ICT enabled professional development of English teachers in Mumbai: A case study

A thesis submitted in fulfilment of the requirements for the degree of Master of Education

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DECLARATION

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis/project is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

Atiya Khan

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<tr>
<td>CPD</td>
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<td>CD</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IMAI</td>
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<tr>
<td>IWB</td>
<td>Interactive Whiteboard</td>
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<td>K-12</td>
<td>Kindergarten (K) and the 1st through the 12th grade (1-12)</td>
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<tr>
<td>LCD</td>
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<td>NCF</td>
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<td>OECD</td>
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<td>PD</td>
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<td>Teaching of English to Speakers of Other Languages</td>
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GLOSSARY OF TERMS

Asynchronous: not existing or occurring at the same time.

Blog: a regularly updated website or web page, typically one run by an individual or small group, in an informal or conversational style.

Bottom-up approach for teacher professional development: when teachers participate in decision-making about their professional development.

Chalk and talk: a formal method of teaching with a blackboard and the teacher's voice as its focal point.

Communities of practice/ Professional learning community: a group of professionals that meets regularly, shares expertise, and works collaboratively to improve skills and performance.

Discussion forum: an online discussion site where people can hold conversations in the form of posted messages.

English medium school: a school where all subjects are taught in the English language, rather than in the local, regional, or first language of the students.

Interactive whiteboard: a display that connects to a computer and projector

One-off ICT workshop: training that happens only once.

Podcast: a digital audio file made available on the Internet for downloading to a computer or portable media player.
**Professional development/learning:** the process of improving and increasing capabilities of professionals through access to education and training opportunities in the workplace. It encompasses all types of facilitated learning opportunities including credentials such as academic degrees to formal coursework, workshops, conferences and informal learning opportunities situated in practice.

**Reflective practice:** a way of learning from one’s own professional experiences, rather than from formal learning, to improve the way one works so as to engage in a process of continuous learning.

**Social learning:** learning that takes place at a wider scale than individual or group learning, through social interaction between peers.

**Vernacular medium school:** a school where most subjects are taught in the local, regional, or first language of the students. It is also known as non-English medium school.

**Virtual community:** a social network of individuals who interact through specific social media, potentially crossing geographical and political boundaries in order to pursue mutual interests or goals.

**VoiceThread:** a Web-based application that allows users to upload images, video, or documents, record audio commentary, video, or text comments, and then invite others to record comments as well.

**Web 2.0:** a variety of websites and applications that allows anyone to create and share online information or material created. A key element of the technology is that it allows people to create, share, collaborate & communicate. Examples of Web 2.0 include social networking sites, blogs, wikis, video sharing sites, Web-applications, etc.
ABSTRACT

The use of Information and Communication Technology (ICT) as a tool to improve the teaching of English in Indian schools has garnered much attention and investment recently (Arora, Singh, & Singh, 2011; Chattopadhyay, 2013). However, with teacher professional development dominated by crash courses and one-off ICT workshops, teachers will seldom change their teaching practices to improve their students’ knowledge and understanding (Prestridge, 2010). Investigations claim that teachers do not transmit the knowledge and skills they learn in professional development, characterised by formal face-to-face training sessions, to classroom teaching practices without continuous follow-up, peer discussions and teacher teamwork (Joyce & Showers, 2002; Timperley, Wilson, Barrar, & Fung, 2008). This study explores the use of teacher reflective practice, teacher networking and teacher collaboration, beyond formal ICT training, through blog-based professional development of English teachers in the Mumbai region of India. Using data collected from 32 teachers in three private schools of Mumbai, through ICT interactive workshop observations, questionnaires, interviews and blog comments, the case study explains whether and why blogging, as a learning community, has potential to add significant value to existing professional development of English teachers in Mumbai.

Keywords: Teaching of English, ICT, English teachers, blogging, professional development
CHAPTER 1
INTRODUCTION

1.1 OVERVIEW
This thesis is a result of a study to investigate a blog-based model of professional development for English teachers in the Mumbai region of India. The study was conducted to examine whether and how this blog-based model could facilitate professional development of English teachers in Mumbai through reflection, networking and collaboration. The introductory chapter commences with the research background, and then presents the purpose and significance of the research. The chapter also includes the research questions, scope of the study, and structure of the thesis.

1.2 RESEARCH BACKGROUND
1.2.1 ICT in developed countries
The development of Information and Communication Technology (ICT) has significantly reconfigured the teaching and learning processes. Education leaders of developed nations have acknowledged the necessity to prepare their youth for the 21st century; a goal that many believe requires the integration of technology into teaching and learning. Australian research findings indicate the need for pedagogy frameworks that integrate ICT for curriculum and assessment, as well as classroom organisation and professional learning of pre-service and in-service teachers, to improve their digital competence (Baker, 2009; Carr & Johnson, 2014a; Carr & Johnson, 2014b). ICT for education is more important today than ever before, and its capabilities are also triggering a modification in the pedagogical approach for teacher professional development in developed nations (Moyle, 2006; Prestridge, 2010; Prestridge, 2014).
Presently, ICT is considered as an essential medium to promote innovative methods of student learning in India (Chowdhary, Yadav, & Garg, 2011; Light, 2009; Light, 2013; Sansanwal, 2009; Supriya, 2013). However, it also should be used to develop teachers’ skills for cooperation, communication, and lifelong professional learning (Noor-Ul-Amin, 2014). The use of ICT in professional development offers self-directed learning environments for teachers that can renovate their learning process; as teachers can deal with new knowledge through a dynamic, contextual and constructive approach (Bell & Morris, 2009; Duncan-Howell, 2009; Prestridge, 2008).

1.2.2 ICT reforms in Indian education

India has over 1.2 billion people (Ministry of Home Affairs, 2011) and hence it has a large formal education system. A high proportion of children in India go to school: The number of children attending school has burgeoned many-fold since the time of India’s Independence – increasing from around 19.2 million in 1950-51 to 113.8 million in 2000-01 (Ministry of Home Affairs, 2001). The demand for education in developing nations like India has soared as education is now viewed as a paramount extension of social, financial and political development (Amutabi & Oketch, 2003).

Schools in India have recognised the benefits of ‘smarter classrooms.’ In India, a growing number of primary and secondary public schools have high-tech ICT infrastructure and tech-enabled classrooms for digital teaching and learning (Vyasulu, Usha, & Vineeta, 2003). Moreover, private schools in India are also promoting an ICT environment in their schools, and trying different strategies with technology devices and software products, to enhance the standards of education provided to their students (Kumar, 2013).
According to the Government of India, the existing technologies are to enable and engage teachers and students in India to evolve into content makers, not simply users, as technology is blended into curriculum (National Council of Educational Research and Training, 2005).

The National Policy on ICT in School Education (2010) by the Government of India endeavours to create (1) an environment to develop an ICT knowledgeable community (2) an ICT literate community who can deploy, utilise, benefit from ICT and contribute to nation building (3) an environment of collaboration, cooperation and sharing, conducive to the creation of a demand for optimal utilisation of and optimum returns on the potentials of ICT in education (Ministry of Human Resource Development, 2010, p. 4).

Innovative technologies have provided novel possibilities for the teaching profession in India. The Indian Government has also initiated several schemes to encourage the integration of ICT in classroom teaching. The ‘ICT@Schools’ scheme is one such major step promoting enquiry based collaborative teaching with ICT (MHRD, 2010). Under this scheme school teachers in India, who use ICT innovatively in teaching their subject to enhance student learning, are acknowledged with a ‘National Award for use of ICT in education.’ The National Curriculum Framework for Teacher Education, a milestone document in India's teacher training by National Council of Educational Research and Training (2005), promotes teacher training models that are self-guided, paced toward oneself, peer-learning-based, guided, followed-up and persistent. The NCERT (2010) advocates teacher training also to be open and adaptable, in light of dialogical investigation and reflective practice, as opposed to a rigid and unchanging information base (NCERT, 2010, p. 19).

1.2.3 Private school teachers in India

With a population of over 1.2 billion people, the Indian education system is vast and complex (Padwad & Dixit, 2014). According to the eighth All India School Education Survey
(National Council of Educational Research and Training, 2009), there are over 1.3 million schools in India; with a gross national enrolment of 227 million students taught by about 7.2 million teachers (Ministry of Human Resource Development, 2013). This massive system is further complicated by education being a ‘concurrent’ subject of governance, i.e. an area managed by both central and state governments. However, these governing bodies of education function autonomously, and often in isolation from each other (Padwad & Dixit, 2014). Every state in India has its own principles of job eligibility, qualifications and recruitment procedures for teachers, which mostly replicate national principles, but with provincially applicable adjustments (Padwad & Dixit, 2014). Generally speaking, in order to be a primary or secondary teacher in India, one needs to have a bachelor’s degree (three-year degree), and a pre-service teacher education qualification (one-year degree). Although the norms are more strictly followed in government-funded institutions (public schools), private schools are often lenient about them, and therefore, it is not that unusual to find inadequately qualified or untrained teachers in private educational institutions in India (Padwad & Dixit, 2014). Furthermore, most of the teacher education institutions in India have weak ICT curriculum, outdated ICT infrastructure, and shortage of ICT trained and ICT qualified teacher educators (Gulhane, 2011). According to the District Information System for Education (DISE) survey (2011), 54.91% of private school teachers were untrained in India, compared to 44.88% in government schools. Moreover, only 2.32% of teachers in unaided schools received in-service training, compared to 43.44% in government schools (Nair, 2011).

The 21st century has seen a rapid growth in number of private schools in India (Sankar, 2008; De, Khera, Samson, & Shiva Kumar, 2011). Private schools in India are owned, operated and financed privately, without any state backing. These private schools have state-of-the-art infrastructure; equipped with all basic and high end amenities. Private schools undertake all
organizational decisions, together with recruitment and wages of teachers. They also frame their own fee structure for students; a structure which is generally much higher than government schools (Ramachandran, Pal, Jain, Shekar, & Sharma, 2005). There are 522 such private schools in Mumbai alone (Deshpande, 2010).

Almost 43% of school teachers in India are currently employed by privately run schools. That's nearly 4.2 million private school teachers in India (Varma, 2014). Although great in number, private teachers in India are vulnerable to excessive teaching workload, exam oriented approach of the schools, lack of job security, and hostile and stringent environment at work place. “Such an oppressive state of affairs has lead to job dissatisfaction, depression, lack of interest in work, and sense of alienation among most of the teachers working in private schools” (Sindhi, 2012, p. 45). In Mumbai, like many other places in India, “teaching is not as prestigious or esteemed as other professions like medicine, engineering or law, and it often appears to be low on the list of career options for most young graduates” (Bolitho & Padwad, 2012, p. 6).

Studies like Ramachandran (2005); Ramachandran, Pal, Jain, Shekar, and Sharma (2005); and Bennell and Akyeampong (2007) point to very low teacher motivation in India, as in most schools of India, the teachers are overloaded, inadequately trained, and frequently deal with difficult working conditions. In particular, private school teachers in India are weighed down with many issues, which even the policy makers and educational leaders in India have ignored until now. The candle is burning at both the ends as “exploitation, overwork, minimum wages, discrimination in salaries, lack of mental satisfaction and happiness at work place, are some pressing problems of such school teachers” (Sindhi, 2012, p. 45). Yet, whilst the teaching profession is taken for granted as compared to other occupations, teachers in
India go through a lot of stress and anxiety to fulfil the substantial demands for better teaching-learning outcomes (Ramachandran et al., 2005).

The Indian education system is under tremendous pressure to adapt to the growing demand for meaningful education for all, and the teacher, the only visible functionary in an otherwise opaque system, is facing the brunt of the attack from all sides (Ramachandra, Bhattacharjea, & Sheshagiri, 2008, p. 6).

Although these private schools with high expectations are growing as small and medium scale business houses, making huge profits with high tuition fees, they do not make the required payment, and give the deserving respect to their teachers. The salary of a school teacher in the private sector in India is generally 25% to 35% of the government salary of a public school teacher (Sindhi, 2012). Therefore, many private school teachers in India look at tuitions as a way to make some extra money (Mascarenhas, 2014).

1.2.4 Teaching of English as a second language in India

India accounts for a large number of the world’s ESL speakers and the English language has a noteworthy position in the educational system and life of Indians (Patel & Jain, 2008). An analysis of the 2001 Census of India concluded that the nation has a high number of ESL speakers (MHA, 2001). Approximately 86 million Indians reported English as their second language, and another 39 million use it as their third language (Peston, 2012).

