewart et al., 1997). Studies have highlighted the importance of class size, grouping of students in classrooms and student-teacher ratios and the recent addition, technology, as important factors of classroom environment.

Students interact with the physical environment constantly, “yet not enough attention is paid to the physical environment for learning” (NCF, 2005). Classrooms tend to be overcrowded, not child friendly or print-rich and do not have appropriate space to learn or satisfy a child’s requirement. It also affects a teacher’s ability to manage the classroom effectively and their productivity. Children in primary grades like being surrounded by colourful spaces with small nooks and corners and filled with pictures of flowers, animals and toys. In order to attract students and create a space for learning, the primary grade classrooms should have these in the
classrooms (NCF, 2005). The NCF (2005) highlights that “on an average, teachers and children spend around 6 hours a day, and over 1,000 hours a year, in school”. So, the physical environment is important to ensure a comfortable space for both teachers as well as students.

"An orderly and attractive environment can have a positive effect on the behaviour by improving the level and quality of student interactions, so teachers and students carry out activities efficiently without excessive noise or interruption" (Stewart, Evans and Kaczynski (1997). They argued that a classroom environment should be a space which helps to facilitate student-student and student-teacher interactions, making learning fun and engaging. Teachers should aim toward creating fun spaces full of big and colourful displays that entices the students. A lot of visual learners also benefit from these displays which highlight the concepts taught in class (Landau, 2004).

A classroom can also help to propel a teacher’s effectiveness in term of behaviour management and teaching. Clear expectations, procedures and behavioural consequences set from the beginning creates an organized space for the students as well as the teachers. When a student enjoys being in a classroom, the behaviour management problems reduce immediately. A classroom environment also denotes a safe space for students. A space where they can share their thoughts, interact with other students and teachers and feel comfortable and independent, “Students learn better when they view the learning environment as positive and supportive” (Dorman, Aldridge, & Fraser, 2006). A classroom should aim to create such a space for the student to ensure positive impact on the learning and also create a sense of belonging. There is a positive and direct relationship between a students’ level of motivation and their perception of the classroom environment being supportive and positive (Patrick, Ryan, & Kaplan, 2007) Students feel confident when they receive emotional support and constant encouragement from their teachers creating a space for mutual respect and a positive classroom environment.

Recent research has also highlighted the role and importance of the school environment. Apart from the classroom, the school should provide basic facilities for the students. Basic amenities like water, sanitation, furniture, etc. should be available (NCF, 2005).
2.6. Conclusion

This chapter is divided into two parts, the Indian education system and the literature review. The first part outlines the structure of schools in India and the current reality of classrooms and teachers in India. The second part shows various researches have tried to understand the impact of student-teacher interactions and the importance of classroom environment in primary grades. The emphasis on test scores to determine teaching quality and learning outcome has been prevalent in the last decade with governments relying on the data to initiate different programmes. There is strong evidence which indicates that a successful learning environment with strong teacher interactions has more impact towards student learning. This study is an attempt to bridge the literature gap and understand the interactions that take place in government and private schools.

The next chapter will present the analytical framework that will help to present the findings and discussions.
3. Analytical Framework

3.1. Introduction

In this chapter, key concepts and theories will be explained to understand student-teacher interactions and classroom environments at a deeper level and analyse the teacher quality in the primary grades of private and government schools. The analysis moves across two levels- the macro level which entails the educational environment and the micro level which includes the interactions between the students and teachers, role of school heads, classroom environment, etc. Constructivism has been selected as the overall lens of this study. Constructivism can be characterized both as an epistemology as well as a pedagogy and is useful to guide the understanding of student teacher interactions and classroom environment. This concept will also guide the data collection process. To understand and analyse the macro level, UNESCO’s Quality Framework 2005 has been selected. The framework is a comprehensive understanding of the components of quality education and has been modified to suit the needs of this study. The Teaching through Interactions framework helps to deep dive into the micro world of the classroom, helping one to analyse student-teacher interactions, classroom environment, etc.

![Illustration of the level of analysis](Compiled by the author)

This chapter will also provide an explanation for the modifications of the UNESCO and the Teaching through Interactions framework. Each of the framework have several categories, but
for this study, only the most relevant categories will be selected. Some of the elements of both the frameworks overlap as well, so modifications will be made accordingly.

3.2. **Constructivism**

Constructivism as a term has many interpretations. It is an ontological position that refers to social actors who give meaning to (or interpret) their environment and constantly adjust these meanings (Bryman, 2012). It highlights that learning takes place in a social environment. In this thesis, constructivism is the approach for doing qualitative research. Constructivism framework is grounded on the basis that “meanings are constructed by human beings as they engage with the world they are interpreting” (Creswell, 2013).

3.2.1. **Constructivism as Epistemology**

Epistemology refers to as a general theory of learning (NSSE, 2000). Constructivist epistemologies are broadly categorized in two ways; empiricism and rationalism. In empiricism, knowledge depends on experiences (NSSE, 2005). Thus, the mind plays a passive role in receiving experiences but plays an active role in the knowledge construction afterwards. Whereas in rationalism, the mind plays an active role by receiving experiences and constructing knowledge at each level (NSSE, 2005). Empiricism faced a few difficulties regarding the role of the mind but rationalism’s approach to an active mind provided a solution.

3.2.2. **Constructivism as a Pedagogy**

Constructivism as a pedagogy explains that learning results from prior knowledge, attitudes and experiences resulting in learners’ constructing their own knowledge (NSSE, 2005). Instructions should be designed in such a way that learners construct their knowledge through the experiences created and their prior understanding. One needs to know each students’ starting point (NSSE, 2005). A constructivist approach views the learning environment as “a mini-society of a community of learners engaged in activity, discourse, interpretation, justification, and reflection” (Fosnot, 2005). According to Smith, et al (2016), learners tend to construct their knowledge through social interactions. Learning takes place due to interactions between the
people and their environment. They identified the following practises that support teaching and learning based on the constructivist approach:

- Social interaction and dialogue
- Environment rooted in culture
- Scaffolding
- Constructive and timely feedback
- Collaboration among students
- More Knowledgeable Others (MKO) helping the students

For e.g., in a classroom, experiences tend to be constructed by the teacher. The teacher encourages students’ perspectives and thoughts and allows for independent and creative thinking. These interactions in turn mould the growth and development of the child, not just student mastery of concepts (Fosnot, 2005). A positive learning environment will propel a teacher to become a facilitator and encourage the students to think critically and own their own learning. This leads to an understanding of the level of learning of students, allowing the teacher to understand every child’s needs. Fosnot (2005) highlighted that constructive education enabled a network of interpersonal relations which dominated a child’s experience at school. Most of the schools lay emphasis on subject matter mastery. DeVries and Zan (2005) argue that the focus should be on interpersonal relations instead as that plays a critical role in the “child’s construction of self, of others, and of subject matter knowledge”. It is useful to apply constructivism in a pedagogical situation; but then it is vital to dwell on this separately from the overall definition of the concept.

Classrooms are spaces of social and cognitive development of a child, hence the teachers have a responsibility to ensure that children benefit from this space. An environment constructed by a teacher is crucial for student learning and reflects upon the quality of the teacher. The teacher creates a space for the students to think critically, enjoy learning, and collaborate frequently with one another. Teachers frequently interact with the students, understand their interests and observe how the child acquires knowledge, that leads to them being aware of their needs. Pianta et al (2002) add that research related to quality in classroom highlight the importance of teachers’ attitudes and beliefs about children as important factors leading to excellence in education. O’Connor et al (2011) conducted a study with 40 teachers to understand teacher-student relationships. Their study showcased the importance of “fostering elementary school
teachers’ awareness of the role of their relationship with students and provides teachers with information as to how to support high quality relationships with their students”.

Constructivism as an epistemology and as a pedagogy are loosely tied together. It focusses only on individual learning and instructors can create such spaces or experiences to induce constructive learning. An instructor must really know each of the learner’s traits and knowledge and help them to achieve their goals individually. Constructivism helps to shed light on the student-teacher interactions in a classroom and the classroom environment that can be created to induce learning.

This study will thus employ a constructivist view to understand the processes of interactions among the students and the teacher in a classroom. As mentioned afore, constructivism guides the methods of data collection in this study and will be highly useful in analysing both the school heads and teachers’ approach to education, with teachers as the social actors in a classroom environment.

### 3.3. UNESCO’s Quality Framework

“Education should allow children to reach to their fullest potential in terms of cognitive, emotional and creative capacities” (UNESCO, 2005).

UNESCO’s 2005 Quality Framework is used to understand, monitor and improve the quality of education. It includes both economist and humanistic aspects. The framework highlights the main elements of the education system and how they interact with each other. It is a comprehensive framework where teaching and learning processes are influenced by enabling inputs as well as the context. The following dimensions influence educational outcomes (UNESCO, 2005): - learner characteristics dimension, contextual dimension, teaching and learning dimension, enabling inputs dimension and Outcomes dimension.

This framework will be used to understand the macro frame, i.e., the educational environment of the schools in this study. It is important to study the different stakeholders involved and the different factors which influence the students. The teacher-support system, knowledge base of teachers as well as national policies influence student-teacher interactions and the classroom
environment. These parameters will help in identifying underlying patterns, and inter-school differences, thus enabling inter-school comparison. The primary focus of this framework will be the contextual and enabling inputs dimensions. It can be argued that this framework proposes a linear relationship between inputs, processes and outputs of education (Tikly, 2010) but it is far more complicated than that. Thus, the framework will be adapted to the purpose of the study to ensure relevant elements of the framework are being focussed on.

Learning characteristics focuses on how a child learns, which is dependent on their capacities and experiences. It also depends on other factors including socio-economic, religious and cultural backgrounds. The learner characteristics rely on prior learning and needs to be taken into consideration (UNESCO, 2005). This report will not emphasize learning characteristics as students were not interviewed in this study and no background data collection was carried out to aid the understanding of the effect of prior learning. The framework also doesn’t clearly define each of the characteristics within the dimensions (UNESCO, 2005). So, some of the categories in the given dimensions will not be emphasized compared to the others which are relevant for the topic. As this is a qualitative study, it is open to more interpretations. The following are the dimensions which will be focussed upon:

**Teaching and Learning Dimensions**

This dimension is nestled between enabling inputs and is highly dependent on the contextual factors as well (UNESCO, 2005). It is the key area related to human development. Teaching methods, curriculum, assessments, learner’s motivations are all part of this dimension. This dimension highlights what actually takes place in the classroom space and is highly dependent on enabling inputs (UNESCO, 2005).

**Enabling Inputs Dimensions**

According to UNESCO (2005), inputs support and influence teaching and learning dimensions. The Inputs dimension highlights how inputs enabling and support teaching and learning and are interrelated to them and have impact on it and vice versa. The main components of enabling inputs dimensions are human and material resources availability and the governance of these
resources (UNESCO, 2005). These are highly crucial for school effectiveness and are necessary for classroom practices.

The human resources category consists of teachers, school heads and other school members. But for this study, teachers and headmasters play the most important role as they are influenced by the context and other enabling inputs, which in turn influence the teaching, learning and outcomes (UNESCO, 2005).

Material resources are the other crucial enabling input which consists of teaching materials, school infrastructure facilities, etc. (UNESCO, 2005). This impacts teachers as a resource as they act as teaching aids.

**Context Dimensions**

Society and education are interlinked and they both influence and impact each other (UNESCO, 2005). National and international policies, socio-economic conditions, etc. shape up the education in the society. The framework lists out various contextual factors which influence education but for the purpose of this study, the focus will only be on the relevant factors. The factors highlighted are socio-cultural factors, public resources, infrastructure, national standards and governance, school time and parental support. All these factors directly and indirectly affect student-teacher interactions and classroom environment. Teacher education has been added as an additional category to add to the contextual understanding of teacher quality.

As the study is qualitative in nature, it is not possible to include measurement of output. Though outcomes dimension is highly relevant to understand quality of education, it is not feasible here as this study is exploratory. Incidentally, outcomes dimension focuses on the academic achievement and consequent labour market success (UNESCO, 2005).

This framework is highly useful for understanding the different influencers which affect classrooms and learners, but it is deficient in terms of the processes at the micro level such as the interactions between student-teachers, students-students, etc. Thus, the Teaching through
Interactions framework will support this framework to provide a holistic view of the process of teaching and learning.

The analytical framework has been presented below:

![Modified UNESCO framework](compiled by the author)

### 3.4. Teaching Through Interactions Framework

#### Emotional Support

Hamre and Pianta (2007) conceptualized this approach on the basis of various educational and psychological literatures and previous theoretical and empirical research (e.g., Brophy, 1999; Eccles & Roeser, 1999; Pressley et al., 2003). This framework describes classroom practices and the salient features of interactions leading to development of students. This model proposes a three-level structure for organizing teacher-student interactions working towards promoting
learning and social development of the students; Emotional Support, Classroom Organization, and Instructional Support (Hamre and Pianta, 2007).

**Classroom Organization and Management**

Another salient category of this framework is behaviour management and focus on academic goals (Hamre et al., 2013). Well managed classrooms with consistent routines create an engaging environment for interactions and is essential for enabling student-teachers interactions in the classrooms. This category also indicates seating arrangements in the classrooms, the displays on the walls and the procedures and behavioural consequences present in the classrooms.

**Instructional Support**

This category draws from various theories focussing on learning instead of just gaining facts. Mayer and Turner (2002) stated that it is necessary to differentiate between learning facts and gaining “usable knowledge” that is built upon learning “how facts are interconnected, organized, and conditioned upon one another”. This category focussed on the use of interesting aids, increasing the rigour of concepts, scaffolding them according to students’ needs help the students to have cognitive and language development. Building up on existing concepts and having the opportunity to have an environment which challenges the students is another crucial element (Hamre et al., 2013).

Each of these elements have broad definitions which the researcher might not adhere to and will be modified during the findings and discussions chapter. These elements help to analyse classrooms, but more elements have been added in the framework, to ensure each aspect of a classroom and the teacher and focussed upon. In India, corporal punishment is awarded in almost every government school and that element will be added in the Emotional Support category to understand the teachers’ views on it and if it is practised. It is necessary to understand the teacher- school heads interactions, the role of teachers, their beliefs and motivations and the training they receive to understand how this all translates into a classroom setting. The Teaching through Interactions framework posits that much of the effect of teachers and classrooms on student learning arises from the interactions that take place between teachers and students.
The framework has been presented below. Corporal punishment has been added to this framework looking at the Indian context. It has been marked in red.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Support</td>
<td>Positive Climate</td>
<td>Reflects the overall emotional tone of the classroom and the connection between teachers and students</td>
</tr>
<tr>
<td></td>
<td>Negative Climate</td>
<td>Reflects overall level of expressed negativity in the classroom between teachers and students</td>
</tr>
<tr>
<td></td>
<td>Teacher Sensitivity</td>
<td>Encompasses teachers’ responsivity to students’ needs and awareness of students’ level of academic and emotional functioning</td>
</tr>
<tr>
<td></td>
<td>Regard for Students’ Perspectives</td>
<td>The degree to which the teacher’s interactions with students and classroom activities place an emphasis on students’ interests, motivations, and points of view, rather than being very teacher-driven</td>
</tr>
<tr>
<td></td>
<td>Over control</td>
<td>Assesses the extent to which the classroom is rigidly structured or regimented at the expense of children’s interests and/or needs</td>
</tr>
<tr>
<td>Classroom Organization</td>
<td>Behaviour Management</td>
<td>Encompasses teachers’ ability to use effective methods to prevent and redirect misbehaviour by presenting clear behavioural expectations and minimizing time spent on behavioural issues</td>
</tr>
<tr>
<td></td>
<td>Productivity</td>
<td>Considers how well teachers manage instructional time and routines so that students have the maximum number of opportunities to learn</td>
</tr>
<tr>
<td></td>
<td>Instructional Learning Formats</td>
<td>The degree to which teachers maximize students’ engagement and ability to learn by providing interesting activities, instruction, centres, and materials</td>
</tr>
<tr>
<td>Instructional Support</td>
<td>Classroom Chaos</td>
<td>The degree to which teachers ineffectively manage children in the classroom so that disruption and chaos predominate</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Concept Development</td>
<td>The degree to which instructional discussions and activities promote students’ higher-order thinking skills versus focus on rote and fact-based learning</td>
</tr>
<tr>
<td></td>
<td>Quality of Feedback</td>
<td>Considers teachers’ provision of feedback focused on expanding learning and understanding</td>
</tr>
<tr>
<td></td>
<td>Language Modelling</td>
<td>The quality and amount of teachers’ use of language stimulation and language-facilitation techniques during individual, small-group, and large-group interactions with children</td>
</tr>
<tr>
<td></td>
<td>Richness of Instructional Methods</td>
<td>The extent to which teachers use a variety of strategies to promote children’s thinking and understanding of material at a deeper and more complex level</td>
</tr>
</tbody>
</table>

Table 2: Modified Student Teacher Interactions framework (Compiled by the author)

This framework helps towards analysing student-teacher interactions which is an important aspect of teacher quality. It has been used in over 4000 classrooms and is highly reliable to understand teacher effectiveness (Hamre et al., 2013). This framework will be useful for classroom observations and the interviews will help to dig deep to understand teachers’ perspectives.

### 3.5. Summary

This chapter gives an understanding of the frameworks used in this study to gather data and analyse data. UNESCO’s quality framework enables the researcher to understand the educational environment of the schools. Teaching through Interactions framework helps to understand the classroom practices and also guide the data collection process. Constructivism helps to explore teacher quality in the Indian schools.

The next chapter outlines the data collection methods and outlines the research design of this study.
4. Methods

This chapter presents the rationale of selecting the research methodology of the thesis. The study is a qualitative comparative study. It is a multiple case study with data collected from government and private schools in Pune, India. The chapter further discusses the research strategy, research design, sample and site, the data collection methods, reliability and validity and ethical concerns.

4.1. Research Strategy

Choosing the appropriate research strategy is critical for any study. According to Bryman (2004), research strategy guides the conduct of social research. It helps in providing a framework for the collection and the analysis of data. It acts as a guide and helps in structure the data collected.

This study is exploratory in nature and looks to understand classroom environment and classroom interactions and hence uses interpretivist and qualitative approach. It is inductive in nature since the researcher tends to draw concepts, theories, meanings and patterns from the data collected instead of testing hypothesis or hastily arriving at a conclusion (Gray, 2014).

Qualitative study focuses on social reality and understand people’s insights about their world view (Miles and Huberman, 1994). It helps in understanding the social reality and “constantly shifting emergent property of individuals’ creation” (Bryman, 2012). The information collected using this strategy is descriptive and in-depth in nature and helps the researcher gain an understanding of real world situations. One can obtain thick descriptions through the qualitative process as the emphasis is on the views and perspectives of the participant (Gray, 2014). The researcher tends to use multiple cases instead of focussing on one to ensure reliability. This study uses qualitative approach so as to deep dive into the social reality and derive stories which will help the research to draw out concepts and theories to analyse and understand the role and the quality of teachers. As Creswell (p.8, 2017) points out that a constructivist researcher focusses on the processes of interaction among individuals, their work and immediate environment.

Thus, interpretivist and qualitative approach were selected to investigate the student-teacher interactions and classroom environment in India.
4.2. Research Paradigm and Research design

The interpretative paradigm guides the research design of this thesis as it focusses on the study of “multiple realities of the phenomenon and describes what exist in the real situation” (Bryman, 2004). In addition, the interpretative paradigm helps “to gain insights through discovering meanings by improving comprehensive idea of any phenomena” as “qualitative research explores the richness, depth and complexity of any phenomena” (Hossain, 2012). Qualitative and interpretivist approach tend to use a ‘multiple case study’ design in order to ensure reliability and explore a phenomenon in depth. In this paradigm, knowledge is seen as socially constructed. This paradigm is useful for this study as the purpose of the study is to explore teacher quality and teachers and headmasters’ perception of student-interactions and classroom environment. The paradigm regards knowledge as something not permanent but relative to culture, time and context (E. G. Guba & Lincoln, 1994).

According to Bryman (2004), a case study allows a researcher to have a detailed and intensive analysis of a study. This study uses ‘Case Study’ as a design to collect and analyse data. This study is also comparative in nature. It looks at two different school systems- primary grades in private and government schools in Pune, India and the case study design were apt for the purpose. In order to collect rich data, rich stories and provide a complete picture with an understanding of the local context, physical environment, the description of the participants, their behaviours and the dynamics between them in their natural settings, a case study was found a suitable research design (Cousin, 2005).

The study is exploratory in nature and the multiple ‘case-study’ approach helps in providing adequate background and observed information in detail.

4.3. Research Site, Sampling and Participants

4.3.1. Research Site

According to Glesne (2006) research setting denotes the site where the study is going to be conducted. The city of Pune, India has been selected as the research site for this thesis. Pune is known as the ‘Oxford of East’ and is home to some of the best schools and universities in India. Students from Pune tend to receive top grades in the grade 10 and grade 12 examinations. Due to the enactment of RTE and EFA, more than 90% of school-going students are enrolled in the
schools in Pune (MHRD, 2017). On the other hand, the condition of students in government schools remain the same with poor learning outcomes and non-trained teachers, absence of infrastructure, etc. Students from low income backgrounds go to government and low-income private schools whereas the middle class and higher-class children prefer to go to expensive private schools. There is a huge difference between the private and government schools.

The focus of the government has now shifted towards quality of teachers and learning outcomes of students. The government has partnered with various NGOs to help them push up the quality of teaching and learning. They also plan to participate in PISA to ascertain the level of their students.

Pune was deemed to be a suitable site to explore teacher quality and understand the importance of student-teacher interactions and classroom environments. Primary grades of private and government schools were selected for this study.

4.3.2. Sampling and Participants

As it was necessary to have representation from government schools, low-income private school and a high-income private school in this study, sampling of schools was purposive. The purpose of the thesis is to explore teacher quality through student interactions and class environment in schools in India. As this study uses an inductive model, purposive sampling was selected to choose the schools for the study. According to Bryman (2004) purposive sampling helps the researcher identify participants relevant to research questions and the purpose of the study. Two government schools and two private schools in Pune were selected for study. The school heads were communicated the purpose of the project.

Snowball method was used to select the teachers. The school heads suggested participants for the study. Three teachers each from the schools were interviewed along with the school heads. Opportunistic sampling was also used to some extent to attain rich data.

To have more insights into the government strategies and understand the perception of teacher quality by the government, stakeholders like NGO members were also interviewed. They work as consultants to the Pune Education Department. There were many casual conversations and secondary sources involved as well to gain a rich context for this study.
Below is the representation of the respondents interviewed:

<table>
<thead>
<tr>
<th>Respondents</th>
<th>P1</th>
<th>P2</th>
<th>G1</th>
<th>G2</th>
<th>NGO</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers (X)</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Principal (Y)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>NGO Coordinator (NGO rep)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total Respondents</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 3: Number of Respondents

4.4. Data Collection Tools and Analysis

This study relies on fieldwork. According to Patton (2002), field work helps to have direct contact and being in their environment helps the researcher understand the participants and their environments more in depths. The data collection tools for this study were semi-structured interviews with teachers, school head and NGO members and class observations of the teachers interviewed. Around two-three classroom observations were conducted per school. A pilot study was conducted in a low-income school to ascertain if the tools created were effective for data collection. After two interviews and two classroom observations, some changes were made to ensure more effective collection of data.

4.4.1. Semi-Structured Interviews

According to Patton (2002), interviewing allows a researcher to enter the participant’s perspective. The semi-structured interviews provide the researcher with the flexibility to dig deep by asking further questions depending on the references. It is a very tool to collect data for qualitative study. As the research design is case study, semi-structured interviews will help to gain deep insights in their own environment and help provide thick descriptions. The
interview guide had a set number of questions but were not restricted by them which allowed the participant to share more insights and narratives. The interview guide was based on the theoretical frameworks and the research questions of the study.

The interview started with basic background and introductory questions to make interviewees feel comfortable. The questions were open ended and allowed the researcher to probe into areas as the interview went along. Most of the interviews were conducted after school hours so the participants were free and could give more time for the conversations. The objectives and the purpose of the interview were communicated to the participants beforehand. The interviews were conducted in a conversational manner to allow the participants to feel comfortable and also allow for more details to come up. Some questions were direct as well, to ascertain certain data or information. All the interviews were recorded to capture all the accurately. Some participants were hesitant but were more comfortable if the conversation was noted down instead. Casual conversations were carried on after the interviews got over to be able to collect more interesting data.

Thus, the semi-structured interviews allowed the researcher to adapt questions according to the answers received from the participants. Sometimes questions had to be modified on the field as it suited the situation. All the interviews were conducted in regional language to make the participants feel comfortable and safe.

4.4.2. Observations

Observation is a significant tool for social research. It helps the researcher to be a part of the participants’ environment and observe their roles, activities, views and their settings. The observations also help to provide an in-depth understanding of the situation. Sometimes it helps the researcher identify things which “the participants themselves are not aware of, or that they are unwilling to discuss” (Patton, 1990).