The number of English speakers in India has increased considerably—from 8% in 1991 to almost 20% in 2001 (MHA, 2001). English today is a second language in India (Meganathan, 2011), and despite official language policies designed to promote the use of regional languages in educational contexts, English in fact is in all spheres of everyday living in the country; it is the language of administration and education, and furthermore jobs in India continue to require fluency in English (Gargesh, 2006; TESOL-India, 2004-2007). It is rather
intriguing to observe that in India, a multilingual country, English is still progressively being deemed as a ‘must-know’ language. In a way “an associate official language, English knowingly or unknowingly plays an instrumental role in maintaining the diversity of India’s language scene” (Meganathan, 2011, p. 83), because with the use of English, it has not been necessary to select any one regional language as a national language for official communication (Meganathan, 2011). Attitudinal investigations such as those by Abbi, Gupta, and Gargesh (2000) and by Agnihotri and Khanna (1994) also confirm that Indians value English even more than their country’s national language (Hindi), and view fluency in English as a crucial skill in educational, technological and scientific progress. Moreover, disadvantaged people of the country now identify the English language as an instrument for progress (Meganathan, 2011).

Today's parents in India want their children to study at a school where classroom lessons are instructed in English. English has become a core subject in Indian schools, and increasing numbers of students are learning the language due to the recognition that knowledge of English is the key to a better career, better job and better exchange of ideas on a global level (Thirumalai, 2002). Also there have been recurring reforms in the policy of the Indian government towards the teaching and learning of English, and currently English is taught as a compulsory subject in Indian schools (Unnisa, 2012). Such is the need for learning the language that private English-medium schools are growing in significant numbers across India, demonstrating the valuable and reputed place English language holds in the minds of Indians. Private schools in India are more inclined to employ English as a medium of instruction (Muralidharan & Sundararaman, 2013). As a result, parents in India are more interested in placing their child into a private English-medium school, a school where subjects are taught in the English language, rather than in a local/regional language school (Galab, Vennam, Komanduri, Benny, & Georgiadis, 2013). The enrolment scale has already
tilted towards private schools in urban India. According to estimates of private school enrolments in India, more than 50% of children in urban areas of India were enrolled in private schools (Desai, Dubey, Vanneman, & Banerji, 2009). Moreover, enrolment at vernacular medium schools, that is, schools that teach primarily in regional or native language, happens to be declining drastically, as India's poor manage to scrape together the funds to send their children to more expensive English-medium private schools (Masani, 2012a).

Further discussion of the status of English in India is beyond the extent of this study, but, undoubtedly it is clear that English plays a foremost and official role in the daily lives of very large numbers of people in India, and therefore, it remains the obligation of schools and their English teachers to develop the English language capabilities of their students. The demands in India for better teaching and learning of English are not being met meaningfully (Dhanavel, 2012). Often the students in India leave school speaking a version of English language that would not be recognised in the job market (Masani, 2012b). Over 20 per cent of Indians in the 15-24 age range were unemployed, based on data published in the 2011 Census of India (MHA, 2011). This volume of jobless youth is staggeringly immense — around 47 million, of which 26 million were men and 21 million women. The National Employability Report on Indian Graduates by Aspiring Minds (2013), an employability solutions company, draws on an employability test performed on a large sample of 60,000 graduate students from many colleges and universities in India. The survey report uncovers that a critical number of graduates in India, approximately 47%, were found not employable in any field based on their English language skills and conceptual abilities.

The current system of English language education in India is unable to fulfil the emerging needs of people in a globalized and competitive setting (Gargesh, 2006). As long as English language teachers in India teach as they taught before, they may not fulfil the essential goals
of teaching English in the current cutthroat scenario. The feeling that the pedagogical practice of English teachers in India is dictated by outmoded approaches is now becoming more widespread than ever now (Lakshmi, 2013). India’s National Curriculum Framework by NCERT (2005) reveals,

> The level of introduction of English is now a matter of political response to people's aspirations rather than an academic or feasibility issue, and people's choices about the level of its introduction in the curriculum will have to be respected, with the proviso that we do not extend downwards the very system that has failed to deliver (NCERT, 2005, p. 38).

According to Thirumalai (2002), English teachers in India still practice the conventional teacher-centred and textbook-based method of teaching. A decade ago, a school classroom in India was a place where a teacher gave a lecture and provided notes through tools like blackboard and chalk, and had no interaction with students (Arora, Singh & Singh, 2011). There has been an increasing awareness that students have different ways of learning, and that several methods can be effective in teaching of English (Alton-Lee, 2003; Auld, Holkner, Fernando, Henderson, Romeo, Russell et al., 2008; Gillard, 2008; Kasapoglu, 2010; Kompf, 2005; Law, Pelgrum, & Plomp, 2008; Pica, 2000; Melor, 2007). This awareness has, to an extent, also influenced the learning of students in India (Arora, Singh, & Singh, 2011; Chandrakant, 2014; Chhabra, 2012; Garai, & Shadrach, 2006; Light, 2009; Light, 2013; Padwad & Dixit, 2010; Patel, Darji, & Mujapura, 2013; Raval, 2014).

However, the same cannot be said about teacher learning in India, as the methods followed for the professional development of English teachers in India are still, by and large, based on formal and outdated professional learning traditions (Vihirkar, 2013). Gokak in his book ‘English in India, its Present and Future’ argued: “The foundational years for the teaching of English in school are in the hands of teachers who, neither know enough English, nor are
familiar with the latest and far-reaching development in the pedagogy of English” (cited in Vihirkar, 2013, p. 309). Good education is possible only with capable teachers (Hattie, 2009; Kendall & Marzano, 2008), and formal pre-service and in-service teacher training and education are not sufficient to develop teacher capability (Hargreaves & Fullan, 2012; Knight, 2002; Lieberman & Miller, 2001; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009).

Nevertheless, it is known that before the turn of the century in India, there was a dearth of trained, qualified and skilled teachers of English; therefore, emphasis was placed on quantity not quality (Kapoor, 2011). The most crucial requirement in effective teaching of English is the English teacher, but the teaching competency of English language teachers in several schools of India is inadequate (Vihirkar, 2013). Recently, the use of ICT as a tool to improve English language skills has enjoyed great attention in Asia (Barad, 2009; Chandrakant, 2014; Kasapoglu, 2010; Melor, 2007). Consequently, professional development is one major area which needs significant changes if quality English teachers in India are to become available (Bedadur, 2012; Chattopadhyay, 2013; Menon, 2012; Mohanraj, 2009). The development of teachers’ ICT skills, knowledge, and attitudes has to be encouraged through innovative training and new professional development strategies (Murugaiah, 2010).

ICT can address teacher capacity building, ongoing teacher support and strengthening school system's ability to manage and improve efficiencies which have been difficult to address so far due to the size of the school system and the limited reach of conventional methods of training and support (MHRD, 2010, p.6).

In such an atmosphere, providing professional development to build the capacity and attitudes of teachers so that they are equipped and eager to use ICT in English medium classrooms is a challenge (MHRD, 2010). But not in the way it is prevailing nowadays, as teachers in India tend to learn and use ICT in a formal and outdated fashion (Mahapatra,
Newer, more innovative and effective approaches to upskill English teachers are required.

This study refocuses attention on the teacher, specifically on the importance of innovative teacher professional development in changing English teachers’ ICT practices in the classroom. It is concerned with the ICT perspectives, experiences and needs of 32 English teachers in three Mumbai schools, and explores the use of blogs as an addition or supplement to the traditional face-to-face professional development. This research investigates whether blogging can change the conventional practice of professional development by engaging teachers in a collective process of thinking and reflecting; by starting without set agendas and fixed guidelines, and allowing the process to evolve in a naturally relevant way (Prestridge, 2014). This study is one that is focusing primarily upon Web 2.0 environments that give opportunities for ICT practice, reflection, networking and collaboration in support of better teacher professional development in ICT. It is against this backdrop of blog-based professional development that I will view its genesis, role and contribution in the improvement of professional learning practices of English teachers in this study.

1.3 PURPOSE OF THE STUDY

The purpose of this study is to investigate the potential of blog-based teacher reflection, teacher networking, and teacher collaboration for the professional development of English teachers in Mumbai. Specifically, it explores the ICT attitudes of teachers, the barriers they encounter in ICT integration for teaching of English. It also investigates the current professional development practices and needs of English teachers in Mumbai. This research examines whether professional development of English teachers in Mumbai for ICT integrated teaching can be enhanced through participation in an online learning network. It explores the potential of blogs as a forum for teachers to connect with each other, aid the
sharing of best ICT practices and impart access to new ideas in Indian education; where English teachers in Mumbai are encouraged to take the lead, use ICT to teach ICT, educate each other, and not just follow.

Research on online communication, collaboration and networking as a professional development practice for teachers has emerged in developed nations (Duncan-Howell, 2009; Henderson, 2007; Henderson, Balatti, Knight, & Haase, 2010; Holmes, Preston, Shaw, & Buchanan, 2013; Murphy, Smith, & Stacey, 2002; Prestridge, 2014; Stacey, 2002; Whitehouse, McCloskey, & Ketehult, 2010), but it is just beginning to emerge in India, and focus mostly on the potential use of online networks to support better classroom teaching in India (Bedadur, 2012; Lunyal, 2012; Menon, 2012). Empirical research and investigations on blog-based professional development of English teachers in Mumbai has been limited. Furthermore, most of the existing literature on educational blogging in India focuses on ways teachers can use blogs as pedagogical teaching tools in their classes (Arora et al., 2004; Chhabra, 2012; Chattopadhyay, 2013). In contrast, this study investigates the relevance of blog-based reflection, teacher networking and collaboration for the professional development of English teachers in Mumbai.

1.4 RESEARCH QUESTIONS

This study explores five overarching research questions:

- What are the attitudes of English teachers in Mumbai towards the use of ICT for classroom instruction and their professional development?
- What are the major barriers to effective integration of ICT and professional development of English teachers in Mumbai?
• What do teachers in Mumbai perceive they need in order to develop their professional competence in ICT?

• How do English teachers in Mumbai perceive the role blogging could play in their professional development?

• What are the prospects of web-based reflection, networking and collaboration for the ICT professional development of English teachers in Mumbai?

1.5 SIGNIFICANCE OF THE RESEARCH

ICT has instilled its presence in our day-to-day living. In the last decade, the extensive use of technology in the form of smart phones, tablets, computers and laptops, has drawn attention to the need to reconsider and redesign conventional pedagogical practices, not only to enjoy the benefits that ICT imparts, but also to remain updated and relevant to contemporary educational environments (Light, 2013). India is a case in point. India has adopted ICT later that more developed countries, facing the dual complexities of providing adequate infrastructure to its large population on one hand, and a predetermined and unchanging pedagogy on the other (Garai & Shadrach, 2006). Even as the government was connecting the country with ICT cabling and its related infrastructure, the previous decade has been witness to significant changes in the application of ICT, as wireless solutions emerged on stream, and the nation leapfrogged stages of ICT development through the advent of mobile devices (Jeffrey & Doron, 2013).

Although the younger members of Indian society embrace the application of ICT in learning (Mahajan, 2009), the adoption of current technologies for teaching English by teachers in India is at the initial stage, as teachers require encouragement, opportunities and guidance to utilise new forms of professional development (Patel, Darji, & Mujapara, 2013). The goal of
India’s education reform is to improve student performance through changes in teaching practices, and changes in teaching practices are likely to result from changes in professional development (Gupta, 2014). But, student achievement is not influenced directly by new curricula and materials, or sophisticated ICT infrastructure. Better student outcomes are the end result of better teaching skills (Bolitho & Padwad, 2012). Several professional development initiatives for teachers in India have failed to generate their anticipated outcomes; they highlighted the drawbacks of traditional ICT training, but presented little assistance in transforming what happens in the classroom and afforded no opportunities for teachers to practice what they learn (Padwad & Dixit, 2008). Research asserts that the usefulness of professional development has a bearing on the adoption and integration of ICT in classroom practice (Lawless & Pellegrino, 2007; Prestridge, 2008). As long as effective professional development is not achieved, ICT investments in Indian schools will continue to be largely ineffective.

Research into ICT integrated teaching of English in India is limited, so are interpretive case studies on blog-based reflection, teacher networking, and teacher collaboration for the professional development of English teachers within an Indian education context. In this light, this research makes two key contributions. First, it is the foremost study to review the use of blogs by English teachers in Mumbai for their professional development. Second, it contributes to reconsidering the current professional development practices of English teachers in Mumbai. Specifically, this study investigates the role online networked learning and collaboration potentially has as a time-effective and useful instrument for the professional development of English teachers in an Indian setting. Since most blog-based professional development studies of teachers to date have been conducted in developed countries like Australia, United Kingdom, and other Southeast Asian nations (e.g., Cruz-Yeh,
2011; Murugaiah, 2010; Prestridge, 2014), this study investigates the extent to which the same can be applied in the Mumbai context in India.