For this study, classroom observations were conducted with the prior permission of the schools. Two to three classrooms were observed per school. The data was collected in the form of written narratives. The ‘Teaching through Interactions’ framework was used as a preliminary checklist for observation. During the observations, some elements were added or deleted from the framework. Copious notes of everything happening in the classroom were taken. This helped in providing thick descriptions about the teacher’s authority, if the classroom is student-centred;
independence of students; teacher-student interactions; nature of interactions; the level of preparation of classrooms; the classroom environment; organization of the room; atmosphere of the class and the school; teacher-head interactions; and students interests. The Teaching through Interactions framework was also used to guide the observations.

The observations were very important and informative and allowed the researcher to understand the different nuances present in the scenario. The researcher tried to be unbiased during the observations and simply recorded observations against the elements in the framework. The data was collected in the form of narratives in a notebook. The researcher did not engage in the classroom processes and remained a passive observer. To have an even more in-depth understanding of the school scenario, school assemblies and playtime hours were also observed. The combination of semi-structured interviews and classroom observations will be helpful to analyse underlying themes, trends and patterns. The observations will also help to provide context to the study.

4.4.3. Field Notes and Secondary Analysis

In addition to the observations and the semi-structured interviews, data was also collected through field notes, casual conversations and other relevant documents. Notes were taken during observations and interviews to record valuable information which could be analysed later. Certain documents were also perused to gather more information like the UNESCO statistics, Maharashtra government statistics and the policies by the Maharashtra Education department. These documents helped to gain a deeper context of the education system in Pune.

4.4.4. Transcribing and Coding

After the interviews and the observations were recorded, each interview was transcribed. This was a long process as most of the interviews had been conducted in Marathi or Hindi, so the transcription into English took a lot of time. Additional field notes taken during the interviews were also added in the transcriptions. The transcriptions were then arranged under the categories mentioned in the frameworks. Once the transcription process was over, the analysis began. Both deductive and inductive approaches were used to identify themes arising from the transcriptions and align them against the framework. Data was organized in an excel sheet under respective schools. The respondents received code names like Teachers-T, Headmasters-H, NGO
representation- NGO rep, private schools- P and government schools- G. Additional categories which arose like ‘corporal punishment’ were then added to the framework to bring in more context to the study. The whole interview was sorted against these categories which helped to examine the data better and in a different light.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptions</td>
<td>Background</td>
<td>Completed Grade 10 followed by two years of Diploma in Education.</td>
</tr>
<tr>
<td></td>
<td>Motivations</td>
<td>My mom was a teacher and I thought it was a safe profession to be in.</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>Student-teacher interactions are important in any classroom. This helps in building a strong environment of learning in the classroom.</td>
</tr>
</tbody>
</table>

Table 4: Illustration of the coding process (Compiled by the author)

4.5. Fieldwork

More than eight weeks were spent in the field as the researcher had to travel back twice due to holidays in India during the planned field work time assigned by the program. Planning for the data collection began in April, with connecting with school heads, etc. and the field work began in September. Most of the schools were busy or closed due to the religious festivals being celebrated during that period but a lot of information and context building took place during that time. It was useful to build relationships with the teachers and the school heads during that period as well. The second field work took place from January to end of February and the previous school visits helped to make the participants comfortable and carry out the conversation in a friendly environment. In a qualitative study, data tends to influence the research (Bryman, 2012), so being in the field helped to focus on certain areas, modify the research and interview questions accordingly. Interactions and observations helped in understanding the local context.
4.6. Levels and Units of Comparisons

Bray and Thomas (1995) created the “Framework for Comparative Education Analysis” to help denote the different levels of analysis and understand the comparative education research in depth.

Figure 5: Source: Bray and Thomas, 1995

The cube has three levels of dimensions: non-location demographics, aspects of education and of society and geographical and locational levels. This cube helps one understand the different levels of analysis within comparative education can be conducted providing a holistic understanding of the phenomena (Bray and Thomas, 1995).

The purpose of the study helps to guide the level of analysis. The comparative dimension of this study is schools. The cube helps to identify the comparative aspect which is classrooms in private and government schools in Pune, India. The analysis moves across two levels: micro level (schools) and the macro level (national). When the micro levels are understood within the macro level, there are richer insights to the case studies.
4.7. Ethical Considerations

In social research, data is collected from human participants and their actions and surroundings are observed. Ethical consideration plays a huge role in social research in order to protect the rights, identity, and dignity of the participants and avoid any kind of harm to them. It is necessary to take participants consent and approval before conducting research. As the study is qualitative in nature, great measures were taken to abide to all the ethical processes. A proper guideline was maintained and carried out to collect data ethically and effectively.

The first step was to receive clearance from Norwegian Social Science Data Services (NSD). All the schools were sent introductory letters from the university as well as the research proposal. Verbal approval was taken from the school heads before started the discussions with the teachers in the schools. The purpose and objectives of the study were clearly communicated to the school heads as well as the teachers. The participants were made comfortable and were ensured of a safe space during the interviews. Classroom observations were carried out only after the permission from the teachers and the headmasters.

During the interviews, measures were taken to ensure the participants were comfortable and could talk freely. The questions were not personal and focussed only on school and classroom. Classroom observations were conducted in a passive manner and no names were noted. Only interactions, environment and other useful things were noted down. The observations were carried out in a non-biased and non-judgement-based way. The participants could even withdraw from the research if and when they wanted. The notes and the interviews recorded were kept safely during the entire period of time. The researcher tried to ensure integrity during the collection and analysis of the data.

4.8. Validity and Reliability

Validity and reliability are essential in order to evaluate the research process as well as the quality of the research. Bryman (2004) highlights how each research strategy is assessed on the basis of validity and reliability. He further emphasized that even though validity and reliability are two different concepts they are interrelated as ‘validity presumes reliability’. Reliability and validity are necessary for analysing, designing and ensuring the quality of a study (Patton, 2002). Triangulation method was used to ensure that the study was valid and reliable. According
to Creswell and Miller (2002), triangulation is a method where the researcher looks for convergence of multiple sources of data collection to form themes of a study. Different sources of data help in building up the story and ensure there is meaningful and significant information for the study instead of relying on only one incomplete source.

In order to collect data, rigorous fieldwork was carried out. Sample selection was carried out through purposive and snowball method to ensure reliable participants and gather valid and meaningful data. To ensure that the study is valid, the interview questions were created of high rigour and included inputs from supervisor and professors from the university. The interviews conducted were recorded. The researcher took follow up of some interviews to ensure valid information was collected. Direct quotations from the interviews will be used during the findings and analysis of the study to ensure credibility.

As this study uses interpretive approach, there is emphasis on multiple case studies to ensure reliability. The data was collected in different ways like interviews, class observations and conversations with the participants. To ensure reliability, all the class observation notes, interview records and the field notes will be kept in order to have a reliable analysis and also to ensure accessibility. The study conducted in student teacher interactions and classroom environment is preliminary in nature and is transferable in nature as it can be used for researchers furthermore in this arena. The fieldwork was also carried out in a neutral manner to ensure valid and reliable data was collected.

4.9. Limitations

There were a few limitations to this study. As mentioned in the data collection section, the headmasters selected the participants for the study. They could have been chosen at random or chosen because of time availability. There could have also been a sample bias if they were chosen for the appropriateness of the study. This is a possible limitation to the study. The other part is the gender bias. Eleven out of the twelve teachers interviewed were women as the population of female teachers in the school were more than the male teachers and as the headmasters chose the participants, gender distribution was overlooked. But this was not the main part of the study, so it doesn’t affect it much.
The other limitation of this study was the language. The interviews were taken in three different languages: English, Hindi and Marathi. The researcher had to switch between languages during interview to make the participants comfortable. A lot of words were difficult to translate verbatim and may have lost its essence in its translation. This also resulted in long transcribing hours. But as the researcher is fairly fluent in all three languages, field notes taken during the interviews helped to provide additional context during transcription.

The field work time provided by the course clashed with the holidays in India. This provided a shorter period to collect data. In order to have sufficient data, the researcher had to go back to India twice to collect sufficient data.

The last limitation was access to classrooms and teacher interviews. The access to some of the schools was difficult as the school heads and teachers were not comfortable with the classrooms being observed. The government school teachers were sceptical and also hesitant to share their experiences during the interviews as they were worried the school heads would find out later. The teachers were not interested in staying at school after school hours for interviews, so they had to be fit in during school hours. The school head chose classrooms they thought ‘were good enough’ to be observed and took a lot of time to make them understand that the participants will remain anonymous.

4.10. Summary

This chapter presents the research methodology and the process from the research design, strategy, sample and site, data collection and the steps taken to ensure ethical considerations, reliability and validity of the study. The chapter is summarised below. This study uses interpretive and qualitative approach to collect and analyse data. The study uses multiple case study to collect thick, rich descriptions as research study. The research design of this study was then presented, a comparative design with multiple cases which became a multiple-case study design. The cases of this study are four schools in Pune. The study uses purposive and snowball method to select participants for the study. The study is comparative in nature. The study compares quality of teachers in the primary grades of government and private schools. The data was collected through semi-structured interviews and observations. The fieldwork took place over two months. A lot of conversations also took place with NGO stakeholders and other teachers to gain more perspective. Triangulation method was carried out to ensure the validity
and reliability of data which also reflects the interpretive nature of the study. Ethical considerations were taken care of during the study. For e.g., the identity of the participants, use of regional languages to ensure their comfort and ensuring a safe space for the participants was of utmost importance.

The next chapter will present the Findings of this study after the data was collected.
5. Findings

5.1. Introduction

This chapter will present the gathered qualitative data. The findings are based primarily on the semi-structured interviews of the teachers of the government and private schools, the headmasters and local NGO representatives and classroom observations. It also comprises of secondary sources like the field notes, casual conversations with the participants which took place during field work and related documents. Research questions and the analytical framework broken down into themes or categories will be the framework for representing the data. The findings will be presented under each research question and will be followed by a summary. Some themes emerged during coding of the data, these will be presented under the research questions as well. A discussion of these findings and the comparison will take place in the next chapter.

5.2. How do the teachers perceive the importance of teacher-student interaction and classroom environment?

This section will present the data from the interviews of the teachers and the headmasters. The teacher (T) interviews from the private schools (P) will be denoted with (PT) and the interviews from teachers (T) in the government schools (G) will be denoted as (GT). The schools have been represented with 1 and 2 under each head respectively. The teachers were asked open-ended questions about their understanding of classroom interactions and classroom environment. The purpose of these questions was to ascertain their ideas and conceptions and help the interviewer to avoid pre-assumptions or biases. This section will also talk about the backgrounds of the teachers and why they chose to be in the teaching profession. This will shed light into the teachers’ perceptions and motivations. This section also highlights the insights of the headmasters and their ideas of classroom environment and student interactions. The interviews of the headmasters will be denoted with an (H).
5.2.1. Understanding Teachers’ Backgrounds

The interviews started with an understanding of the teachers’ professional degree and their decision to join the teaching profession. This helped to set a comfortable environment for the interviewees and help the researcher understand each teacher, their motivations and perceptions in depth. The researcher found links between the teachers’ backgrounds and their actions in the classrooms, which shall be discussed at length in the next chapter.

The background stories of the government school teachers were interesting and sheds insights into them as teachers, their interactions with students and their perceptions. Most of the government teachers chose teaching profession as it was easy to balance professional and family life.

“Didn’t have much qualification to join private schools. Got married quickly, didn’t get much options of studying higher, but really wanted to be a part of this field. Chose to pursue this field so I could have a balance between managing family life and doing what I wanted to do.” (G1T2)

“Been part of this for the past 9 years. Happy with the salary and also allows to balance between family and her professional life.” (G2T2)

A few of the government school teachers also talked about their interest in trying to contribute towards the education sector, especially in improving government schools, as the students come from poor economic backgrounds.

“I completed grade 10... Have a two years’ diploma in education. My mom was a teacher and I thought it was a safe profession to be in.... always wanted to join NGOs, always wanted to be a part of the education sector because there is a strong need for professionals in this filed, especially in government schools. Trying to contribute to this system as much as I can”. (G1T1)

“Studied in government school till 10th myself so decided to join government school again and contribute back. Kids coming to government schools come from really underprivileged backgrounds. They don’t have anyone to depend on back home or any support. They are dependent on us in the school to get some learning. Parents don’t take much interest, they are completely dependent on us”. (G2T1)
Another underlying reason for joining the government schools is the required qualification. Most of the teachers have studied till grade 10 and have a diploma in education and work primarily with the primary grades.