1.6 SCOPE OF THE STUDY

The study was conducted with 32 English teachers in primary and secondary levels (from grades 3-10), in three private schools in the Mumbai prefecture. The findings may not be generalised, as it is limited to private school teachers, teaching English in the Mumbai context. The relatively small number of teachers and Mumbai setting can be seen as the major scope of the study, and therefore, I acknowledge that my findings are context specific. However, readers have the choice of identifying how findings in this study may apply to similar contexts.

1.7 STRUCTURE OF THE THESIS

The thesis is organised into six chapters. Following this introductory chapter (Chapter 1) is the Literature Review (Chapter 2). The key literature to be found in this review is based on: Teacher professional development in India, professional development through reflective practice and teacher collaboration, barriers to ICT integrated teaching of English, professional development using Web 2.0 reflection and collaboration, blogs as the Web 2.0 vehicle to empower reflective and collaborative professional development, and the factors influencing and promoting blog-based professional development. This lays the foundation for the framework of discussion.

Chapter 3 is the Research Methodology, which explains the rationale for adopting an interpretive paradigm and case study methodology with a qualitative design. The procedures and methods of collecting data are specified. They are ICT interactive workshop
observations, questionnaires, interviews and blog comments. The chapter also discusses the rationale for the instrumentation, sample, analysis and ethical considerations.

Chapter 4 reports the Findings of the quantitative and qualitative data collected, and the Analysis of the findings. Quantitative reporting is mainly done with frequency distribution, percentages, tables, pie charts and bar graphs. Qualitative reporting is with words and descriptions after putting the data into different categories based on the themes arising from data.

Chapter 5 is Discussion of the findings. Attempts are be made to discuss the outcomes of the analysis and answer the research questions with an interpretive case study approach, based on researcher’s reflection and interpretation. It aims at answering the research questions and provides the readers an inspiring view on the findings.

Chapter 6 is Conclusion. A summary of the research can be found, and recommendations on teacher professional development for ICT integration are given; based on the analysis of data. It also suggests focuses of further investigation.
CHAPTER 2  
REVIEW OF RELATED LITERATURE

2.1 OVERVIEW

The background in the previous chapter indicates that innovative professional development of English teachers in India is crucial for fostering a significant change in classroom teaching practice and students’ learning outcomes. This chapter starts by mapping the current situation of the professional development of English teachers in India, and what (if any) professional development solutions have been developed to tackle the challenges of traditional policies and practices. As a common concept, reflective practice through community and collaboration seems to be emerging in new forms of professional development. This is followed with further review of Web 2.0-based professional development in general and blog-based professional development in particular for reflective and collaborative learning as the proposed focus of this study.

2.2 TEACHER PROFESSIONAL DEVELOPMENT IN INDIA

2.2.1 Endangered praxis

Within the complex educational scenario in India, the teaching profession is characterised by inadequate and ineffective pre-service education resulting in poor teacher preparation (Ministry of Human Resource Development, 2009; National Council of Educational Research and Training, 2005; National Council of Educational Research and Training, 2006; Padwad, 2008; Padwad & Dixit, 2010; Rajput & Walia, 2001). In such conditions, in-service professional development assumes further importance, since it also has to compensate for teacher professional learning overlooked during teacher education.
However, research claims that in-service English teachers in India are in a constant struggle to reconcile the theory of their professional learning with their classroom teaching practices (Padwad & Dixit, 2014; Stannard & Matharu, 2014). Their professional development leaves little room for them to use ICT effectively for teaching their particular subject and in their particular teaching contexts (Prince & Barrett, 2014).

This narrow yet long established practice of professional development also misses a crucial point – the need for teachers to take responsibility for their own learning. Informal contributions to teacher learning are rarely recognised in India as professional development; teachers’ roles, responsibility and agency in their own professional development are disregarded (Stannard & Matharu, 2014). As a result, officially sanctioned professional development programs obtain recognition and support in India, even if they may not be related to teachers’ needs; whereas new forms of professional development, based on teachers’ own initiatives, needs and interests, are not recognised or supported (Bolitho & Padwad, 2012). Kemmis (2008) argues that these issues “cannot be closed once and for all by the answers given in any particular time or place” (2008, p. 29). Education should attempt “to continually review and revise past answers in the light of changed historical times, and changed social circumstances” (Kemmis 2009, p. 29); the practice calls for a consistent interpretive breakdown of the present using the knowledge gained from past experience. In such compliant contexts, praxis is, indeed “endangered” (Kemmis & Smith, 2008, p.5), and is slowly amounting to an educational practice which is simply following the rules; preventing teachers from consciously reflecting on what they have learned. Praxis requires teachers to reflect beyond convention; it demands their creative thinking, judgement, involvement, and critical consciousness (Kemmis & Smith, 2008).
In a typical short-term ICT workshop for teachers in India, an external trainer models instructional practices for teachers so that teachers can then adapt the model to their own situation. Such workshops are often ineffective because of the lack of contextual considerations before modelling and the overreliance on teacher adaptation of existing practices (Prince & Barrett, 2014). A shift in attitudes and actions is necessary, and teachers are the primary means of addressing and resolving this professional development crisis in India. However, their current passive roles in their own professional development in India are not essentially the best means to realize this transformation. This study therefore promotes teachers’ active roles in their own professional development through blog-based networking and collaboration.

2.2.2 Policy versus practice

From a policy context, professional development is observed as pivotal to advancements in the standard of teaching and learning in schools all over the world (Ingvarson, Meiers & Beavis, 2005; Muijs & Lindsay, 2008). But, teachers time after time end up getting professional development that they just do not value, that they believe has minor bearing (Organisation for Economic Co-operation and Development, 2008), and that investigations prove does not succeed (Burns, 2007). The majority of the world’s teachers, irrespective of the diversity of their professional contexts, engage in a particularly patterned model of professional development—the workshop or training program—despite research illustrating that this sort of a model is less likely to have an impact on teacher practice or student achievement (Anderson & Henderson, 2004; Dempster, 2009; Dumont, Istance, & Benavides, 2010; Finger & Finger, 2013; Mattson, 2008; Rönnerman, 2008; Timperley, 2011, Wei, Darling-Hammond & Adamson, 2010).
Based on the research of Darling-Hammond and Richardson (2009), a number of factors are important in planning and implementing professional development for teachers. An effective professional development program:

- Provides opportunities for active, hands-on learning
- Enables teachers to acquire new knowledge, apply it to practice, and reflect on the results with colleagues
- Is part of a school reform effort that links curriculum, assessment, and standards to professional learning
- Is collaborative and collegial
- Is intensive and sustained over time (p.49)

Darling-Hammond and Richardson (2009) further claim that professional development is ineffective when it:

- Relies on the one-shot workshop model
- Focuses only on training teachers in new techniques and behaviours
- Is not related to teachers’ specific contexts and curriculums
- Expects teachers to make changes in isolation and without support
- Does not provide sustained teacher learning opportunities over multiple days and weeks (p.49)

With approximately 3.2 million English language teachers employed in government and private schools across India, the constraint of ensuring every one with access to good-quality and relevant professional development options is substantial. The schools in India follow a bureaucratic approach to teacher professional development where policy makers mandate single solutions, prioritising on large-scale workshop-based applications, which generate inadequate opportunities for need-based and flexible learning of teachers. The competencies and practical knowledge of the teachers is different but the formal lecture technique tends to rule over in professional learning, and, more seriously, follow-up and school-based support is scarce (NCERT, 2010). Moreover, the strength of teacher learning by doing (resembling
what students practice), by sharing and collaborating with other teachers, is mostly missing from teacher professional development in India (Padwad, 2006). As a result, the chief goal of professional development – promoting quality changes in teaching practices – is rarely attained in spite of formal training programmes (Mohanraj, 2009). In that case, professional development becomes a stubborn structure operated by government, state, district or school policies, mandating a conventional culture of professional compliance, instead of fostering a culture of professional learning (Lieberman & Pointer-Mace, 2008).

A quality teacher is critical to a quality education for a child (Hattie, 2009). English language teachers, with a suitable ability level and effective resources to cater to the teaching-learning practice, are among the essentials for language learning in any environment, and are especially crucial in the case of second language learning (Wang, 2005). Policy emphasises that teachers are the strongest determinants of successful ICT integration and what happens in a classroom (Groff & Mouza, 2008). But, teachers are often held accountable for ICT ‘washout’ in schools (Somekh, 2008), and it is often argued by researchers that ICT effectiveness depends on how teachers use ICT in their classrooms, that is, what instructive strategies they employ when integrating ICT (Zhao, Bo, & Lei, 2008). As Graddol (2010) claimed: “Aspiration of such magnitude is a heavy burden for any language, and for those who have responsibility for teaching it, to bear” (p.120).

Moreover, particularly in the world’s developing countries like India, where the need for quality teaching is greatest, the frequency of professional development is episodic, its quality variable, its duration limited, and support or follow-up for teachers is almost non-existent. Also, the teachers who might need the most professional development, teachers who are novice to the profession, who are under-qualified, or who teach outside their content areas, receive the minimum professional development (OECD, 2008). Further, they get involved in
formalised learning opportunities not when and where it matters most, in their classrooms as they are teaching, but away from their school contexts and outside of their school schedule (Bolitho & Padwad, 2012).

According to Geer and Sweeney (2012), teachers require opportunities to put their learning theories into practice and in their related contexts. Policies must no longer merely focus on the use of ICT simply to foster better performance through traditional practices, but also focus on the use of ICT as an instrument for novelty and change to reform professional learning (Law, 2008). Moreover, schools in India can no longer separate professional development activities from the on-going realities of teachers' work and their workplace (Raval, McKenney, & Pieters, 2012). However, a ‘narrow’ view of teacher professional development still prevails in India (Bolitho & Padwad, 2012), which is solely focused on face-to-face training programs. This study will, in contrast, examine a Web 2.0 model of professional development that is more aligned with use of online, asynchronous, and collaborative professional learning.

2.3 PROFESSIONAL DEVELOPMENT THROUGH REFLECTIVE PRACTICE

The teaching profession requires teachers to consistently reform their knowledge of teaching and learning (Brookfield, 1995; Elias & Merriam, 2005; Farrell, 2007; Farrell, 2009; Mann, 2005). This knowledge reformation is more likely to occur through reflective practice (Gnawali, 2001; Tedick, 2005). Philosopher, psychologist and educational reformer John Dewey (1938) stated that “we do not learn from experience…we learn from reflecting on experience”, that is, the experience alone does not lead to learning. Dewey (1938) asserted that teachers can free themselves from monotonous practices through the process of reflection.
Posner (1993) furthered the debate, stating that reflection offers teachers “to act in deliberate and intentional ways, to devise new ways of teaching rather than being a slave to tradition, and to interpret new experiences from a fresh perspective” (p. 21). Osterman and Kottkamp (1993) considered reflection as meditative and integral to practice. They believed that reflective practice can help professionals develop a better awareness about the essentials of teaching learning process. Also Reed and Bergemann (2001) identified the magnitude of teachers actively engaging in reflection, and claimed that more successful teachers are those who are able to reflect on their experiences and reconsider their techniques.

However, reflection in its truest sense is meaningful when it enables teachers to be practical rather than passive when organizing their own learning environments. Hoffman-Kipp, Artiles, and Lopez-Torres (2003) confirmed the relationship between reflection and practice. They posited that reflection is most vital when it causes constructive changes in practice. Reflective practice is achievable when teachers purposefully play the role of reflective practitioner (Jay & Johnson, 2002), take total accountability for their actions in the classroom, and persevere to improve their teaching practice (Farrell, 2007). Applied to education, the use of reflective practice in teacher professional development is based on the belief that teachers can improve their own teaching by consciously and consistently reflecting on their teaching experiences and being in charge of change (Farrell, 2004; Farrell, 2007).

According to Paterson and Chapman (2013), teachers simply can be responsible and increase aptitude throughout their practice by reflecting and learning from their own experience. Leitch and Christopher (2000) advocate that teaching is a complex process, and there is not one right approach; reflecting on different versions of professional development, and reshaping past and current experiences will lead to improvement in teaching practices. In implementing a process of reflective practice, teachers will be competent to progress
themselves, and their schools, further than current theories in practice (Leitch & Christopher, 2000). But, reflection does not develop naturally to most teachers. Therefore the best suited opportunities should be furnished to teachers who want to take up reflective practice of professional learning. This study aims to examine whether blogs can provide such an environment of reflective learning for English teachers in Mumbai.

2.4 PROFESSIONAL DEVELOPMENT THROUGH TEACHER COLLABORATION

A body of research (Tearle, 2003; Phelps, Graham & Kerr, 2004; Phelps, Graham, Watts & O’Brien, 2006) claims that competent and skilful teachers learn ICT mainly through collaborative professional development: by being stimulated by co-workers, instead of remaining reliant on traditional professional development. Moreover, reflective practice done collaboratively “illuminates what the self and others have experienced” (Raelin, 2002). Researchers emphasize that collaborative reflection with peers benefits everyone and enhances professional knowledge, competence and awareness (Manouchehri, 2002). Even though workshop based approaches can furnish ways of integrating ideas, undoubtedly the most beneficial learning for teachers is one which is controlled and sustained by the teachers themselves.

Developing communities and motivating communication between teachers needs to be viewed as essential, not simply in transferring of skills and knowledge but additionally as an approach to deal with subject related issues and having an impact on ICT beliefs and practices. As has been discussed in various other studies (Phelps, Graham & Thornton, 2006; Phelps, Graham, Watts & O’Brien, 2006), specific collegial consultation concerning ICT strategies can encourage risk taking and promote more ICT hesitant teachers to learn with and from their co-workers. Day (2004) proposed that pre-service and in-service educators should
welcome an agenda that acknowledges the value of continued collaboration, teachers’
functions as knowledge suppliers; their requirement to maintain change, along with a
mutuality of ICT practice.

Motivating a teacher in using ICT is more crucial than acquiring a large number of computers
and exhausting resources on their formal ICT training (Prestridge, 2012). Reducing trainer
talk and encouraging teacher collaboration is important to empower English teachers in India
(Padwad, 2006). Teacher professional development is most successful when it is
decentralized, so that the teachers have some element of command, control and ownership
(Borko, 2004; Wei et al., 2009; Desimone, 2009). Previous investigations on teachers’ ICT
beliefs ignored the social aspects of learning and the social contexts in which the teachers
work (Bate, 2010; Darlington-Hammond, 1996; Lim, Lee, & Hung, 2008). To continue the
learning process, teachers must control their professional development; make it more real,
attainable, challenging, yet stimulating and not intimidating (Padwad, 2008; Padwad & Dixit,
2008).

Bedadur (2012), researching on the use of mobile phones by rural teachers of English in
Karnataka, for their professional learning, described that “the pedagogical design of a
professional development plan has to be collaborative to succeed. Moreover, it has to be an
initiative driven by the participants” (p. 94). Somekh (2008) considers the integration of ICT
as much as a social process as it is a technical process. Recent research in India, on the
professional development of teachers, is starting to yield a consensus concerning the social
characteristics of effective teacher learning (Gupta, 2014). Teacher interaction is what drives
real learning and change in the teacher professional development of teachers in India (Gupta,
2014; Mahajan, 2009). Increasingly, researchers have revealed that like all types of learning,
teacher learning is not only individual, but ‘social’ as well (Hall & Davison, 2007; Lieberman
&Miller, 2008; Lieberman & Pointer-Mace, 2010). Teachers who learn together over time feel committed, not only to each other, but also to further learning (Stannard & Matharu, 2014; Swenson, Young, McGrail, Rozema, Whitlin, 2006; Toner, 2004). Moreover, teachers’ engagement and collegial discussions in networked professional learning communities develops improved practices of teaching and professional development (Borko, 2004). Most notably, strong professional learning network and collaboration of the teachers within their schools contribute to better student achievement and performance (Fishman, Marx, Best, & Tal, 2003; Timperley et al., 2008).

Studies suggest that teachers do not transmit the knowledge and skills they learn in training sessions to classroom teaching practices without continuous follow-up discussion and co-worker support (Coutinho & Lisbôa, 2013; Joyce & Showers, 2002; Prestridge, 2014). With one-time workshops, teachers will seldom change their teaching practices to improve their students’ knowledge and understanding, as ICT workshops and conferences are rarely followed up with feedback, suggestions, support or continued training; which is vital to the realisation of innovative and improved classroom practices (Timperley, Wilson, Barrar, & Fung, 2008). The World Bank (2013) stresses that while traditional teacher practices are still important, teachers must also have access to innovative, appropriate and on-going professional development, and the time and resources to explore this new learning base and develop new skills. This suggests the need to practice peer support and networking beyond formal training.

An issue with formal ICT training is forced conformity (Klein, 2005). Research completed in North Carolina demonstrates that teachers have too little liberty to make choices about content and pedagogy (Kauffman, 2005), keeping teachers from seeking innovative classroom teaching leveraged on ICT. Professional learning communities offer an
opportunity to leverage this strength of contribution, group interaction and reflection (Murugaiah, 2010). For many teachers India, teaching can be a solitary practice with not many chances for professional discourse, reflective inquiry and collaboration with one’s colleagues. Teachers feel empowered by their own voice and choice with professional development through professional learning communities (Rovai, 2002). When teachers are given the opportunity to contribute in their own learning, they become much more open to change (Klein, 2005). This study investigates the innovative use of Web 2.0 networking by English teachers in Mumbai to establish self-supporting practices and build connections with peers for collaborative professional learning.

2.5 BARRIERS TO ICT INTEGRATED TEACHING OF ENGLISH: FROM PROFESSIONAL DEVELOPMENT TO PRACTICE

In a global research survey conducted by Pelgrum (2001), of nationally representative samples of schools from 26 countries including India, 38 barriers for employing computers in the classroom were revealed. These obstacles were both material and non-material conditions. The major five barriers in his list were limited number of computers, school teachers’ inadequate knowledge/skills, challenges in merging ICT with instruction, arranging computer time, and insufficient peripherals. Pulist (2005) in an exploratory study on secondary and senior secondary level schools of Delhi identified that lack of computers with Internet connection, pressure of curriculum on teachers, lack of teacher motivation, lack of technical expertise, regular power cuts were seen as barriers for the use of web-based technology in the classroom.

Jones (2004) summarised a number of the crucial findings in a research report on the barriers that existed in schools that averted the teachers from making extensive application of ICT in
teaching: an extraordinarily fundamental determinant of school teachers' engagement in ICT was their confidence level in using the technology; accessibility to ICT and training designs were in addition vital in ascertaining levels of use of ICT by school teachers; they were at times struggling to take advantage of technology since they lacked the amount of time needed to thoroughly plan and explore resources for lessons; technical problems with ICT tools were sure to result in reduced levels of ICT use by school teachers; reluctance to change was another issue which hindered the optimal integration of ICT in the classroom; school teachers who could not recognize the benefits of technology in their instruction were unlikely to utilize ICT; there were close connections between several of the recognized barriers to ICT use; any of the aspects affecting one barrier were equally certain to affect a number of other barriers.

There is a common understanding that exposure to technology does not necessarily lead to the most effective uses of technology (Dawson, 2006). At first, teachers may start using an ICT tool, but never develop beyond basic use of it. Surveys of teachers employing new ICT tools demonstrated some ICT adoption by them, but oftentimes the exercise did not broaden their higher level understanding or performance (Dawson, 2006). In the findings from case studies of the introduction of the Intel Teach Essentials Course—a professional development program focused on integrating information and communication technologies (ICT) into project-based learning—into six schools in India, Chile, and Turkey, Light (2009) suggested that mere introduction of a new tool, new practice or new policy in the classroom is not enough. Light (2009) further claimed that change is essential and possible only “by deeply reshaping life in the classrooms—from educators’ beliefs about learning to the relationships that make up the school community.” (p. 12). Apart from ICT availability and accessibility (Pramela & Noraza, 2007), ICT attitudes are among those important factors which influence the teachers to adopt ICT for teaching (Bordbar, 2010). As Baylor and Ritchie (2002) stated:
“regardless of the amount of technology and its sophistication, technology will not be used unless faculty members have the skills, knowledge and attitudes necessary to infuse it into the curriculum” (p.398).

When schools and their teachers realize the need of using ICT, and more importantly, achieve the benefits thereof, infrastructure and training will be useful. A survey carried out by Uniyal and Pandey (2008) on teachers of the Uttarakhand region of India, found that even if there is availability of computers, the teachers did not make use of it. Rajasekar and Vaiyapuri (2007) studied computer knowledge and attitudes towards computers of 670 higher secondary school teachers in the Cuddalore district of Tamilnadu, India. Their survey demonstrated that 60% of the teachers had positive attitude towards computers however teachers’ computer knowledge was low. Teachers become effective ICT integrators in the classroom through positive teacher attitude, thereby feeling more comfortable with using and integrating ICT into their teaching (Kumar & Kumar, 2003). Positive attitudes typically persuade teachers missing ICT know-how to gain knowledge of the competencies for implementing ICT in the classroom environment (Narasimham, 2012). Also, a lack of positive attitudes may give rise to stress, anxiety and absence of confidence; as teachers may feel uncomfortable with technology (Kulkarni, 2012; Rajasekar & Vaiyapuri, 2007; Sadik, 2006).

An ICT enabled English teaching environment also cannot be created overnight: teachers need to experience appropriate input so that they can become engaged with ICT enabled teaching strategies. But teachers of English who do not possess the required ICT skills, knowledge, and attitudes cannot create such an environment (Kulkarni, 2012; Rajasekar & Vaiyapuri, 2007; Sadik, 2006). Research demonstrates that teachers generally use ICT to support their existing teaching practices, rather than use it to transform their teaching at a more deep-seated level (Law, Pelgrum & Plomp, 2008). Factors that influence the extent of
their ICT integration are lack of time and resources to develop new pedagogical practices; unenthusiastic school culture, (Groff & Mouza, 2008; Levin & Wadmany, 2005) and the lack of ICT reform in the curriculum (Somekh, 2007). Investigations into teachers’ ICT use in other nations have discovered the scarcity of time as one common hindrance that a majority of, if not all teachers deal with (Cuban, Kirkpatrick & Peck, 2001).

English teachers in Mumbai (and all over the world) have busy days full of teaching, assessment, parent communication and extra duties (Raval, 2014). There is precious little time to acquire information about subject-specific pedagogical applications of ICT through training by an ICT expert (Prince & Barrett, 2014). Teachers, in addition to completing given teaching workload, also overwork in planning and managing both curriculum-related and unrelated actions along with other administrative load. For many teachers, using ICT is extra burden that is simply considered if there is time to spare. A study by Bhalla (2012) on 20 schools of Delhi region of India reveals that time was perceived to be the strongest barrier to computer use by school teachers in teaching-learning process. Other barriers were access, support, training and competence. Various aspects related to characteristics of students and attitudes of teachers were also considered to be the barriers to computer use by a few respondents.

The time challenge for ICT integration, to a certain degree, continues to be overlooked in the Indian framework. The adoption of new technology tools and strategies is an ongoing effort in Indian schools. Schools obtain LCD projectors, computers and Internet connection, and then send their teachers for short-term professional development workshops that train them to use ICT in teaching (Menon, 2012; Mohanraj, 2009). It is common for schools in India to have a short faculty session for their teachers that introduces a new tool, software or ICT application, but then gives little or no time for teachers to reflect, discuss and develop new
ideas for applying ICT in the classroom (Bolitho & Padwad, 2012; Menon, 2012; Mohanraj, 2009). In many cases, the knowledge from this formal and traditional experience is short-term as teachers hear ICT ideas, but rarely apply what they were exposed to and reflect on the experience (Padwad, 2008). Chalmers (2006) makes the case that although formal teacher training may furnish new ideas to teachers, they need time to reflect, interact, and adapt new ICT ideas.

Prior to the development of online technologies professional development usually took the form of face-to-face workshops, often with limited time available for effective follow up or consolidation (Vavasseur & MacGregor, 2008). Moreover, there is limited face-to-face time in a typical school calendar for teachers in India to follow-up formal ICT training sessions, and share, collaborate and design collectively (Ramachandran et al., 2005). If teachers don’t get time to reflect on their learning, they are much less likely to use those new ICT ideas (Chalmers, 2006). Moreover, formal professional development programs tend to be evaluated too soon after delivery, so that the long term impact on the teachers and their students cannot be determined (Vavasseur & MacGregor, 2008).

Research literature on effective professional development supports teacher learning practices that are consistent, followed-up, supported by the school, and done collectively by all teachers (Garet, Porter, Desimone, Birman, Yoon, 2001; Ingvarson, Meiers & Beavis, 2005; Meiers & Ingvarson, 2005; Timperley, 2008; Timperley, Wilson, Barrar, & Fung, 2008). In India, what teachers use ICT for and whether they use it collaboratively for their professional development are not addressed adequately (Mitakshara, 2009). This study will examine a time-saving model of professional learning that offers prospects for English teachers in Mumbai to overcome ICT barriers through Web 2.0 reflective practice, teacher networking and collaboration.
2.6 PROFESSIONAL DEVELOPMENT USING WEB 2.0 REFLECTION AND COLLABORATION

The increasing possibilities of using ICT for communication plays an important role in helping teachers to reflect, share and advance their current perspectives on professional development (Holmes, Preston, Shaw, & Buchanan, 2013). Professional development calls for networking or collaborating with like-minded teachers. Khaniya (2006) claims that professionals develop a particular group or community resulting from the nature of the tasks they carry out. Teachers need to reflect and communicate with each other about these tools to identify, consider, adapt their implications, and therefore influence their professional growth and their choice for how they will use it. Teachers call for each other’s support in developing their higher level understanding and application of these ICT resources in teaching (Davis & Roblyer, 2005).