The private school teachers have two different stories. The teachers from the low income private school had similar stories like the government school but the stories of teachers from the higher income private school were different.

“Have a Master’s in education. Wanted to work with children for a long time with a special focus on special needs. This space has been a huge learning space for me. I have had a steep learning curve and I absolutely enjoy teaching. I would love to continue working in a space like this.” (P1T1)

“Teaching is my passion. I look forward to coming to school every day and help in facilitating spaces where students have the freedom to express themselves, learn and follow their interest areas. I have a Bachelors in Education and other certificate courses in early needs education, etc.” (P2T1)

The backgrounds of the teachers shed light on the teacher qualifications and their interests in being in their current profession. The teachers from the government school and low income private school have similar stories in terms of education qualifications, motivations whereas the teachers from high income private schools have master’s degrees and different motivations to be in the field.

5.2.2. Understanding of Student-Teacher interactions

The interviewer asked the Teachers and the Headmasters what came to their mind when they heard the term student-teacher interactions and what does it mean to them?

“An ideal student-teacher interaction for me is when there are healthy conversations between a student and teacher. The teacher understands a child and is aware of his/her needs. A student trusts a teacher and feel comfortable around the teacher.” (P2T1)
“Students usually imitate teachers. Parents leave their children with us and leave their entire responsibility with us. We need to be their role model. They should respect us, and we should understand them”. (PIT1)

“Students should not be scared. Should be able to express themselves without fear. There should be a healthy interaction. These interactions relate to a strong relationship between the teachers and students, allowing both to express themselves freely.” (G1T2)

Most of the teachers replied in a similar fashion. They spoke about the need for healthy student-teacher interactions and how important it is especially in the primary grades, when the students are young. They feel that parents leave the responsibility of their children to the teachers and it is the role of the teachers to live up to that expectation. They try to play the combined role of a parent, a teacher and a friend in class. According to them, student-teacher interactions are necessary, especially in formative years. Positive and healthy interactions are required on the classroom and it depends on a teacher how these interactions take place daily.

When the headmasters were asked their opinions about student-teacher interactions, there were mixed reactions about the idea of student-teacher interactions. One of the government school headmasters inclined more towards a disciplined, learning oriented classrooms. “Student teacher interactions are important. Teachers need to ensure well disciplined, well-managed classrooms, should have strong values, include life skills. Students need to follow rules and instructions and listen to the teacher” (HG2). They emphasised the need of developing well-rounded children in their schools and their idea of ensuring that was classrooms where students were focussed on learning and teachers ensuring knowledge delivery.

Whereas the other opined that there should be differentiation in classroom and individual attention needs to take place. “Student-teacher interaction should take place in such a way that teacher is aware of each child’s needs and the teacher provides attention to each child”. (HG1)

The private headmasters of the both the schools were of same opinions when it came to classroom interactions. They emphasised the need to have child friendly interactions, understand child’s requirements, create healthy interactions between a student and a child. “Student-teacher interactions help in creating a positive environment where teachers facilitate learning and students are engaged and happy to be in classrooms and learn”. (HP2)
The teachers and the headmasters couldn’t clearly explain the meaning of the term, but each highlighted the need of it in a classroom. The teachers especially explained how healthy interactions among teachers and students ensures smooth learning in the classrooms every day.

5.2.3. Understanding of importance of classroom environment

Similarly, teachers and headmasters were asked what the term classroom environment meant to them and how they perceived it playing out in a classroom scenario. There were mixed responses. Some spoke about the physical environment such as the classroom layout, decorations, etc and some spoke about environment in terms of a safe, learning space for students.

“It means positive, learning environment where students are interested in learning. Teachers should use innovative methods to teach children. Must be a safe space, students can share anything they want.” (T2G2)

“Students should not be scared. Should be able to express themselves without fear”. (T1P2)

“Students should be seated according to their learning levels and be given activities and tasks accordingly to reach their individual goals. Print rich classrooms with good infrastructure.” (T2G1)

The principals emphasized that a positive classroom is directly dependent on a teacher seemed to share the opinion that positive classroom environment is the first step towards student learning.

“A positive classroom environment is very important for a child’s learning. Teaching is secondary. Children spend so much time in schools and should be comfortable in the space they have been provided”. (HP1)

“Positive classroom environment helps the students feel comfortable”. (HG2)

It is evident that the participants are aware of the term and its necessity but as the interviewer kept the question open ended, interesting answers were received. It helped to understand a teacher’s style of teaching and the methods used to ensure an engaged, learning environment.
5.2.4. Summary

The findings from the first research question shows discussions with participants about their backgrounds, interests in being teachers, their perceptions about student-teacher interactions and classroom environment. These discussions took before the classroom observations and helps to draw links between their ideas and perceptions and the classroom practices.

Summing up, the teachers and the headmaster of the government schools have low educational qualifications and are interested in the teaching profession because they have had similar backgrounds as the students’ and want to contribute back to the society or balance their family and work life. The government has chartered guidelines about the recruitment of teachers and these guidelines mention that teacher education is necessary. But on the contrary, underqualified teachers were recruited in the government schools. The teachers from the low-income private school had similar stories. They have low motivation of being in schools because of low salaries and lack of support from schools. The teachers and headmasters of the government and low-income schools are aware of the need for student-teacher interactions and positive classroom environment for children.

The teachers from the high-income private teachers have high teaching qualifications and are highly motivated to continue working in the education field and have clear ideas of the terms student-teacher interactions and classroom environment and why they are important.

The teachers’ backgrounds, the teacher and the headmaster interpretations of student-teacher interactions and classroom environment have interesting impacts in the classrooms as can be noticed in the next section.

5.3. What are the common practices as regards current classroom interactions and classroom environment and how can these be explained?

The second section of the findings will present the first half of the research question, i.e., the common practices of classroom interactions and classroom environment in the primary grades of private and government schools, based on classroom observations. The second part of the question, how these can be explained, will be visited in-depth in the discussions chapter. The
Teaching through Interactions framework will be used to present the data. During classroom observations, the framework was used to note down observations under each category. The findings from the private and government classrooms will be presented consecutively, which will help in understanding the comparative aspect as well.

5.3.1. Emotional Support

Data from the classroom observations highlights interesting patterns in the primary grades of government and private schools. This component describes both student-teacher interactions as well as the classroom environment. Corporal punishment was later added to this as this is prevalent in many schools in India and the researcher observed the same during the class visits.

**Government Classrooms**

The classrooms are very large in size as there is a high rate of teacher absenteeism/retention. Some classrooms have 50 to 80 students. Managing such big classrooms is quite a task and the teachers struggled with classroom management, the level of noise in the classrooms and usually ended with teachers having a really strict control over the students to maintain student discipline. Many teachers tend to use sticks or other forms of corporal punishment to ensure students behave properly in the classrooms. Students are used to being hit at home, so they aren’t affected by it. Three out of the four teachers looked disinterested in the classrooms and were passive, which means they provided minimal control of the class. In T1G1’s classroom, the 2nd grade students were playing with paper planes at the back of the classrooms while the teacher was teaching in the front. She was engaging with only the students sitting in the front rows and didn’t have control over the rest of the class.

Most of the teachers adopted the ‘lecture’ method where they taught concepts to the whole class but participation from the students was not encouraged. The teachers didn’t interact with the students and during the whole observation period, they kept focussing on classroom discipline because they consider that being the most important classroom practise and a sign of a good classroom.
T1G2 came to the interviewer after the classroom observation to apologise for an unruly class. He usually slaps students when they misbehave, and the students become quiet after that, but seeing the interviewer he avoided this as he thought the interviewer would report him.

T2G2 had fewer number of students compared to the other three, around 35 students and she had a strict control over the whole class. She stood in the front of the class most of the time and called out students who were not listening to her often. The classroom was completely teacher-centric.

**Private Classrooms**

The classrooms were very small, 15-20 students in each classroom. The teachers were easily able to manage the classrooms. The high income private school teachers did not use any corporal punishment but the teachers in the low income private school tend to use sticks in case the class got out of control. The high income private classrooms were student centric where the teachers played the role of facilitators. The teacher would explain a concept and the students had various activities to engage with the concept and also come up with their own ideas which was highly encouraged. The students engaged actively with the teachers. In the low income private classrooms, the teachers tend to be very strict and have a strong control over the classroom. It is a teacher centric space where some students tend to be disengaged. They follow the ‘lecture’ method as well.

**5.3.2. Classroom Organization**

Classroom organization describes seating arrangement, proximity of the teachers to the students, behaviour management of the students and the awareness of consequences in the classrooms.

**Government Classrooms**

Most of the classrooms had a traditional seating arrangement with seats arranged in rows facing the blackboard and the teacher standing in front of the class. The classrooms were stuffed with desks and chairs as each class had around 40-50 students minimum. The teachers
tend to ask the students in the front more questions compared to the students in the back, a consequence of having such large classes. The teachers tend to use verbal warnings as the first consequences and the next warnings tend to be standing outside the class, standing with hands up in one side of the classroom or being hit by hands or sticks.

T1G1 tends to walk around with a stick in the hand and threaten to use it on students who are not attentive. The teachers usually try to avoid it using it but used it occasionally if a student kept misbehaving. The teacher talked to them more and asked them questions most of the time. Those at the back of the room hardly participated in the classroom learning and this was exacerbated in large classes.

T1G2 has a smaller classroom and tends to walk around the classroom to ensure proximity to students resulting in less classroom chaos.

“Raise your hand…. please listen…. what are you doing...listen...stop disturbing the class.... you have to tell me the answer…. you don’t know the answer? You don’t study and keep talking in the class. I’ll complain to your parents”. (T2G1) The teacher kept scolding one student the whole period.

The government school teachers have a difficult time managing huge classrooms and most of the time is wasted in charting out behavioural expectations and ensuring class discipline in 3 out of the 4 classrooms.

**Private Classrooms**

The low income private school had a similar scenario with classrooms arranged in traditional seating arrangement with teacher taking the central role in the classroom. Both the classrooms had a stick kept in the corner, one of the teachers tried to hide it when the researcher walked into the classroom. Expectations and consequences were not clearly charted out and students were allowed to talk only when asked something. The classroom sizes were smaller, mostly 20-30 students in each class and there was much more control in the classrooms.
The high income private classrooms had different seating arrangements in class. One had a circular arrangement and one took out the students to sit under the tree for one of the classes. They sat in groups and the teacher had several stations where they kept moving around completing activities. Teachers have clear expectations and consequences charted out. The students were engaged in the classroom activities and were visibly happy to be learning. The classes were student centric and there was an extra assistant in one of the classes to support students who were struggling to understand a concept.

5.3.3. Instructional Support

This component describes the teaching methods, teaching approaches and teaching aids used in the classrooms to teach a concept. The focus of this component is also to understand teacher-centric vs student-centric classrooms.

Government Classrooms

As mentioned afore, the classrooms are teacher centric. The teachers use traditional methods of teaching. The focus is on completing the syllabus and preparing the students for the exams, so the teachers follow the age-old pattern of: teach a concept, explain it, and ask students to solve questions.

T2G1, an English teacher for grade 2, walked into the classroom and announced the name of the chapter to be read that day. The teacher read out from the book, made few students read out a few passages and explained the text. The teacher started writing questions and answers on the board and asked the students to copy it into their notebooks.

T2G2 made students write 1 to 50, ten times to make them remember the numbers. The teachers use the method of repetitive teaching, so the students can recall the information. Teachers usually ask close ended questions resulting in a ‘yes’ or ‘no’ answer. The feedback the teachers usually give the students is either ‘correct’, nodding the head, etc. The students are completely dependent on the teachers. There is no differentiation in the class, all the students are taught at the same level and same assessments are taken half yearly to ascertain the results of students.
The other government teachers tried to engage the students by asking them questions which tied to real life experiences and making a few students solve questions on the board. Most of the classes were dull, where students played a passive role. Most of the teachers didn’t have plans before the classes and seemed to be improvising in the class. One of the teachers got a phone call and was chatting on the phone while the students were copying down texts from the board. The students are expected to memorize these and write them during the exams. There is no real discussion or application of the knowledge, the focus is only on memorizing. The only student-teacher interaction taking place is when a teacher asks a question or trying to control a class.

Private Classrooms

The low income private school had the exact same classroom scenario as the government classrooms. The teachers taught in front of the classroom, explained the concept and then the students either copied from the board or sat and solve questions by themselves in the book. Students were not allowed to talk during class as it is not encouraged. In T2P1’s classroom, a student raised hand to ask a doubt. The teacher told the student to not disturb the class when he is teaching. Traditional styles of teaching are used with very less focus on building the understanding of the students. Apart from that, the school has poor infrastructure facilities which hinders delivery of education to the students even more. The classrooms don’t have electricity, the students study in hot, dark classrooms. There is a lack of teaching resources or aids, lack sports equipment or other extra-curricular activities, very few toilets for girls and lack of meal provisions.