There have been online communities for over ten years now, so there has been much international research published on Web 2.0 discourse and how it influences those engaged in it (Friedman, 2005). Research claims teachers learn and progress professionally through active and two-way professional discourse in the teaching community and not passive learning. The tools that support professional communication need to be brought into schools to give the opportunity for greater teacher interaction, teamwork and collaboration (Davis & Roblyer, 2005). Studies have shown that teachers exposed to Web 2.0 tools for professional interaction recognize the power of technology to create a learning environment (Lieberman & Miller, 2008; Lieberman & Pointer-Mace, 2010). Early studies on the use of professional discourse by teachers showed the promise of better interaction and collaborative professional development (DuFour & Eaker, 1998). Teachers using Web 2.0 networks for professional development are more engaged and express their pleasure in having an online tool to enable
conversation beyond face-to-face meetings and formal ICT training (Walker, Recker, Robertshaw, Sellers, & Leary, 2012).

But regardless if collaboration is fostered as a substantial feature in a school teacher community; it frequently centres on administrative procedures such as student assessment, staff meetings, student welfare, etc. Even if these team meetings are an important part of collective decision-making, group cohesion and the smooth functioning of a school, they do not consequently result in the type of professional reflection and dialogue indispensable to professional learning communities (Tarnoczi, 2006). Typically this type of collaboration endorses administrative decisions, rather than educational inquiry. Michael Fullan (2010) notes the U.S. disregard of what he identifies as “collective capacity,” a form of planned collaboration that he says is “the hidden resource we fail to understand and cultivate” (p.4).

With the rapid uptake of Web 2.0 technologies, time and distance are no longer prohibitive concerns for the delivery and design of professional learning opportunities (Duncan-Howell, 2009). Online professional learning is a promising field of investigation for educational researchers, mainly with regard to the social and collaborative nature of the learning it fosters, and the opportunities it provides for teachers to integrate their professional development with practice; effectively follow up and merge new with existing learning practice, and its long term benefit on their teaching and their students’ learning (Duncan-Howell, 2009).

This latest wave of Web 2.0 networking and collaboration for teacher professional development is still in its infancy for teachers of English in India, moreover; there is hardly any research to secure foundational understanding how and whether teachers of English in Mumbai use online networks in their professional lives. Although online communities have existed for over 10 years, very few teachers actively got involved in the communities that are
established for professional learning purposes (Zhao & Rop, 2002). This fuels the debate about what stimulates teachers to participate in self-generated online communities of teachers. There are very few studies that investigate collaborative teacher professional development in India (Chattopadhyay, 2013) emphasising the need for teachers to support each other. Once a consistent practice of online networking is in place, teachers can collectively collaborate to build a professional knowledge base that can be shared, discussed and implemented.

Quite a bit of the research investigates how teachers can effectively use ICT in their teaching, rather than also using it effectively as a critical component of their own professional learning (Downes, 2004; Fisher, Higgins, & Loveless, 2006). Many researchers now accept that, when used effectively, Web 2.0 technologies have the potential to break the dated and outworn one-off ICT workshops in schools, and stimulate the increase of teacher-learning opportunities that are beyond doubt collaborative and job-embedded (Finger & Finger, 2013). Web 2.0 opens up a new world of high quality, in-depth and interactive professional learning (Lemke, Coughlin, Garcia, Reifsneider & Baas, 2009). Carr and Chambers’ (2006a) study of online teacher professional learning reflects that collegial and reflective learning of teaching practices are the most successful forms of teacher professional learning. They reported that ICT offers an environment of collective learning for teachers through on-line environments and related networks. In particular, asynchronous environments are generally more collaborative and reflective than traditional environments.

The community features of Web 2.0 technologies render obvious opportunities for collaborative professional learning: It connects individuals to form a community of learners, where all contribute and collaborate in what amounts to a comprehensive and large-scale discussion of ideas (Lemke et al., 2009). Web 2.0 tools promote teacher-centered, teacher-
specific and continued experiences through personal learning context (Ferdig & Trammell, 2004; Hall & Davison, 2007; Lunyal, 2012). They make easy professional communication and collaboration, provide chances for follow-up, stimulate social connections and communities, and develop collective learning with no associated costs (Lunyal, 2012; Toner, 2004). Moreover, research indicates that using Web 2.0 tools benefits both teaching and learning in educational settings (Lemke et al. 2009).

People in India are beginning to use technology in a number of different ways. Jeffrey and Doron’s (2013) broad snapshot of contemporary India confirms that in just over a decade, the mobile phone transformed from a rare, luxurious and unwieldy instrument to a palm-sized, affordable staple, taken for granted by poor fishermen in Kerala and affluent entrepreneurs in Mumbai alike (Jeffrey & Doron, 2013). In 2001, India had 4 million cell phone subscribers. A decade later that number had grown to more than a staggering 750 million. The number of Internet users also is increasing substantially in urban India. Research shows that there were approximately 130 million active Internet users in urban India in June 2013 and 137 million active Internet users in October 2013 (Internet and Mobile Association of India & Indian Market Research Bureau, 2013). In terms of use of social media urban, India will register only a sharp and constant rise (Mahajan, 2009). 56% of Indian net consumers do social networking over the Internet (Mahajan, 2009).

However, an investigation by Chattopadhyay (2013), concerning 46 teachers of English from the different states of India, demonstrated that the application of web tools for socialisation invites more interest from Indian educators, than their usage for teaching and for professional development. The weekly standard use of web tools in teaching English is 11.4% compared to 24.5% in social lives of teachers in India. They have quite limited knowledge and understanding regarding the potential benefits of web-based professional development.
(Chattopadhyay, 2013). It is timely that this rapid spur in the use of social networking and other Web 2.0 tools for personal communication could be taken advantage of, for influencing the professional practices of English teachers in India.

Young learners of Mumbai today, digital learners as they are called, are learning not only from technology, but also with technology (Mitra, 2003, Mitra, Dangwal, Chatterjee, Jha, Bisht, & Kapur, 2005). Projects like Sugata Mitra’s “hole in the wall” project provide alternate avenues through ICT of reaching out to the children in India (including the underprivileged), and reveal that ICT is undoubtedly an interesting and exciting source of education. In this project, children from remote areas in India learned how to use a computer on their own — and then taught other children (Mitra, 2003). Undoubtedly, the speed at which technology is influencing lives in India, it is unfeasible to think of classrooms with chalk and talk (Arora, Singh & Singh, 2011). The emerging role of ICT in the lives of young people in India adds further weight to the need for English teachers in Indian schools to incorporate ICT in their learning.

The social prospects of Web 2.0 technologies, such as wikis, blogs, and social networking for professional learning has gained attention from many researchers in developed nations (Henderson, 2007; Holmes et al., 2013; Killen, 2009; Levin & Wadmany, 2005). But teacher professional development in most schools of India has a traditional and predictable look, feel and result (Bedadur, 2012). A study by Rahman and Borgohain (2014) of the continuing professional development practices of secondary schools English teachers in the Assam region in India shows that the teachers’ use of Internet for updating their professional competence in teaching English was found to be low. If schools in India wish to actualize effective learning, then they and their teachers need to reconsider their professional learning approaches and realign their learning with the pedagogical potentials that Web 2.0 technologies offer (Chattopadhyay, 2013).
Aware of the prospects offered by technological innovations, Menon (2012) provided an account of just how much Indian school teachers use a social network for their continuing professional development, concerned with four components of online professional development - reflection, peer networking, sharing of classroom practice and user generated content; and identified that social media is an effective instrument to facilitate teachers to transform into reflective professionals, and this takes place through peer networking and sharing of classroom practices. Yet much of teacher professional development in India focuses on ICT training, on the technical aspects of technology integration, hardware and operation: teachers in developing countries are rarely sharing, discussing, and negotiating knowledge through Web 2.0 social networks, therefore underestimating the social nature of learning (Chattopadhyay, 2013). It has therefore become important for teachers in India to understand the benefits of Web 2.0 social learning for their effective professional development. This study investigates the efficacy of blog-based reflection, networking and collaboration in enhancing the professional development of English teachers in Mumbai.

2.7 BLOGS AS THE WEB 2.0 VEHICLE TO EMPOWER REFLECTIVE AND COLLABORATIVE PROFESSIONAL DEVELOPMENT

A large body of evidence points to the efficiency of professional development which is initiated, developed and controlled by the teachers (Gaible & Burns, 2005; Scott & Scott, 2010), and also which incorporates teacher reflection and collaboration (DuFour & Eaker, 1998). Moreover, several studies have acknowledged the potential of blogs to promote both reflection and collaboration, techniques that are imperative in a teaching community (Swan & Shea 2005; Hawkes 2000; Lord & Lomicka 2004).

Blogs have the potential to be a useful Web 2.0 instrument for teachers to develop a private or public discussion space that supports teacher reflection and collaboration (Henderson,
By online and collaborative reflection through blogging, the participants can be in control of their own professional development and establish possibilities for learning within their work and context. Ray and Hocutt (2006a) in a study focused on K-12 teachers’ use of blogs, found that blogs “functioned as reflective journals where teachers could write about and reflect on events occurring in their classrooms.…Entries demonstrated a process of continuous reflection about…students and about [teachers’] knowledge and understanding of…issues impacting practice” (p. 25). Also, in a study of middle school teacher bloggers, Ray and Hocutt (2006b) found that “a majority of entries examined demonstrate some level of reflective writing” (p. 14). Results also revealed that blogs support collaboration and social interaction among teachers.

The worth of online learning networks is being accepted as a way of updating professional learning through self-paced professional learning activities in a connected setting (Sari & Herrington, 2013). Blogs have gained popularity as an interactive tool in online communities of practice, and represent one kind of social software that is increasingly employed to enhance communication environments in the educational domain (Kim, 2008; Murugaiah, 2010). Using blogs is one way to encourage teachers to communicate with other teachers on what is working and how they can integrate fresh ideas into their existing teaching tools (Hall & Davison, 2007). Educational blogs can also be considered as additional communication channels between ICT trainers and teachers in India, through which they can follow-up training and communicate by cost-saving means of a different media (Lunyal, 2012; Murugaiah, 2010). Stiler and Philleo (2003) studied the use of blogs as online journals in two groups of pre-service and in-service teachers and learned that both students and teachers thought of blogging as a unique tool that could boost reflective development and construct online communities.
Blogs have been proven to be an effective means of establishing and maintaining online communities of practice (CoP) and helping members reflect on their professional practices (Yang, 2009). A blog can aid conversations within an online community by eliminating many of the constraints face-to-face communities of practice encounter. The online forum can sustain professional learning by giving teachers a medium for interacting with other professionals and an environment to discuss current issues and trends (Yang, 2009). Involvement in a community of practice can reduce teacher isolation and increase problem solving (Schlichte Schlichte, Yssel, & Merbler, 2005). Teachers involved in collaborative models such as communities of practice report fewer discipline problems, are happier, and have higher levels of teaching achievement (Schwab Learning, 2003). Blogs as online communities of practice allow teachers to collaborate, solve problems, and transfer best practices, and prompt change (Hou, Chang, and Sung, 2009).

There are several other investigations that studied the application of blogs in various educational activities. For example, Stiler and Philleo (2003), Wheeler and Lambert-Heggs (2009) and Yang (2009) observed blogs to promote reflection; and Oravec (2003) studied blogs in blended learning programmes. The vital dimension of blogging as a communicative platform for both individual self-expression and social connectivity has fuelled rising interest in blogging as an educational tool (Williams & Jacobs, 2004; Burgess, 2006). Through the application of blogs for collaborative planning, teachers can break free from the isolating work environments and long established conformities, that the teaching profession had imposed on them in the past (Ramachandran et al., 2005). Richardson (2009) claimed that blogs “engage readers with ideas and questions and links. They ask readers to think and respond. They demand interaction” (p. 18). In such context where there is mutual reciprocity and where ideas can be developed and expanded, blogs can be an effective tool for professional development activities. Utilizing online networks also as the means to reduce
professional isolation has been indicated by in-service teachers, as they identify it as a valued means of finding like-minded professionals (Sari, Lim, & Pagram, 2010).

As a learning community, blogs also support asynchronous communications among learners. Compared to technologies supporting synchronous interactions, asynchronous communities allow teachers extra time for in-depth knowledge construction and to manage their responses (Whitehouse, McCloskey, & Keteult, 2010). Additionally, asynchronous communication liberates participants to communicate at their pace and is more flexible to use than synchronous communication. Research implies that if you want busy teachers to work with an asynchronous learning context, they need to feel part of a contributed vision, have a belief of ownership of some part of the site, and gain from the shared ideas of other teachers (Padwad & Dixit, 2014; Robertson, 2005). Self-determining professionals who are drawn together by common principles, objectives, and interests are loyal to knowledge building through strong exchange of ideas and alliance (Cruz-Yeh, 2011; Henderson, 2007; Schwier & Balbar, 2002). Blogs, as an asynchronous platform for professional discourse, defeat the two barriers to effective professional learning identified by Wenger (2005). The first tension, separation in time and space, is overcome by the togetherness developed by the continuity. The second tension, relationship between communities and teachers, is overcome by eliciting a meaningful participation through interest communities, such as teachers of a certain subject.

Blogs provide teachers with an online private or public space that encourages them to write or publish a combination of personal thoughts, reflections, and ideas, or information that could be of interest to other teachers (Henderson, 2004). According to Wang & Hsua (2008), blogs are a socially interactive and collaborative Web 2.0 tool: the asynchronous nature of blogs allows individuals to write for personal purposes (Godwin-Jones 2003; Richardson 2009); it helps users to share and exchange their knowledge, ideas and opinion which creates
an online network and a setting appropriate for social constructivist learning (Wang & Hsua 2008). Blogs foster better teacher interaction with features of asynchronous conversation and equal voices in professional development (Tapscott & Williams, 2006; Zandi, Thang, & Krish, 2014).

It is a social tool that enhances knowledge-building by means of reflective blog entries (Lankshear & Knobel, 2003). Suzuki (2004) claims that blogs, which primarily work as online journals, might be an advantage to teacher development in three ways. First, blogs are easily accessible to readers. Second, blogs not only have personal uses but can also be used for interactive and collaborative purposes. Finally, blogs allows immediate publishing. Previous studies suggested that blogging is an effective means for professional development (Jeffrey & Hadley, 2002) and critical reflection (Yang, 2009). Blogs can further be regarded as vehicles for online communication; where teachers share ideas with each other, and receive feedback and support. Eekelen, Boshuizen, and Vermunt (2005), in their research of teachers’ self-regulating techniques in blogging, discovered that the practice of reading and writing online journals resulted in the professional development of both pre-service and in-service teachers. Loving, Schroeder, Kang, Shimek, and Herbert (2007) also examined how blogs could play a role in a teacher networking project, and noticed that blogs assisted the construction of a network amongst the teachers involved in the project. The resources and ideas were shared by teachers through the blogs, which allowed teachers to reflect on their own practices. Murugaiah (2010) conducted a study on the role of blogging in teachers’ professional development, and its function in developing computer-assisted English language teaching skills. English language teachers from Malaysian Smart Schools, who shared their ideas and practices through blogging, were engaged in their study. The finding suggests that interaction through the blog led the teachers to be exposed to the required skills for computer-assisted teaching and benefited them to enhance their competencies. Krish, Thang, Nambiar,
and Lee (2012) found the usefulness of blogs in advancing teaching practices and boosting a community of practice. The findings indicate that blogs helped them to share teaching practices to a large extent.

According to well-known New York Times journalist Thomas Friedman (2005), blogs are shared intellectual associations that are contributing to the “flattening” of the world and in comparison to other Web 2.0 discussion tools, blogs are simple to use and absorb little cost. Currently, researchers in India have started testing capabilities of social media in the academic domain (Arora, Singh, & Singh, 2011; Bedadur, 2012; Bolitho & Padwad, 2012; Bordbar, 2010; Chhabra, 2012; Chattopadhyay, 2013; Garai & Shadrach, 2006; Gupta, 2014; Mahajan, 2009; Menon, 2012; Mohanraj, 2009; Narasimham, 2009; Padwad & Dixit, 2014; Patel, Darji, & Mujapara, 2013; Rajasekar & Vaiyapuri, 2007; Raval, 2014). To surmise, previous studies in developed nations conducted on blogs have displayed that blogs play an encouraging role in teachers’ self-reflective practices, assisted in conceptual development through sharing of materials and ideas, and improved the construction of online communities that produced connection amongst teachers. But research on the use of blogs for ICT professional development of teachers in Mumbai is rare, and no study has focused particularly on English teachers in Mumbai. Therefore, my research study, investigating the use of blog-based reflection, networking and collaboration, for the professional development of English teachers in Mumbai, is both timely and crucial.

2.8 FACTORS INFLUENCING AND PROMOTING BLOG-BASED PROFESSIONAL DEVELOPMENT

If blogging has the prospective to facilitate teachers to widen their own professional learning networks as a means of professional development, then teachers need to be aware of its
potential benefits (Hall & Davison, 2007; Henderson, Balatti, Knight, & Haase, 2010). There is evidence that, initially, many professionals dismiss online learning networks as a casual and tiresome time waster (Richardson & Mancabelli, 2011), although many teachers may describe traditional yet existing professional development sessions in the same manner. How then could teachers of English in India be motivated to indulge in a relatively new, somewhat unexplored Web 2.0 professional development?

The professional development literature is uncertain as to how best to transform teachers’ fixed practices and beliefs. The likelihood is that change in teacher’s practices will happen with change in teachers’ attitude, which may then lead to change in students’ learning outcomes (Desimone, 2009). Also, the advantages of online learning and networking are clearly relevant to teacher professional development, where resource availability and accessibility have been identified as critically important motivating factors (Borko, 2004). Accordingly, investigations into teacher professional development must seek innovative, accessible and collaborative techniques that can fulfil teachers’ learning needs; to determine possibilities for developing new professional development solutions, with a view to establish innovative models of professional development that are practical for 21st century teacher professional learning (Raval, Mckenney, & Pieters, 2012).

Likewise, Bolitho and Padwad (2012) revealed that encouragement by means of policy changes, new resources, rewards, liberty and opportunities was essential for teacher learning, and that this would principally be the state liability. In a study seeking various stakeholders’ views about teacher professional learning (Padwad and Dixit, 2012), requirements of state support were clearly suggested by the participants, who involved not only teachers but also administrators, managements and state officials. Pandit-Narkar’s (2012) study of the District English Centre at Nellore moreover demonstrated that the encouragement and opportunities
brought in by the school managers and/or education ministry considerably increased the
effect and success of the teachers’ professional development initiatives. These findings, about
the importance of supportive policy solutions, programs and opportunities, were further
substantiated by two investigations, one from Montenegro (Popovic & Subotic, 2012), and
another from Serbia (Glusac, 2012); countries with open legislation and highly structured
governmental provisions for teachers’ professional development. While underlining the worth
and importance of policy support for teacher professional development, these investigations
also outlined how the need of school-based teacher professional development was identified
and prioritised at the ministry level.

Web 2.0 learning could provide opportunities for teachers to engage in professional
development at a time that is convenient for them, and the opportunity for teachers to build
collaborative online learning communities where they can interact and contribute to a stress-
free environment without essentially disclosing their identity (Pachler & Daly, 2006).
However, Carneiro (2007) advocates that Web 2.0 professional learning tools like blogging
generally take more time to develop, when compared to synchronous tools like chatting. This
causes a delay in teacher acceptance and application of blogs that needs to be considered. The
initial approval of blogging might well not be sustained, as the day-to-day use may require
new behaviours in teachers that they are not prepared to commit to. Moreover, the demands
of teaching have often prevented regular or sustained sharing among teachers in India during
school work hours (Bennell & Akyeampong, 2007).

There are a number of obstacles to online learning that would need to be borne in mind. For
example, issues potentially relating to low Internet connectivity, teacher workloads and
feelings of loneliness due to lack of peer support (Hall & Knox, 2009). Thang, Murugaiah,
Lee, Hazita Azman, Tan, & Lee (2010) identified that fear is one of the major problems that
leads to teachers’ low participation rate in online professional development as sharing of mistakes and doubts on a public platform bring in teachers a sense of failure and lowers their sense of confidence. This could be because of teachers’ fear about being embarrassed and mocked by their colleagues and students. Therefore teachers have difficulty accepting and adapting to Web 2.0 professional development platform.

Carr and Chambers’ (2006b) investigation of teachers’ participation in an online community suggests that teachers’ lack of confidence hinders their readiness to share practices. Their findings reveal a combination of organizational and personal factors contribute to low use of the online community by teachers. They reported that organizational barriers include: reflective sharing of practice not valued; time not allocated for reflective sharing of practice; online communication not integral to teachers’ lives; and access to technology limited. They also reported that the personal barriers include: reluctance to share personal practices; preference for face-to-face communication and the perceived permanence of text. Carr and Chambers (2006c) suggest that online communities have been slow in developing as an effective medium of teacher professional development due to two main reasons: “Schools do not adequately value collegial reflective sharing of practice, and classroom teachers do not use online communication tools as an integral part of their professional practices” (p. 269).

Today’s teachers must be lifelong learners, who are receptive to change and continually seeking and developing new knowledge and skills, rather than passively acquiring a core set of skills in isolation or ignorance, to be used for an entire career. But because many teachers feel a sense of comfort from doing things in familiar routines, disturbing their well-established professional and instructional practices could result in a fear of the unfamiliar (Murray, 2013). Rather than working to develop new skills стратегий, it is merely easier for those teachers to keep on teaching and learning in the long established and long practiced
ways (Murray, 2013). Similarly, teachers might feel threatened by the prospect of change. Their acceptance of change could be affected by perceived threats to their expertise and abilities, and their belief that they lack the knowledge or skills to implement the change successfully (Murray, 2013).

According to Opfer and Pedder (2011), change is not linear, and rather, it should be a consistent cyclical practice, where the teachers’ beliefs may persuade practice, or practice may persuade beliefs. Pandit-Narkar’s study (2012) highlighted how the member teachers’ own efforts enabled them to take advantage of the District English Centre established in their town, under an education ministry scheme for initiating continuing professional development (CPD) tasks. As Mathew observed in her study (2012), the success and importance of her experiment in promoting CPD by means of reflective practice were premised on the participating teachers’ voluntarism and readiness to take on a committed responsibility for their own learning: “although there was no acknowledgement/benefit of any sort in the school for teachers to take on CPD-related work” (Mathew, 2012, p. 69). The account of the 30-year-long developmental process of a voluntary teacher development group (Shivakumar, 2012) strongly confirmed that the member teachers taking responsibility for their own professional development was the pivotal and fundamental component in initiating and maintaining the group, and none but teachers could be responsible for their own professional development.

2.9 CHAPTER SUMMARY
Adapting to technology enabled education is undeniably needed in the epoch of technological advancement where ICT is rapidly building bridges to unite people across the globe opening new prospects of learning opportunities (Lieberman & Mace, 2010). Investigations on
international practices of teacher professional development suggest there cannot be a ‘one size fits all’ policy for every case (Hayes and Chang, 2012). The review also shows that professional development takes many forms, but there appear to be key universal concepts for effective professional development. For instance, there is significant evidence to advocate that collegiality and collaboration in professional development tend to be crucial, and numerous studies have established that the most well-liked forms of professional development were ‘observation of colleagues’ and ‘sharing of practice’ (Boyle, Lamprianou, & Boyle, 2005).

The literature also suggests that reflective practice for professional development is important (Farrell, 2007, 2009). As Day Stobart, Sammons, Kington, Gu, Smees, & Mujtaba, (2006) emphasise, it is necessary to give teachers with adequate time and possible choices to reflect on teaching and to share best practices with their co-workers. Regarding the effectiveness of professional development in changing practices, there is an increasing concern for accountability, with many educational policy-makers and administrators seeking to quantify the effectiveness of professional development. Conversely, it can be construed with this review of related literature that it is only when policy makers, schools, administrators, and teachers collectively change the long established practices, the possible benefits of innovative professional development, such as blogs, could be achieved. “You can dream, create, design, and build the most wonderful place in the world . . . but it requires people to make the dream a reality” (Walt Disney as cited in Schermerhorn, 2011, p.208).

Teachers need to know that in the 21st century, ICT is not merely to portray information but to act together, work together, share together, and thus learn (MHRD, 2010). This demands a stage, a place where teachers in India can assemble and exchange views about similar pedagogical concerns (Gupta, 2014). Blogs, which can function as online personal journals,
can act as incentives in galvanizing teachers to record and reflect on their teaching processes (Lunyal, 2012). Moreover, blogs improve the creation of online professional communities in which collaboration and interaction amongst teachers provided insights, perspectives and directions for teacher development (Prestridge, 2010; Prestridge, 2014).