In the high income private school, the teachers first introduced the topic, then showed videos and had various differentiated level of activities for the students. There was constant teacher-student and student-student interactions taking place. Many innovative teaching aids and resources are used to support teaching methods. The classrooms are equipped with projectors, maps, globes, games to aid in engaging the classrooms. These facilities are not available in the government and the low income private classrooms.
5.3.4. Summary

The findings reveal the difference in styles of teaching, behaviour expectations, classroom management and classroom styles between private and government classrooms. In terms of emotional support, the government school teachers struggle with large number of students and discipline of the students resulting in use of corporal punishment often, to maintain discipline. The low-income private school teachers had smaller class sizes comparatively, but they tend to use corporal punishment to maintain discipline as well. The teachers looked bored and unmotivated to teach in the school. The high-income private school teachers payed a lot of attention on creating emotional support for children by understanding each child’s needs and having individual goals for children.

The teachers in the government schools and the low-income private schools had traditional approach to classroom practises with teachers playing the authoritative role in the classrooms and the students sitting in rows facing the teacher. The high-income private school teachers had different arrangements in the classrooms to ensure teacher proximity to students. The findings from the government schools highlight the one-sided, repetitive teaching style with very less opportunities for students to explore a concept or apply their own thinking. The teachers focus is mainly on maintain discipline. The low income private school had the same story whereas the high income private school, with better facilities and teachers, provided a differentiated student-centric learning environment.

5.4. To what extent private and government schools differ regarding (a) student-teacher interactions (b) teaching practices (c) classroom environment (d) teacher quality?

The last section of the findings will present the context brought up the participants towards understand the quality of teacher in private and government classrooms. This research question will be discussed in detail in the Discussions chapter, but in this section an overall context will be provided using the UNESCO quality framework. The findings are based on the informal conversations with teachers and principals and interview with the NGO representative and general observations.
The background of the education system in India and current policies and the socio-context of the schools in Pune have been presented before in the Literature Review section. The enabling inputs have been talked about at length in the above sections. In this section, the focus will be on the context.

**Parental Support**

The parental support varied in the different schools. The headmasters were asked about the parental support in the school and they all mentioned that parent involvement is a must and they highly encourage the teachers to hold regular parent—teacher meetings to update the parents about the students.

The government schools have recently started a School Management Committee (SMC), a space where, teachers, parents, students and other external stakeholders come together to create a vision for the school and work towards improvement of the school. The law came into effect from 2006 when the RTE act was passed. This has increased the parental involvement in the school.

“We have observed that parents now have an increased interested in the school affairs and in their child’s education. They want to have a good education and achieve success in life”. (HG1)

“We hold regular parent-teacher meetings to update the parents about their children. Parents are usually eager to hear how they are performing in their studies. They are poor and want to ensure their children have better lives”. (HG2)

“The parents of the government schools and low income private schools send their children to English medium government schools so that their children learn English and can have better livelihoods. Some of them are illiterate and want their children to read, they place their trust in the schools and hope that the children learn and achieve high grades”. (HP1)

Parents of students in low income private schools and government schools are very poor and they look at education as a tool to push their children out of poverty and make them job-worthy. They have now started taking an active interested in their children’ studies. They actively seek out teachers to be updated about their child’s progress.
The parents in the high-income private school have a similar active role. The school has a parent council with a parent representative from each class and they have a monthly meeting. They take active role in the school’s management and a parent is elected every year to be a part of the board as well. Parents play an important role as they are more aware of the system. So, parents take a keen interest in daily processes of the school, right from studies to extra-curricular activities. HP2 mentioned that parent involvement is so strong that at times if teachers don’t give home work to the students, the parents call up the teachers asking them to give more work at home, so students get practise at home as well. The parents also organize events for the students. The parent community is very strong and is an immense support to the school. Thus, in both the cases, the parent support and involvement have been significant as parents take keen interest in their children life.

**Educational Knowledge and support infrastructure**

In Pune’s education field, NGOs have begun to play an important role in designing, supporting and implementing PMC’ policies. Pune government has recently joined signed an MOU with an education NGO and has delegated them projects of teacher training and teaching support. The organization has trained twenty teachers from the government school and have given them the title of ‘Sahayogis’. These Sahayogis travel to different schools and hold teacher-training workshops and organize event where the best teaching practises can be showcased (NGO rep). The government schools also have regular inspection by government officials resulting in headmasters being accountable for their schools. These are the recent efforts of the Pune government to support teachers at school, but this is limited to only Marathi medium schools. The English medium government schools just have inspection but no other support from the education board. “There are yearly workshops organised for the teachers, but this is voluntary so many of our teachers usually don’t go for them” (HG2).

There are many NGOs working in the government schools in Pune in the space of teachers, teacher-trainers, headmaster trainer, community builders and so on. “We have tried to create a collective space where all the NGOs working in a space come together with the same vision of improving the space and ensuring the children receive better opportunities” (NGO rep).
The low-income private school has no support structure in place for the teachers. “If teachers have any issues, we highly encourage them to observe other teachers or come to me with doubts” (HP1). But slowly a few NGOs have been intervening in this space as well in terms of teacher training and support.

The high income private school have teacher trainers who regularly observe classes and provide feedback to the teachers. The teachers have regular teacher training workshops and are sent to participate various seminars and conferences. The school hold regular planning days and workshops for the teachers to develop both professionally as well personally.

**Time available for schooling**

The school duration of the government and the low-income private schools are around five hours. Some are morning schools and some afternoons, as many of the schools share the space with colleges or Hindi/ Marathi medium schools. “The government is planning to increase the school timings for government schools as well because students have almost 6-7 subjects and very less time to teach everything in just a 45 min class period. But the decision has not been made yet” (NGO rep). The morning school timings are 7:00-12:00 and the afternoon school timings are 12:30-5:30. The teachers stay back for two hours after that as they have to plan for the next day and they also have a lot of administrative work to be done. One of the teachers was called out from the class to finish an urgent administration work during observation.

The duration of the high income private school was around 7-7.5 hours. The school also ran after-school activities for students whose parents work long hours. “We have long hours compared to other schools because we want to student to immerse themselves in this space and absorb as much learning as possible, so they don’t spend much time studying at home and can do other activities” (HP2).

**Competitiveness of the teaching profession in the labour market**

The teacher profession is highly gender skewed. A high percentage of women join this profession as this field is not very stressful or has long hours compared to other professions giving them a sense of balance between work and family. The salary of permanent government
schools is around INR 36000 ($500) per month, but one can become permanent only after three years of teaching and the salary then too is very less (NGO rep). So, a low percentage of men join the profession as they have more pressure to earn well and support family. Thus, fewer people apply for this profession resulting in a lack of teachers in the government schools leading to classrooms with more than 50 students.

The low-income school charges fees from students. A percentage of the salary goes towards the salary of teachers. As these students come from poor backgrounds, they are unable to pay the fees regularly leading to teachers being unpaid for months. Their salary is meagre, some earn barely Rs 6000 ($85) per month. Most of them supplement this salary by taking tuition classes after school.

“Why should I take so much interest in teaching? This is the third month without salary” (T1P1). There are few teachers in the school and often there are classrooms with no teachers.

The teachers in the high-income schools earn well and there is a soaring demand of being part of these high-income schools. The school the researcher visited, had only female teachers, there were no male teachers, even though the salary was high. The teachers are very well qualified and go through long selection procedures to be a part of these schools. Most of the teachers in the school had master’s degree and a few years of experience.

Thus, the competitiveness in the labour market is more in the high-income schools bracket due to the high salaries compared to the government and the low-income private schools.

Teacher Education

The teachers need to have a bachelor’s in education to become a permanent teacher in the government schools. The recent policies have placed a lot of weight on B.Ed. to ensure schools have qualified teachers (NGO rep). Many teachers pursue a one-year diploma in education to get a job but have to work as temporary or contract teachers until they complete their bachelors. Many of the teachers interviewed by the researcher in the government schools were such diploma-holders and were content with being temporary teachers. They supplemented their salary by taking tuitions or working as temporary teachers in other schools as well. The
government schools have regular inspection by the school boards, who are strict about teacher qualifications. So, there has been increase in qualified teachers in the government schools.

The low income private school had hired teachers who had just studied till grade 10\textsuperscript{th} or 12\textsuperscript{th}. Out of the 14 teachers in the school, only two teachers had a diploma in education. The management’s focus is on profits and not the qualifications of the teachers. “\textit{When we take a teacher demonstration before hiring a teacher, we check if she can control the class and teach. We focus on quality}” (HP1). The headmaster insisted that qualifications don’t define teachers, but the teaching quality defines them.

The teacher in the high-income private schools, as mentioned afore, have a bachelor’s and/ or master’s in education. The school also holds regular teacher training workshops for the teachers to teach new, innovative methods of teaching.

\textbf{5.5. Summary}

This section presented the findings based on the interviews, observations and casual conversations which took place during the fieldwork. The findings were arranged according to the research questions. The findings showed the comparative aspects between the government classrooms, the low-income, and high-income private classrooms in terms of classroom interactions, classroom environment and the overall context of the schools. The findings also shed light on the strong links between education and society and how they tend to influence each other. Classroom practices are heavily influenced by the social contexts, physical environments and the national policies.

In the next section, these findings will be analysed using the analytical frameworks.
6. Discussion

The purpose of the thesis is to understand the student-teacher interactions in classrooms and the state of classroom environments in the government and private schools in India. This chapter will explore the research purpose by analysing the findings from the previous chapter with the analytical framework. Recalling the framework, the analysis of the data will move across two levels- the macro level which entails the educational environment and the micro level which includes the interactions between the students and teachers, role of school heads, classroom environment, etc. This chapter will be organized in two levels- micro and macro and the discussions will take place using the findings of the research questions and analysed according to the frameworks. The UNESCO quality framework will be used as the macro lens and the teaching through interactions framework will be used for the micro lens. Constructivism will be used as the overall lens. The comparative aspects came out in the findings, these will be highlighted during the discussions.

6.1. Macro Lens: Educational Environment of the Government and the Private Schools

This section gives an understanding of the educational environment of the four case studies. The findings and literature review will be analysed against the UNESCO quality framework. As constructivism is an overall lens, it will be used to analyse certain parts of this section as well. The discussions of this section will be presented under the categories of the UNESCO Quality Framework.

6.1.1. Teaching and Learning Dimensions

This dimension focusses on what takes place in the classrooms and is highly dependent on enabling inputs (UNESCO, 2005). This section will be looked upon in detail in the Micro level, but an overview will be provided here. Only the categories which are necessary for discussion will be selected. The comparisons between the government, low-income and high-income private schools will also be provided and reasons for the similarities and the differences will be discussed.
Teaching Methods

The findings reveal that the prevailing pedagogy in government schools and low-income private schools is dominated by teacher-led recitation. The teachers use a text book or the blackboard to transmit knowledge and the students learn through rote learning method. There is no emphasis on the actual understanding of the topic. The interactions which take place in the classrooms is primarily of a teacher giving instruction and students following it. The assessments and homework given are usually mechanical, stressing on memorizing the topics. There is no differentiation in the class with teachers focussing usually on the students sitting in the front. There is a standard examination at the end of the school term which determines how a student has performed that year and achieves ranks or grades accordingly. More than 50 per cent of the class is devoted to teacher explaining the concept and the rest on disciplining students. This was even highlighted in Alexander’s (2000) study of Indian primary classrooms. He stated that the lessons were highly rigid and repetitive. The lessons are not progressive and focusses on factual knowledge. There is no use of teaching aids in the classrooms and teaching was targeted at the entire class, leading to gaps in learning levels.

Group work is less, resulting in low student-student interaction and/or peer discussions. A great deal of time is spent on trying to maintain strict discipline in the classrooms. Kumar (1991) mentions that this tradition of discipline can be traced to the primary schooling in the British period. A significant proportion of the students were disengaged, lacked understanding and showed disinterest. Often, these were also the ones who were disruptive in the classes. The classrooms are not student-centred leading to lack of student ownership of their learning. Constructivism theory puts emphasis on students constructing knowledge through social interactions, but in the low-income private school and the government classrooms the students are not allowed to engage with other students or with the concepts itself.