In summary, blogs functions as an asynchronous platform for teachers to reflect, collaborate, discuss ICT ideas, and resolve ICT issues (Toner, 2004). Therefore, this study promotes the use of blog-based networked learning, reflection and collaboration for the professional development of English teachers in Mumbai. It examines the potential of blog-based networked learning and collaborative professional development for English teachers in Mumbai to determine whether teachers embrace or reject this collaborative platform, with a view to making its potential benefits or drawbacks more transparent for those teachers and all other educational stakeholders yet to become involved in blog-based professional development. The next chapter discusses the methodological framework employed in the study.
CHAPTER 3
RESEARCH METHODOLOGY

3.1 OVERVIEW

The literature review in the previous chapter provided a foundation for the development of blog-based professional development of English teachers in Mumbai. The purpose of this chapter is to explain the specific methodology applied in the research. Common philosophical assumptions are reviewed and presented; the interpretive paradigm is identified for the framework of the study. Moreover, the chapter discusses the qualitative research methods selected, the research design used in the study including sample, instruments, data collection and analysis methods, and the ethical process involved.

3.2 INTERPRETIVE PARADIGM

Interpretive paradigm studies individuals with their different opinions, dissimilar attitudes, diverse human behaviours, and their unique characteristics (Cohen, Manion, & Morrison 2007). There have been increasing calls for interpretive research within educational technology research (Ross, Morrison, & Lowther, 2010; Spector, Merill, Elen, & Bishop, 2014; Willis, 2008). Interpretive research paradigm was used to structure the development of this study. I selected interpretive paradigm since it could help me to understand and explain the teachers’ ICT practices, ICT perspectives, ICT barriers and ICT needs within the context that regulated their professional development (Merriam, 1998). This gave me opportunities to seek understanding and make sense of others’ perspectives which were shaped by their contexts.

Interpretive research empowered the participants and positioned both me and the participants’ views in a subjective context (Cohen et al., 2007). With an interpretive approach, I, as a
researcher, was able to take into consideration the emotions, experience, and responses of my participants to improve their professional development practices. I considered it important to enable the knowledge the participants had and the knowledge I had to come together through an interpretive approach in order for effective blog-based professional networking to take place.

3.3 CASE STUDY METHODOLOGY

Cohen, Manion, and Morrison (2007) claim that case studies can be used to recommend changes for development at the individual, professional or institutional level, as information obtained from case studies are “strong in reality” and “a step to action” (p. 256). Cohen, Manion, and Morrison (2007) also stated that case studies may add to the “democratization” of decision-making and knowledge, as they allow readers to evaluate the implications of the research by themselves (p. 256). Researchers like Hew and Brush (2007), and Light (2009) called for further and intensive research on the use of ICT in Indian schools, recommending case study research design as a way to address the lack of local understanding.

Through this case study, the participants were introduced to blog-based professional development. A professional development tool (blog) for English teachers in a primary and secondary school setting in Mumbai was designed, developed, implemented and evaluated. The use of blog was examined as a reflective and collaborative form of professional development, and as a possible alternative to traditional models of professional development. Also, its efficacy in fulfilling the professional development needs and overcoming the professional development barriers of teachers in this study was reviewed. A case study approach was taken in order to develop a holistic understanding of the (blog-based) process undertaken by the participants for their professional development. More specifically, an
interpretive case study is a methodology that provided me with the ability to examine blog-based professional development as a whole, also giving an in-depth look at the participants’ professional learning experiences from multiple perspectives (Creswell, 2007).

A holistic case study approach was used to identify several factors that challenge or motivate English teachers in Mumbai to integrate technology in teaching. The case study also revealed the blog-based perceptions and blog-based participation of English teachers in Mumbai for their professional development. Since the research focused on teacher networking and collaboration, all 32 teachers in this case study were considered as one case study, rather than individually. The ICT experiences most common to the 32 teachers were presented as a case study to highlight the intensity of issues, conditions and processes that impact the practice of blog-based professional development. The case to be investigated was the perception, participation and involvement of teachers in blog-based reflection, networking and collaboration. It was not the aim of the study to develop separate detailed case studies of all the 32 teacher-participants involved in the study, but to develop a richer conceptualisation of the nature of teacher participation in the blog for their professional development. Each teacher’s case contributed to an overall understanding of how teachers learn in a new environment, and where and whether they situate their learning as they engage in online professional development. This holistic case study focused on the experiences of 32 teachers, presenting their perspectives and participation in the online blog-based community for their professional development.

Yin (2009) described the opportunity to use many different sources of evidence as one of the greatest strengths of data collection in case studies. I adopted a case study methodology gathering data from ICT interactive workshop observations, questionnaires, interviews and blog comments. According to Merriam (1998), case study focuses on “the process of research
instead of the results, context instead of variables, and discovery instead of confirmation” (p. 19). Yin (2009) described the case study as the preferred method when research contains a focus on a contemporary phenomenon within some real-life context (p. 180). Case study was employed to understand the research situation (professional development of English teachers in Mumbai) in depth. The case study is used in many instances when the goal of the research is to contribute to the collective understanding of individuals and related phenomenon. The professional development needs of 32 English teachers teaching primary and secondary students in three private schools of Mumbai were investigated. Their ICT integrated teaching practices, ICT knowledge, ICT attitudes, ICT barriers and ICT suggestions, within their traditional professional development practices, were explored. Also, the case study systematically inquired into a new practice of professional development using a blog-based model for English teachers in Mumbai. Both teacher perspectives about blogging for professional development and teacher participation on the blog were evaluated using qualitative data. This research does not examine the impact of blog-based professional development, that is, how the teachers changed their teaching practices in the classroom. This case study focuses on the process of professional development, rather than the product.

Flyvberg (2011) stated that choosing to do a case study is not so much a methodological choice, but rather a choice about what to study (the unit represented by the case). My case study examines whether blog-based collaboration facilitates teacher professional development (case) of English teachers (unit) in Mumbai. This study investigates the potential of blog-based professional development of English teachers in Mumbai’s private schools, where many of their current professional development practices in ICT were focused on formal workshop, often only in the format of face-to-face training given by an ICT trainer, instead of teacher reflective, networked and collaborative learning. It demonstrates whether the teachers adopted, engaged in, or faced challenges in blog-based professional learning.
The case study methodology for gathering data enabled me to assume the role of an ‘inside observer’ (Creswell, 2005), to record detailed descriptions of events, to develop a deep understanding of the factors that influenced the extent to which teachers became involved in reflective practice, networking and collaboration within the context of an online professional learning community. A case study researcher rarely adopts one particular role, as they are not a complete participant, nor are they totally an observer. I assumed a participant observer role and also engaged in the activities by facilitating the ICT interactive workshops, and most important, by running my ICT blog. A case study methodology enabled me to enter into the authentic educational context of Mumbai. Consequently, case study was appropriate for investigating the use of ICT for teaching and professional learning by English teachers in Mumbai, where their ICT practices were documented through an interpretive inquiry involving the participants and the researcher in an environment of asynchronous Web 2.0, blog-based environment of professional development.

3.4 QUALITATIVE DESIGN

As case studies may be studied in varied ways using a range of different methods or even methodology (e.g. qualitatively, quantitatively, or by mixed methods) the researcher has to make decisions as what types of data are most useful for informing and/or studying a case. Case studies normally depend on qualitative methods, although quantitative data may be applied to support developing ideas (Creswell, 2007).

The strength of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue. It provides information about the “human” side of an issue – that is, the often contradictory behaviours, beliefs, opinions, emotions, and relationships of individuals. Most importantly,
qualitative research does not aim to generalize findings but to understand a specific situation. (Mangal & Mangal, 2013, p. 162).

The purpose of my study was to specifically investigate the influence of blogging on the ICT professional development of English teachers in the Mumbai region of India. In this sense, given the nature and focus of the study itself, an interpretive case study, using qualitative data (with minor quantitative data) was applied. In qualitative research, diverse knowledge claims, enquiry techniques, and data collection methods and analysis are employed (Creswell, 2009). Qualitative data sources include participant observations, interviews, questionnaires, and the researcher's impressions and reactions (Myers, 2009). Sarantakos (2005) and Patton (2002) both argue that qualitative analysis is an appropriate approach when flexibility is required for an in-depth study, and when attempting to understand a contextual phenomenon. Qualitative research studies the “why,” not the “how” of its research area, and uses interview transcripts, field notes, and various forms of feedback to analyse unstructured information (Creswell, 2009).

When considering the views of teachers who influence the integration of ICT in teaching and professional learning, qualitative data collection such as that from participant observations and interviews were appropriate for this study. Through this research design, the experiences and perceptions of the participants could be explored in-depth. It also provided rich qualitative data to better understand the phenomenon of the integration of ICT into teaching of English to determine the professional development needs of English teachers in the Indian education context.
3.5 PARTICIPANTS AND SELECTION CRITERIA

The study can be best characterized as small-scale and in-depth. As the aim was to investigate and understand how the ICT professional development of English teachers was being practiced in Mumbai and how blog-based professional development could be integrated into this process, I collected my data from three established private English medium schools in Mumbai. The schools I visited confirmed most closely to four set criteria for selection; the schools should be located in Mumbai, privately administered, the medium of instruction in the schools should be English, and the schools should provide both primary and secondary education. I visited several schools in Mumbai based on the above set criteria, shared the research objectives with the school teachers, and got teachers’ consent from three schools to participate in the study.

Overall 32 teacher-participants attended ICT interactive workshops (conducted by me in their schools) and completed questionnaires. From this population, I selected 10 participants for the interviews. I used Intensity Sampling in conjunction with Random Sampling. This means that after observing my participants’ attitudes and interaction during the workshop, and after analysing their responses in the questionnaires, I selected a subset of ten intense cases for more in-depth analysis. With the help of workshop field notes and questionnaire responses, five participants with positive ICT perceptions, ICT attitudes and ICT experiences, and five participants with well explained negative ICT perceptions, ICT attitudes and ICT experiences were selected for the interviews. This equal emphasis on both viewpoints resulted in two teacher groups forming positive and negative representations of ICT perceptions, ICT attitudes and ICT experiences of the teacher-participants in this study. Intensity Sampling allowed me to select a small number of rich cases that provide in-depth information and knowledge of my research interest. As Patton (2002) points out, Intensity Sampling requires “prior information” and “exploratory work” to be able to identify intense examples (p. 172).
Therefore I gathered prior information about my participants and explored the extent of their relevance to this study through participant observations during the ICT training workshops and also through their questionnaire responses.

3.6 DATA COLLECTION STRATEGIES

Gorard (2004) and Johnson and Christensen (2004) claim that the outcomes of a research study are stronger when they are rooted in a variety of methods, as the researcher can authenticate, elucidate, and validate the data. It is also considered that researchers can develop the accuracy of their findings by collecting and analysing different forms of data which speak about the same phenomenon (Johnson & Onwuegbuzie, 2004), in this case the integration of ICT into teaching of English and teacher professional development in India. I collected data through ICT interactive workshop observations, questionnaires, interviews and blog comments.

3.6.1 Blog

Prior to conducting ICT interactive workshops, I created an ICT blog specially designed as a teaching resource for English teachers in Mumbai. Please refer to Figure 1. The blog was also a professional development resource that could support teacher professional development through web-based inquiry, reflection on practice, networking and collaboration for the ICT professional development of English teachers in Mumbai. I maintained the blog from October 2013 till Feb 2015. During this period I published a total of 97 posts on the blog; comprising articles, lesson planning resources, teaching materials, and links to audio-visual resources that were useful for ICT integrated teaching of English in Mumbai schools. Every post was divided into categories, such as drama, evaluation, Facebook, games, iPad apps, lesson plans,
podcast, PowerPoint, puzzles, songs, TED, worksheets, YouTube, and so on. In addition, every post had a grammar or vocabulary focus.
As a facilitator of the blog, I summarized main ideas and themes, and posed probing questions to keep the dialogue with blog members flowing. The blog members received notifications of new posts by email to keep the blog fresh in teachers’ minds. Teachers were able to utilize teaching materials published on the blog and also could have an open conversation with each other.