The case of high-income private school was very different. The classrooms were student-centres and students were highly engaged in the learning process. The lessons and assessments were differentiated, and students were aware of their individual targets. The learning was project-based helping the students explore the topics on their own and apply the knowledge gained. The students worked in pairs or groups and there was constant student-student and teacher-student interactions taking place in the classroom.
Classrooms must be engaging, student-centred, differentiated and catered towards each child’s individual needs. The government and the low-income private classrooms are unable to provide this to the students.

**Assessment, Feedback, Incentives**

The findings show that teachers in the government and the low-income private school usually directed ‘closed’ questions to the students usually resulting in ‘yes’ or ‘no’ answers. The purpose of the questions was to ascertain if the students can recall all the information instead of their understanding of the topic. Students were rarely allowed to ask questions in the classrooms. Students were praised by usually by a ‘good’ or ‘bad’ or a non-verbal affirmation despite of the research which has taken in this field (Brophy & Good, 1986; Good & Brophy, 1991).

The teachers in the high-income private school mostly asked open-ended questions and followed them up with a ‘why’ to encourage students to think more. The teachers also had one-on-one discussions with them about their goals and the progress towards these goals.

In terms of assessments and homework, students in the government and low-income schools received factual questions. There is no differentiation nor a scope for students to explore a topic in a different way. The students in the high-income private school had different type of questions ranging from multiple type to open-ended to understand a child’s knowledge and grasp of the topic.

One of the key points of constructivism is to ensure the concepts or assessments are scaffolded to individuals and also ensure provision of constructive and timely feedback to the students. The teachers in the government and low-income schools are unable to offer students such a conducive environment.

**Class Size**

The government classrooms generally have a class size ranging between 50-80, making it one of the biggest challenges for the teachers. It was difficult to manage so many students, and consecutively teaching was restricted to the first few rows. There is low proximity between the teachers and the students, resulting in less student-teacher interactions.
Constructivism advocates spaces for interactive learning for students and this is possible with fewer students. The low and high-income private schools had class sizes of 15-20, giving the teachers a lot of flexibility and ensuring more individual attention to the children.

6.1.2. Enabling Inputs

According to UNESCO (2015) human and material resources are highly essential for school effectiveness and are interrelated to teaching and learning process. This section will provide an overview of the state of the school, the support structures present and the resources available. In regard to the enabling inputs, clear differences were visible among the four cases.

Teaching and Learning Materials

The government schools are run by the education budget assigned by a state. The government schools provide free education, free uniform, mid-day meals and free textbooks to the students. The state is also responsible for provision of physical infrastructure, extra-curricular facilities, teaching aids, computers and other resources to facilitate learning. The government classrooms lacked teaching aids and other resources. The teachers only used text books and the blackboards as teaching aids. Some classrooms had maps and charts displayed on the walls, but the teachers rarely referred to them and, moreover a few of these were outdated.

The low-income private school is run on the fees collected from the students. The students come from underprivileged backgrounds and parents are often unable to pay the fees resulting in paucity of funds to pay salary to teachers or purchase resources for the school. The lower grades displayed the work done by students on the walls, but the higher grades had blank walls. The school couldn’t even afford electricity, so the students usually study in warm, dark classrooms.

The low-income and private school and government school teachers adhere to traditional methods of teaching using text books and teaching concepts based on syllabus. The assessments are also designed to test the number of correct answers. Constructivism pushes for new innovative ideas of teaching like experiential teaching, field trips and so on.

The high-income private school is run by the fees collected from the students. The fees are very high resulting in the salary of the teachers being high and the classrooms had modern technology and resources. The students had a laptop each and the teachers had a lot of resources
available for them to make teaching interesting. The school had provision for many extracurricular activities, giving students opportunities to follow their interests. They have regular field trips and have classes in different settings to expand their knowledge.

**Physical Infrastructure and Facilities**

The government schools had poor physical infrastructure but had basic facilities of drinking water, toilets, electricity in the classrooms, computers labs and sports equipment. The classroom sizes were very small and the number of students really high, leading to crammed spaces.

The low-income private school had very poor physical infrastructure. The walls were crumbling down in some areas, there was no electricity, no sports or lab facilities. Conducng learning environments are essential and can be generated by provision of more teaching materials and comfortable classroom spaces (Ackers and Hardman, 2011).

The high-income private school had air-conditioned classrooms with swimming pools and huge sports complex, projectors, auditoriums, etc. Each classroom had a unit theme and was decorated accordingly. The school had even its own radio station run by the students, for the students.

**Human Resources**

As mentioned briefly in the literature review section, PMC manages and maintains the government schools. The recruitment of the headmasters and the teachers are done by the education department. The Headmaster plays the role of a mediator between the school and the state. The headmaster is responsible for a lot of administration work. There is no support structure available for teachers in the school. The teachers usually talk with each other in case of difficulties and solve issues themselves. The headmaster rarely goes around for class observations or gives feedback to the teachers. They are just responsible for the day to day activities of the school.

The low-income private school is run by a trust, which runs several other private schools across the state and their sole interest is to make profits often resulting in teachers not receiving salaries and poor physical conditions of the school. The headmaster’s role is to provide support to the
teachers and ensure smooth running of the school. The teachers do not receive any support in the school.

The high-income private school is run by an individual. The headmaster plays a very important role in the school and is the primary decision maker. The headmaster observes classrooms, provides feedback to the teachers and organizes workshops to support the teachers.

The framework puts more emphasis on the human resources than the materials. Teachers are the most crucial aspect of the human resources and if adequate training, support or autonomy is not provided to the teachers, the effect reflects in the classrooms. In the case of the government and the low-income private schools, there is no support or training. The government teachers have to do a lot of administration work resulting in less time to plan classrooms. The teachers have no flexibility or autonomy and have to stick to the curriculum and guideline outlined by the school or government.

6.1.3. Contextual Dimension

In regards to the contextual dimension, the impact of this dimension on the four case studies varied. The findings and the literature review have clearly explained the socio-eco contexts, parental support, strategies in the four different schools. The context aspects however play a very important role every day in the lives of the teachers, students’ , headmasters and other stakeholders in this field.

There are many national strategies and initiatives in place to ascertain student-teacher interactions and positive classroom environments. NCF clearly charts out the requirements and the ways to create positive classroom environment and initiate student-teacher interactions in the classrooms. There is a gap between the implementation and execution, the teachers and the administration staff aren’t aware of the process and usually do things differently. The mindsets of the educators need to be changed as well.

Another setback in the low-income private school and the government schools is the use of English as the medium of language. Brock-Utne & Mercer (2014) have mentioned that learning in an ‘exogeneous’ language can affect education quality. Many of the concepts explained in by the teachers who didn’t master the language themselves couldn’t be comprehended by the students, leading to low comprehension of the concepts taught at school, leading to a further barrier between students and learning outcomes. The students in the high-income private school
come from backgrounds where both parents usually speak English fluently. Thus, language is not a barrier to them.

6.2. Micro Level: Student-Teacher Interactions and Classroom Environment in the Government and Private Classrooms

As mentioned in the Findings of Research Questions 1 and 2, there is a stark difference between the beliefs and perceptions of the teachers about teacher-student interactions and classroom environment and what is practised in the classrooms. The discussions will take place under the three sections from the Teaching through Interactions framework.

6.2.1. Emotional Support

As Hamre et al (2013) mentioned in the framework, emotional support is provided by building a positive climate, being sensitive towards children’s needs and being a facilitator of learning. The discussions will take place under the components defined in the categories.

Positive Climate and Negative Climate

This component focuses on the emotional tone of the classroom and ascertains the connection between teachers and students (Hamre et al, 2013). As the literature review on classroom environment mention that it has a direct impact on behavioural and academic outcomes, it is imperative at classrooms are a space for learners to grow. It is directly proportional to teachers’ interests and motivations.

The government classroom sizes are very big, with the teacher-to-student ratio being 1:50 or more, most of the times. The teachers find it very difficult to control the classroom and the atmosphere is usually negative as the teach resorts to verbal or physical punishment to create discipline in the classrooms. Often, teachers are unable to control the classrooms. The classrooms are skewed towards a negative climate and not feasible for student learning. The low income private school teachers have very little interest in being in classrooms as their
salaries are very low and they don’t get paid regularly. Their focus is on the private tuitions after school as it is their source of income. The classroom atmosphere is skewed towards positive atmosphere.

The high-income private school teachers were highly aware of their students’ need and created a positive classroom environment for the students. The classroom sizes were small and allowed the teacher high proximity with the students.

**Teacher Sensitivity**

Hamre et al (2013) mention that this component helps in understanding teachers’ responsivity to students’ needs and awareness of students’ level of academic and emotional functioning.

The government teachers are usually focussed on completing the syllabus and ensuring students receive good grades in the term-end exams. There are no diagnostic tests to ascertain students’ level or any one-one student discussions to understand their needs. The teacher-sensitivity of the government teachers is low.

The low-income private school had lesser number of students in each class, so the teachers were aware of their levels and requirements. The teachers also lured the parents of the low-performing students to their private tuitions after school, mainly to boost their own incomes. The classrooms don’t have any differentiation or run tests to diagnose if a student is lagging behind.

The high-income private school teachers were aware of the students’ backgrounds, educational requirements and emotional capabilities. They are highly sensitive towards the children in their classroom. There is a special needs educator and counsellor who work with students in the primary grades and work with under-performing students along with the homeroom teacher on a regular basis.

**Regard for Students’ Perspectives**

“The degree to which the teacher’s interactions with students and classroom activities place an emphasis on students’ interests, motivations, and points of view, rather than being very teacher-driven” (Hamre et al, 2013).
The students in the government classrooms don’t take any initiatives and the teachers play the central role in the classrooms. The teachers aren’t sensitive towards the students’ academic levels. It is highly teacher-driven.

The low-income private school teachers are the authoritative figure in their classrooms and students are usually wary of them. The classes are teacher-driven, and the teacher plays the role of giver of knowledge.

The teachers from the government schools and the low-income private teachers do not encourage the children to voice their opinions or create their own learning space as propagated by constructivist theory.

The high-income classes are student-driven and the teachers played the role of facilitators. The teachers are receptive to students’ perspectives in the classrooms.

**Over Control**

Over control component in the Teaching through Interactions Framework shows if the classrooms are rigidly structured or regimented at the expense of children’s interests and/or needs (Hamre at al, 2013)

The government school teachers were struggling to control their classrooms leading to chaos. The low-income private classrooms were teacher-driven and there was over control by the teachers. The students couldn’t talk to each other in the classroom at any point of time, they had to maintain complete discipline and only focus on learning. The teaching through interactions framework lays emphasis on student-teacher interactions in the classrooms, but there were no interactions take place in the government and low-income private classrooms. The classroom is highly structured and in turn create a negative classroom environment.

The high-income private classroom was student-oriented. The teachers set behaviour and classroom expectations in the beginning of the lesson and constantly adapted to the needs of the students.
Corporal Punishment

The Indian schools have a context of corporal punishment in the classrooms and it was highly visible in the schools.

The government classrooms and low-income private classrooms had canes in the classrooms and used it liberally on the students who misbehaved. This is highly criticised by all educators and has harmful impact on both student-teacher interactions as well as classroom environment. The students are fearful in the classrooms and it impacts student learning.

The high-income classroom had classroom expectations charted out and didn’t use corporal punishment as a consequence. This materialized from the fact that the teachers had several workshops on classroom and behaviour management and were aware of several strategies they could put in place to ensure the students were engaged as well as aware of the behaviour expectations.

6.2.2. Classroom Organization and Management

According to Hamre et al (2013) focus on academic goals is important for classroom interactions and regular classroom routines and procedures are necessary for an engaging classroom environment.

Behaviour Management

According to Hamre (2013), the teachers should have effective methods in place to prevent and redirect misbehaviour by presenting clear behavioural expectations and minimizing time spent on behavioural issues.

The high-income private classrooms had set classroom procedures and the expectations and behaviour consequences were charted out and displayed on the walls. The students were aware of the consequences and worked accordingly. This enabled more student-teacher and student-student interactions. This stemmed from the fact that the teachers had regular workshops as well as regular observations by the trainers who gave them feedback about how to be effective teachers in the classrooms.
The low-income private teachers and the government teachers didn’t chart out clear behaviour expectations or classroom expectations. The teachers stayed mostly in front of the class and didn’t walk around much. The students were aware of the cane resting in front of the classroom; it kept them quiet. The students were passive in the classrooms. The teachers spent a lot of time trying to disciple students and consequently lesser amount of time was sent on learning. The consequences usually ranged from informing the parents or principal, to caning the students.

**Productivity**

The framework mentions that teachers should use their instructional time effectively and have set procedures to have more opportunities of learning.

The government teachers had many students and had to keep repeating instructions. A lot of time was spent of trying to maintain discipline in the classrooms resulting in low productivity. The low-income teachers had fewer students, but the teachers had low interest in teaching and being in the classrooms, resulting in low productivity.

Constructivism highlights the need to be effective teachers in the classrooms to maximize learning. Due to set classroom procedures, the high-income private school teachers spent less time on repeating instructions and more time on learning. The classroom productivity was high.

**Instructional Learning Formats**

Hamre (2013) advocated the use of innovative and fun teaching methods to engage the students in the classrooms.

The government and low-income private school teachers used a repetitive method of learning and made the students write tables or difficult work a few times, to make them memorize the matter. There were no teaching aids used in the classrooms. Thus, the teachers didn’t engage the students with interactive or experiential learning as encouraged by constructivism.

The high-income private classrooms were organized in such a way as to initiate more group work among students and student-student interactions and student-teacher interactions was highly encouraged. There is use of ICT and other resources to make the class interesting and the learning fun.
**Classroom Chaos**

“The degree to which teachers ineffectively manage children in the classroom so that disruption and chaos predominate” (Hamre et al, 2013).

The government classrooms had high number of students and the teachers were not able to control the classrooms. There was no student-student or student-teacher interactions, but the teachers stayed in the front of the class, teaching, with no awareness of the disruption happening among the back benches. There was high classroom chaos in the government classrooms.

The private schools, on the other hand, had fewer students and a good control over the students. The low-income private school focussed on discipline and use of corporal punishment to main a strict discipline in the classrooms. The high-income private school teachers had strong behaviour management techniques and tools present in the classroom, resulting in students being engaged.

**6.2.3. Instructional Support**

The student-interactions framework lists Instructional Support as a category to determine classroom environment and interactions (Hamre et al, 2013).

**Concept Development**

The framework stresses on the need to move towards high-order thinking skills from rote-based learning.

The observations showed that the government classrooms and the low-income private classrooms had very low variations in teaching methods and approaches. Both the framework and constructivism highlight the need to scaffold and increase the rigor of understanding in the classrooms. They also encourage project-based learning, but the government and the low-income schools follow traditional approach of teaching a concept from the syllabus and the students were encouraged to memorize regardless of the subjects taught.
The high-income private classrooms had project-based learning which helped them to understand the concept and to apply it. The teachers use differentiation in classrooms and push each child to meet their individual goals.

**Quality of Feedback**

Teacher feedback helps in expanding students’ learning and understanding (Hamre, 2013).

As explained in the previous section, the students in the government classrooms and the low-income private schools were asked questions in ‘yes’ or ‘no’ format and usually replied to it with a ‘right’ or ‘wrong’. There was no meaningful feedback given. The feedback provided to students were usually in the form of scores derived in tests and not on the understanding of a concept. Teachers in the low-income private school had similar feedback system of approval; a ‘yes’ or ‘no’ or just a nod of the head.

Teachers in the high-income private school showed constant appreciation and gave appropriate feedback to the students. The questions asked in class were usually open-ended and students were encouraged to question and explore concepts.

**Language Modelling**

Hamre (2013) defines language modelling as “The quality and amount of teachers’ use of language stimulation and language-facilitation techniques during individual, small-group, and large-group interactions with children”.

Constructivism advocates guided reading and learning as an approach to make the students understand the concept and then attempt to work on their own. The high-income private teachers did a lot of modelling for the students to understand how to solve a question or how to do a certain task. The students imitated the same method while solving the questions during both group and individual tasks.

The teachers of the government and the low-income private school weren’t aware of this method and didn’t practice it. They played the role of an authority and were present in just the front of the room, read out the texts and let the students just answer the questions from the text.
Richness of Instructional Methods

Teachers should use various strategies to promote students’ learning and thinking at a more complex level.

There were no use of teaching aids or innovative methods to explain a concept in the government and low-income private classrooms. The students were not given group work or project work, the focus was on individual work.

The high-income private classroom used many teaching aids and project-based learning, for e.g., one of the teachers held a classroom outside to study insects. The teachers use daily life scenarios and examples to connect the students to the concept. This was also due to regular workshops held at the school on how to enrich students’ learnings.

6.2.4. Summary

The section highlights the stark differences in approach and in practise in the government, low-income and high-income private classrooms. The government and low-income private classrooms show lack of student initiatives, student-teacher interactions and a safe and supportive environment for the students. The teachers are highly authoritative in the classrooms and focus on disciplining students instead of teaching and making learning a fun process. Dillon (1994) and Wood (1992) mention that teachers should shift the balance of control to the students by paying more attention to their needs and through interactions.

The high-income private teachers use innovative methods, interesting classroom seating arrangement and project-based learning to keep the students engaged in the classrooms. The classes are student-driven, and a fun and safe environment is created by the teachers for the students.

The student-teacher interactions are visible in the classrooms of the high-income private school. The classroom environment is also positive and a space for learning. There is very less to almost no student-teacher interactions in the classrooms of the government and the low-income private schools. The classroom spaces are not engaging or a safe space for the students.

Here is a representation of the discussions in a table format:
6.3. Exploring Teacher Quality in India

The previous sections have highlighted the classroom practices of student-teacher interactions and classroom environments in the government and the private classrooms and the educational environments of these schools. This section provides a larger discussion on the quality of teachers in India and uses constructivism as a lens to analyse it. This section focusses on the concepts or ideas which emerged in the Findings and the previous sections in the Discussions chapter and breaks them down into different categories to have a deeper understanding of these and their impact on teacher quality in India and subsequent classroom practices which take place in the government and the private schools.

![Table 5: Modified Student Teacher Interactions framework (Compiled by the author)](image)
6.3.1. Rote Learning Method Vs Innovative Methods

The findings indicate that the teaching in the government and the low-income private schools are dominated by rigid, rote learning methods of teaching. This impacts the cognitive development of the students in these schools (Alexander, 2000, Clarke, 2003, Sarangapani, 2003). This ritualised form of teaching method goes against constructivism which propagates dialogic discourse. Constructivism lays emphasis on student-teacher interactions and an engaging classroom environment which results in students playing an active role in their own learning. Learning does not take part by just adding to the factual knowledge of a topic, but students need to explore the topics, create new experiences and develop their own understanding of the topic. Students need to be provided with opportunities to have dialogues and discussions with other students and their teachers leading to higher thinking. Thus, constructivism questions the traditional approaches of rote learning methods taking place in the classrooms, especially serving the poor. The practise of ritualised practises of recitation in the classrooms began in the colonial periods. Alexander (2000) argued that the pedagogical practises in India are highly influenced by the education history, colonial traditions, practise of teacher-led recitations and memorization of texts leading to the phenomenon of recitation practises. The government and the low-income schools continue these traditional practises in the classrooms. Most of them have not had teacher-education and do not receive training on classroom practises, and hence aren’t aware of the changes in outlook required. So, the schools catering to the poor have teacher led classrooms. The teachers resort to tried and tested methods of teaching and the students are mainly passive and just memorize the concepts and prepare for exams.

The same practise does not take place in the high-income private schools as the teachers have strong pedagogical backgrounds and have constant in-school support from observations, feedbacks to workshops to help them. They receive appropriate guidance from their headmaster and school management to introduce innovative methods in teaching which will make learning fun and engage the students. The teachers also have teacher education and relevant qualifications. Thus, the classrooms in the high-income private school are student-centred and students take the ownership of their own learning.
6.3.2. Interactions within Schools

The interrelationships among the stakeholders within and outside school, influence and impact each other. For this study, focus is on synergies between the teachers, headmasters and the school management or governing boards.

In the government schools, many stakeholders are present in the school: teachers, headmasters, school management committee, state education officers and the NGOs intervening in these schools. In one of the schools, there were four different NGOs working in four different space, training headmaster, training teachers, working with the youth and working with the mothers of the children towards financial stability of the women. The interactions between the teachers and the headmasters are limited because the headmasters have many administrative work and tend to be busy with that and other official work. They rarely went for classroom observations and weren’t much aware of what took place in the classes. The teachers went to their peers for suggestions or other classroom related issues. The government officers visited schools once in two-three months and walked into classrooms to check classrooms displays and the discipline. They do not interact with teachers but give the reports to the headmasters who in turn announced it to the teachers demanding an explanation if the reports were negative instead of understanding the situation. The four NGOs working in the same space do not have interactions with each other even though they are all working in the same school. There is a necessity to have a school level meeting where member representatives from each stakeholder group come together and work towards the betterment of the school.

In the low-income private school, the stakeholders present are teachers, headmaster and the school management. The school management rarely intervenes and only checks for quarterly reports of the school results and the fees collected. The headmaster is focussed on office related work like accountings, report writing and so on. The headmaster rarely goes for classroom observation or provided teacher support like training or feedback. There is very less interaction between the teachers and the headmaster regards to classroom practices.

The high-income private school had the following stakeholders: teachers, teacher trainers, headmaster, parent council and the school management board. There is a clear communication chain between all the stakeholders and each hold the other accountable. The teacher trainers and the headmaster visit the classrooms regularly and have a clear overview of the students’ needs and teacher’s skills and knowledge. The parents’ council hold the school and the staff accountable. There are checks and balances in place. This creates more awareness about the
needs and requirements, keeping students at the centre and the synergies required to address them.

6.3.3. Language Instruction

Teachers use English as the medium of instruction in both government and the private schools. It is the second language for the students. The medium of instruction is a real struggle in the government and the low-income private schools. The students come from backgrounds where no one understands English, but parents encourage them to learn it because they think it is a language which will get them jobs in the future. The teachers of these schools come from the same communities and have had similar education from similar schools, leading to same kind of teaching. The teachers resort to using regional language while teaching concepts to help the students understand but expect the students to understand and express their thoughts in English. This practice is the outcome of English being introduced as the medium of instruction by the colonial rulers.

The high income private school teachers have strong teaching training and high education qualifications and the students have parents who have also been taught in English medium, so English, for some of the students in the high-income private school is a native language.

English instruction is also responsible for culture hegemony as mentioned in the Literature review. High-income private schools with English become the natural hierarchy among the schools.

6.3.4. Education for the Poor and Teacher Training

The findings indicate the need to improve the quality of teaching in the schools for the poor. Teacher quality is essential to ensure the gap between the rich and the poor do not increase but narrows down. The teachers in the government and the low-income private schools are unaware of the understanding levels of the students and how to cater to individual needs. The teaching practices usually reflect their own experiences of how they were taught and the interactions between them and their teachers. They could articulate theoretically the importance of interactions and environment but resorted to the traditional practices in the classrooms. The
teachers do not practice student-teacher interactions and create a positive environment for the students.

There is an urgent need to make changes in the system to ensure quality education for all. It is necessary to build on the existing systems and structures in places rather than building something from scratch. Clarke (2003) added that more research should take place to understand different cultural approaches which shape up the pedagogy and the classroom practices in the government and the low-income private schools.

Most of the teachers in the government and the low-income schools had very poor educational qualifications, where two of them have just completed Grade 10. The teachers lack formal training. Clarke (2003) mentions that even though some teachers have teacher education and training, there is little impact on the pedagogical practices in the classrooms. The literature review shows the current education quality in India, elaborating on several challenges the education system faces. One of the main challenges was the need for qualified and trained teachers. The teacher education in India is of two years, with practices in classrooms, but many low-income private schools and government schools tend to hire teachers with low qualifications because their salary is comparatively lower. The teacher education in India has undergone several changes in the recent years and have turned towards student-centred teaching practices but the teachers continue practicing the traditional methods of teaching in the classrooms as it is influenced highly by the Indian culture.

There is a need for school-based trainings and support in the government and the low-income private schools (Clarke, 2003; Sarangapani, 2003). Especially as there are many untrained teachers, this will be highly beneficial to learn new practices and evolve their own understanding of different pedagogical practises. Working and training in the same work space will also enable them with opportunities to keep refining their teaching practices and collaborate with other staff. Constant feedback is also essential to help the teachers reflect and work to improve their practices. These practices will then in turn reflect in the classroom resulting in more student-student interactions and feedback to the students.

One major difference among the teachers in the government and the low-income private schools and the high-income private school was teacher education and the constant support received by the teachers. In the private school, the teachers had personal and professional development goals, constant communication with the teacher trainers and the head teachers.
6.4. Summary

The discussions analysed the findings against the three frameworks used in the study. These discussions led to an overall understanding of the classroom practices taking place in the classrooms and helped in the comparison between the four cases. Interesting trends and patterns emerged out of these discussions.

Teaching through interactions framework looked and compared the classroom practices of the four schools. It was observed that teachers in the government and low-income private school spoke about the importance of student-teacher interactions and the classroom environment in classrooms, but in practice student-teacher interactions were not encouraged in the classrooms. The teachers did not create a differentiated and collaborative space of learning for children. The classrooms lacked in terms of being safe space for the students. The classroom environment skewed towards negative in these classrooms. The high-income private schools encourage student-student and student-teacher interactions and create a safe, enabling environment for students’ learning. They engaged students in interactive and experiential learning, letting the students take ownership of learning. The classroom environments were positive, and the classroom walls had students’ work and ideas displayed on all walls, making the students proud of their own accomplishments.

The Quality framework put in perspective the contextual dimensions of the school, the role of headmasters and management and other relevant components which affect student learning indirectly. These were directly proportional to the classroom processes and practices in the respective schools. The government and the low-income schools had students and teachers coming from poor-economic backgrounds. The teachers used corporal punishment in the classrooms because they as students had faced the same consequences and it was also practised in the communities they came from. The lack of training and education of the teachers impacted the teaching methods and approaches resulting in traditional forms of ‘ritualised’ teaching. The teachers didn’t receive support from the schools and it reflected in the classrooms as they showed lack of interest in the student’s learning. The high-income private classrooms had students coming from privileged backgrounds. The teachers were held accountable for the students’ learning and achievements. The classrooms had many teaching aids and resources to facilitate the learning of a child. The school also encouraged constant professional development of the teachers through personal mentors, workshops, online courses, etc. Parents also played an important role in the school management. All the stakeholders in the school worked towards
a common interest, holistic development of children in the school. This also led to a discussion of the segregation of the society from a very early age due to the differences in the schools.

The constructive framework highlighted the need of classrooms being spaces of learning and students construct knowledge through interactions with peer and students. It also advocated interactive or experiential learning, innovative practises of teaching and ensuring students take ownership of their own learning. The government and the low-income private classrooms didn’t adhere to any of these. The teachers were authoritative and practised traditional methods of learning. Students were not encouraged to ask for doubts or express their opinions. The teachers were not aware of the needs of the children and thus did not practise differentiation in the class. The high-income private school teachers were highly receptive to the needs of the students. They were aware of each child’s individual goals and created lessons and assessments accordingly. The students constructed their own knowledge in the classrooms.
7. Concluding Remarks and The Way Forward

The purpose of this study was to look at the student-teacher interactions and classroom environments in the primary grades of government and private schools in India. The overall purpose of the thesis was to explore the quality of teachers in the government and private schools in India.

The study is a multi-case study and comparative in nature. Data has been collected from four schools through semi-structured interviews and observations. The data indicates that the teachers in government and private schools have strong understanding of the need of student-teacher interactions and positive classroom environment in the primary grades, but the classroom practices of government and low-income private schools failed to reflect the same in the classrooms. The classrooms were teacher led, where teachers are the sole authority and the focus is on maintain discipline. The teachers tend to use corporal punishment to ensure discipline. The teachers use recitation techniques to teach concepts. Most of the teachers had low educational qualifications and did not receive support from school. The teachers did not have much interactions with the students. The classroom environment did not promote student learning.

The high-income private school teachers are aware of individual student needs and put strong emphasis on student-teacher interactions and positive classroom environment. The teachers have constant support provided by the headmaster. They strive to use innovative methods in the classroom and the classrooms are usually student-led, where the teachers play the role of facilitators. There are synergies between the different stakeholders with the same vision of ensuring holistic development of the child.

Given the research design of the study and the qualitative approach, the aim is to discuss the specific cases rather than strong generalizations. But a few points came up which can explain the current context of government schools and private schools in India. The four case studies showed that it is necessary to support teachers and improve teacher education in the schools. There are a range of strategies, recommended by different researchers, that can be implemented to improve the classroom practices. Nystrand et al. (1997) advocated the need to evaluate student responses. Teaches should focus on the students’ responses and ask subsequent questions instead of just accepting a ‘yes’ or ‘no’. There is a need for ‘high-level evaluation’
instead of just recitation. The questions should be followed up with a set of questions to understand if the student was aware of pre-requisites of knowledge and a set of other relevant information to shape up the knowledge of the child and understand the level of knowledge the child has. The teachers can help the students explore the concepts through the probing questions. The students would feel more engaged and interested to engage with the topic rather than just focussing on the facts. This would lead to more student-teacher interactions. The teachers should also create opportunities for student-student discussions through pair or group work, allow students to interact with fellow students to work together, and develop problem-solving skills. There needs to be more innovative practices and use of teaching aids in the classrooms and teachers should provide students with opportunities to take ownership. Thus, there is a need for school-based teacher development programmes with regular classroom observations, feedback, training and coaching. More longitudinal studies should be organized to understand the effects of interventions of these programmes and to continuously improve upon them.

The segregated system of education for the ‘have-nots’ and education for the ‘haves’ needs to be delved into soon. The government has been coming up with acts such as RTE and modifying curriculums, trying to bring uniformity. A new national policy on education is being created with recommendations from different sectors of the society but the need for reform is urgent.

The schools reflect the lack of urgency of the state government to create changes in the education system or create systems of excellence. The new policy of education should focus on the role of teachers, headmasters and other stakeholders in the schools and the need of a common panel, with representatives from each stakeholder to address the needs of the child. There is also a need for NGO-government partnerships. In a city like Pune, where there are many NGOs working in the education sector, it is necessary to work collectively towards the same vision. The government should work with the different NGOs and CSRs to strengthen the school leadership, capacity building of teachers, work with the youth, work on hygiene and health, capacity building of women and employment generation of the youth. These organizations can also bring in funds required to address immediate needs of the communities and support the students and their families and the schools respectively.

The state education departments must strengthen the teacher-training institutes and start with in-school training workshops first. There are NGOs working in teacher-training and there needs to be a collaboration between NGOs and the education department for best practices and
effective teacher support structures. The school leader should receive leadership training and
should be allowed to work with teachers more and the administrative work should be delegated
to other staff members. The headmaster should be the link between understanding teachers’
needs and organizing required workshops to improve certain skills and knowledge sets.

All stakeholders, education department and the NGOs must work collectively to bring around
a systematic change in the communities.
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9. Appendices

9.1. Teacher Interview Guide

BACKGROUND INFORMATION:
1. Can you tell me about yourself?
   - background
   - qualifications
   - years of teaching
2. Why did you choose this profession?
3. Would you like to continue working in this field? Why?
4. Why did you choose private/government school?

CLASSROOM:
1. Describe your feelings for your students.
2. What are the primary challenges you face in a classroom?
3. How do you try to engage students in the class? If you think that the class is not engaged, what do you do?
4. In class, sometimes certain students are not on the same level as the other students. What steps do you take to tackle this?
5. How should an ideal classroom look like?
6. Every child should be disciplined. What do you think?
7. What kind of environment do you like to create in the classroom?
8. Do you think it is necessary to create a positive environment? Why?
9. How should interactions between students and teachers be?
10. Teachers traditionally have been authoritative figures in the classrooms. What do you think?
11. What steps do you take to promote student-teacher interaction in the classrooms?
12. How do you celebrate student success?
13. Do you have a feedback system for your students?
14. How do you distribute responsibility among the students?
15. Should competition among students be promoted in classrooms?
16. Do you reach out to students at their individual levels?
17. Do you think that the students find the classrooms a safe space?
18. Is there a system where the students can come to you and talk to you about anything they want?
19. How much emphasis is put on completion of syllabus to learning?

SCHOOL:
1. Apart from teaching, do you have any other roles in the school?
2. Does the school lay emphasis on promoting healthy interactions and environment in classrooms?
3. What kind of support do you receive from school?
4. What kind of trainings do you receive from school/ government?
5. In case of difficulties, who do you reach out to?
6. Are there any monitoring or evaluation systems?
   - process
   - feedback?

9.2. **Headmaster Interview Guide**

BACKGROUND:
1. Can you tell me about yourself?
   - background
   - qualifications
   - years of teaching
2. Why did you choose this profession?
3. Would you like to continue working in this field? Why?
4. Why did you choose private/ government school?
5. Tell me about your school and its vision?

CLASSROOM:
1. What should an ideal classroom look like?
2. Do you think student-teacher interactions are important? Why?
3. How should student-teacher interactions look like?
4. Describe an ideal classroom environment.
5. Why is it necessary to have a positive classroom environment?
6. How do teachers in your school create a positive environment in their classrooms?
7. How do the teachers encourage healthy student-teacher interaction in the classrooms?

SCHOOL:
1. Do you observe classrooms?
2. What do you expect during classroom observations?
3. How do you give feedback to the teachers? How do you follow up?
4. What kind of support or training do you provide the teachers? How do you encourage teachers to create a positive classroom environment?
5. How do you support the teachers to build healthy student-teacher interactions in the classroom?
6. What kind of expectations do the parents have from the school and the teachers?
7. What do the parents expect for their children at school?

9.3. Participants Consent Form

Research Project Title: "An Understanding of Teacher Quality through Student-Teacher Interactions and Classroom Environment in India".

This research is being conducted by Ananya Mishra, a Student from the University of Oslo as part of her Master’s Thesis.

You are being asked to participate in a research study. Please take your time to review this consent form and discuss any questions you may have, or words you do not clearly understand, with the researcher. You may take your time to make your decision about participating in this study and you may discuss it with your friends or family before you make your decision.

Purpose of the Study: The purpose of this research is to understand how the student-teacher interactions and classroom environment influence student learning outcomes in public and private schools in India. This will further help to explore the quality of teachers in India.

Study Procedures: To have an in-depth understanding of student teacher interactions in classrooms, data will be collected from private and government schools. My method will mainly constitute of 1. interview teachers on one-on-one basis to understand their approach
towards teacher-student interactions in classrooms. Observe classrooms to understand the classroom environment.

The interviews will be recorded as well as notes will be taken, which will be transcribed later. The questions will be towards teachers’ understanding of the need for student-teacher interactions and the support and training received to prepare them. The interviews will take place in the language of your choice.

We will also ask if you would be willing to be contacted later in case we need to clarify any of the responses given in the interview. This would involve providing your name and phone number. All personal information you provide will be kept strictly confidential, separate from the interview data and kept on file for the duration of the study. At the conclusion of this research project, all computer and paper records containing your identifying information will be destroyed. Access to personal information will be restricted to the researcher only and will be secured electronically and physically in a locked office away from public access. The interview will be approximately one-hour long. You can stop participating at any time.

Classroom observations will help to be a part of the environment and immerse oneself in the situation. The observations will take place during school hours for around 20 minutes. The researcher will not disturb the class proceedings in any way and will merely observe the teacher-student interactions. There will be no video recordings of the observations. If you don’t wish to participate in the observation, please feel free to reach out to the researcher at any time during the study.

Once the data is collected, it will be analysed against theories and frameworks and the findings will be discussed at length. The project is scheduled to be completed by December 2018.

Risks and Discomforts: We will make every effort to make certain that there will be no way that people can identify you in the study. Absolute confidentiality will be guaranteed.

Costs: The study procedures are conducted at no cost to you. Participants will not be paid for their participation in the interviews and/or focus groups.

Benefits: There may or may not be direct benefit to you from participating in this study. When the research is completed, it will help the researcher to understand the teacher-student in a classroom.

Confidentiality: Information gathered in this research study may be published or presented in public forums; however, your name or other identifying information will not be used or
revealed. Your personal information may be disclosed if required by law. The University of Oslo may review records related to the study for quality assurance purposes.

Voluntary Participation/Withdrawal from the Study: Your decision to take part in this study is voluntary. You may refuse to participate, or you may withdraw from the study at any time.

Questions: You are free to ask any questions that you may have about your rights as a research participant. Do not sign this consent form unless you have had a chance to ask questions and have received satisfactory answers to all of your questions.

Statement of Consent Participant: I have read this consent form. I have had the opportunity to discuss this research study with the researcher. I have had my questions answered by them in the language I understand. The risk and benefits have been explained to me. I understand that I will be given a copy of this consent form after signing it. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time. I freely agree to participate in this research study. I understand that information regarding my personal identity will be kept confidential, but that confidentiality is not guaranteed.

Participant’s Initials ________ consent to participate in the research study “An Understanding of Teacher Quality through Student-Teacher Interactions and Classroom Environment in India”. I consent to participate in: 1) an individual interview; 2) classroom observation; 3) both (check one only) 4) I do not consent to being contacted at a later time for any clarification required on the survey responses. I (check one only) consent / do not consent to providing the name and phone number of contact people for the study team to contact if a phone number changes. By signing this consent form, I have not waived any of the legal rights that I have as a participant in a research study.

Participant Signature: ___________________________ Date: ____________