My blog provided an easy Web 2.0 tool for teachers in this study to:

- Engage in online discussions organised by topic
- Find free ICT materials and related resources for classroom teaching of English
- Connect with colleagues and share strategies
- Grow their professional network

Teachers’ professional development was centred on their blog-based participation through reflection, networking and collaboration with other teachers and researcher on the blog. Findings related to the blog can be found in the next chapter. The blog link is http://www.teachingenglishwithict.wordpress.com

### 3.6.2 ICT interactive workshops

I conducted ICT interactive workshops for 32 English teachers in three schools of Mumbai on 24 June 2014, 18 July 2014, and 1 August 2014. From a research perspective, the aim of the ICT interactive workshops was to identify the barriers to integration of ICT for teaching of English in Mumbai and also understand the English teachers’ ICT needs and expectations, the specific challenges and issues of their current professional development practices, including formal face-to-face training; which was often the primary and often sole platform for building their ICT skills. The objective of the workshops was to introduce the participants to the pedagogical potential of blogging as an asynchronous professional development practice of English teachers for ICT integrated teaching, so that the potential of using online networks for teacher professional development in Mumbai becomes a possibility. I wanted to examine
whether blogging became a collaborative space for shared resources specific to their needs. I wanted the teachers to use my workshop as an informal and liberal platform to freely share and discuss their ICT views, experiences (good/bad), and suggestions. I wanted to know whether the professional development programs conducted by the teachers’ schools were meeting their needs. I wanted to address the challenges of traditional professional development: experience, time, and follow-up. I wanted the teachers to have innovative learning experiences beyond a typical ICT workshop, and I provided them with examples and ideas. I wanted the teachers to identify the usefulness of Web 2.0 interaction for their professional learning. Most importantly, I wanted the teachers to ask themselves at the end of the discussion, ‘Why be solely dependent on formal ICT workshops for professional development, when there are several opportunities to create your teacher network online and learn new ICT ideas collaboratively?’

Due to there being no Internet access in the classrooms of all three schools, I conducted the workshops in the schools’ computer laboratories. During the workshops, I shared my blog with the participants and the workshops were also a platform for teachers to share each others’ ICT experiences in the classroom. The workshop focused on the use of ICT as an aid for teaching of English and also as an aid to develop the professional competence of English teachers in technology. Observational methods have the advantage of directly evaluating participants’ involvement and engagement in the learning environment and with the learning (Anfara, Brown, & Mangione, 2000). Through teachers’ discussions and suggestions, the workshops were used to identify the views of teachers toward ICT integrated teaching. Teachers worked in small groups to explore the blog. They discussed the affordances and constraints of using blogs for their professional development, learned the basics of subscribing to the blog, posting comments, and embedding links. All in all, through the ICT interactive workshops, I wanted to capture the teachers’ perceived potential of the blog.
3.6.3 Participant observations

During the ICT interactive workshops I recorded my observations of teachers’ interactions in the form of field-notes. Macintyre (2000) defines note-taking as a “quick and unobtrusive way of recording aspects of behaviour as they occur or as soon as is practical afterwards. The notes are quick observations of something that is happening now, and so they have a liveliness and authenticity that is pleasing” (p.62). I jotted down the field-notes in a small notebook at the time of participant observations, as and when time permitted me during the workshops. Most of the verbatim quotes that I managed to note down were during teachers’ interactions with each other in the workshops. For taking detailed notes of conversations missed out by me, some of the comments were repeated by the teachers on my request after the workshops for me to note down. I used data collected through ICT interactive workshop observations (field-notes) to improve the design of other methods I used in the study, such as interviews. Based on the observations of the discussions emerging from teachers’ participation in the workshop discussions, I selected 10 teacher-participants for the interviews.

Participant observations required me to be a subjective participant in the sense that I used knowledge gained through personal and informal interaction with the research participants during the ICT interactive workshops to interact with and gain further knowledge about their opinions, attitudes beliefs, etc. This factor supplied an aspect of information that is lacking in close-ended questionnaires. Merriam (2009) states, “Participant observation is a schizophrenic activity in that the researcher usually participates but not to the extent of becoming totally absorbed in the activity” (p. 126). Participant observations during the ICT interactive workshops were helpful in knowing the ICT barriers and needs of English teachers in Mumbai for instructional and professional development purposes and their
responses to education blogging. Also it helped in identifying the resources that could be used to excite and motivate teachers of English to practice ICT integrated teaching. The duration of the workshops was 45-60 minutes. The field-notes can be found in Appendix 6.

3.6.4 Questionnaires
After the ICT interactive workshops, all teacher-participants completed questionnaires. Questionnaire was imperative for establishing broader parameters to know the teachers’ ICT background. The questionnaire was used at this point of the research process to investigate the teachers’ ICT skills and attitudes towards integrating ICT in their teaching of English, and also the barriers that obstructed teachers from utilising the ICT resources for teaching and professional development. Also, responses to the questionnaire were later used in selecting teachers for the interviews.

The questionnaire was a mix of closed and open-ended questions. The closed-ended questions were added to know the teachers’ demographic information, ICT availability and accessibility in the school, teachers’ ICT knowledge and competency, teachers’ attitude towards ICT, factors discouraging the teachers to use ICT. Open-ended questions have an engaging feature and they persuaded genuine responses and two-way communication from the participants (Patton, 2002). Also the responses to open-ended questions could be thought of as a kind of written interview. The questionnaire had 27 closed-ended questions embedded in a series of Likert scale questions. Three open-ended questions were added to know the ICT attitudes, barriers and professional development needs of teachers. This design was beneficial as it means both quantitative and qualitative data could be obtained (Creswell, 2009, Johnson & Onwuegbuzie, 2004). The participants took 10-15 minutes to complete the questionnaire. The questionnaire can be found in Appendix 1.
3.6.5 Interviews

Interviewing is the primary means of collecting qualitative data for comprehending the phenomenon under scrutiny (Drew, Hardman & Hosp, 2008; Fontana & Frey, 2005). Cohen et al. (2007) point out that interviews provide opportunities for the researcher to investigate ideas and beliefs of participants further, and to obtain in-depth data on participant thoughts and actions, which may not have been achieved by other methods such as survey or observation (Gay & Airasian, 2009; Kendall, 2008); and they allow follow-up to incomplete or unclear responses through probing questions (Patton, 2002).

According to (Cohen et al., 2007), interviews can be very productive since the interviewer can pursue specific issues of concern that may lead to focussed and fruitful suggestions. The main advantages of interview method of data collection are (Fontana & Frey, 2005) that:

a) Direct contact with the participants usually leads to specific, useful ideas
b) They are helpful at obtaining comprehensive information
c) Few participants are required to get detailed data

Brown & Dowling (1998) advocate that interviews are useful research instruments to investigate how interviewees construe their world and make logic of their experiences, and therefore are regarded as a helpful method in understanding intricate and deep issues (Cohen et al., 2007). The interview method is frequently used for qualitative data collection because it permits a researcher access into the beliefs and attitudes of participants (Lichtman, 2006; Patton, 2002). Macintyre (2000) mentioned that “the interviewer is hoping to be able to give explanations of why people’s views are as they are…” (p.84). Interviews provide comments that offer different perspectives on the study topic and provide a complex picture of the situation (Creswell, 2009).
During the ICT interactive workshops, teachers shared that they often lacked time due to their hectic work schedule. Keeping in mind the time constraints faced by teachers in the study, I gave them two weeks after the workshops to become familiar with the blog. Two weeks after each ICT interactive workshops, I conducted face-to-face semi-structured interviews with ten teacher-participants to examine their ICT attitudes and experiences post workshop and blog usage. The interviews in this study were semi-structured. While a structured interview has a precise set of questions which does not permit one to sidetrack, a semi-structured interview is open, letting fresh ideas to unfold during the interview as a result of what the interviewee says (Cohen et al., 2007). The interview was moderately structured including some general pre-planned questions, with some emerging questions from the interviewees’ responses. Walsh (2001) concurs when he explains, “In these situations, the researcher has fewer predetermined questions and is more likely to let the interview develop as a ‘guided conversation’, according to the interests and wishes of the interviewee” (p. 65). May (2001) claims that this form of interview is considered the most appropriate communication method because it provides both some control and flexibility during discussion; which help to elicit valid responses from the interviewees. I asked the teacher participants about their post workshop ICT perceptions, experiences, barriers, level of blog use and suggestions. The interviews took about 15 minutes to complete and were audio recorded and transcribed. For the reassurance of the teacher-participants, all ten participants were allowed to read their interview transcripts after their interviews.

The purpose of implementing interviews in this study was to expand the data obtained through field notes and questionnaires, as well as to explore the reasons teachers proposed for their previous responses. A full list of some pre-planned interview questions can be found in Appendix 2.
3.6.6 Blog comments

My goals for establishing the blog-based version of teacher professional development were:

- To enable English teachers in India to gain experience and knowledge in blog-based professional learning
- To motivate the teachers to participate in the blog discussions
- To enhance the teachers’ ICT competencies
- To help the teachers to understand how to integrate ICT into a teaching environment
- To encourage teachers to take responsibility and control over their own learning experiences,
  and most importantly,
- To know whether blogs enable social learning and reflective dialogue among English teachers in Mumbai.

I created the blog to include ICT ideas, resources, external links, and importantly, a discussion environment with the aim to support reflective dialogue, interaction, and collaboration among teachers. Teachers’ participation in the blog was on a voluntary basis. The blog data was gathered using teachers’ comments on the blog from July 2014 and continued until February 2015. All the participants had an opportunity to use the blog (http://teachingenglishwithict.wordpress.com/) for collectively reflecting and sharing their ICT experiences. There were no particular tasks for teachers to complete on the blog – they were simply asked to use the blog voluntarily to write about ICT topics they wanted to share with others or to ask questions to others. Only I could add new blog posts to the blog. However, the teacher participants could post comments on the blog posts or embed links.

During the ICT interactive workshops for English teachers in Mumbai, I suggested to the teachers that they subscribe to the blog to receive regular updates. I also suggested to the teachers that they communicate with other members of the blog, exchange ICT ideas, post
ICT ideas queries, provide links to other web content, use the ICT resources on the blog for classroom teaching of English, and use the blog as an integrated part of their professional development in ICT. Teachers could also ask for ICT assistance/suggestion from me or from other teachers, and also share their own ideas with other members of the blog. Teachers’ individual and collaborative work was visible to all viewers as it was an open blog and membership was free. In addition, participants were continually informed about any new post by receiving e-mail notifications. Screenshots of some of the blog comments can be found in Figure 5.

3.7 DATA ANALYSIS STRATEGIES

3.7.1 Quantitative
Descriptive statistics (percentages, distribution frequencies and means) were used in summing and analysing all quantitative data of 32 questionnaires. According to Johnson and Christensen (2004), with the help of descriptive statistics, "the researcher can attempt to convey the essential characteristics of the data by arranging the data into a more interpretable form and by calculating numerical indexes such as averages and percentile ranks " (p.434). Teachers’ responses to 27 items were recorded using distribution frequencies and percentages. Moreover, descriptive quantitative data included tables, pie chart and bar graph.

3.7.2 Qualitative
ICT interactive workshop observations, open ended questionnaires, interviews and blog comments were analysed for emerging themes in a more interpretative way. I followed thematic analysis for qualitative data, the most common and relevant form of data analysis used in interpretive and qualitative research (Bain & McNaught, 2006; Boyatzis, 1998; Coffey & Atkinson, 1996). All potentials for interpretation were likely. Thematic Analysis allowed me to realize the centrality of the issue more extensively (Boyatzis, 1998).
With thematic content analysis, I identified patterns of meaning across my datasets that provided an answer to the research questions being addressed. Patterns were identified through a thorough process of familiarisation of data, coding, development of themes, and finally revision. The coding process is considered the heart of thematic analysis (Lichtman, 2006). Coding can be defined as “the process of organising the material into chunks or segments of text before bringing meaning to information” (Rossman & Rallis, 1998 as cited in Creswell, 2009, p.186). Sarantakos (2005, p.384) describes the levels of coding as: “phrase, number, line, sentence, paragraph, symbols, or whole document”. Johnson and Christensen (2004, p.502) state that “coding is the process of marking segments of data (usually text data) with symbols, descriptive words, or category names.”

I analysed ICT interactive workshop observations field notes, open-ended questionnaire responses, interview transcripts and blog comments to generate initial codes and search for recurring themes among codes with the help of qualitative software program, QSR NVivo. QSR NVivo is a program which is frequently used in qualitative analysis because of its efficacy in management of data (Lichtman, 2006). Patton (2002, p.442) states that computers and software are tools that assist analysis, “qualitative software programs facilitate data storage, coding, retrieval, comparing, and linking (themes) … speed up the processes of locating coded themes, grouping data together in categories, and comparing passages in transcripts or incidents from field notes.”

I examined key areas across my data sets associated to my research questions and coded the key area categories as A, B, C and D. I also identified similar/singular/varied patterns (themes/sub-categories) related to the key areas and coded them as A1, A2, B1, B2, C1, C2, D1, D2 and so on for the thematic analysis and coding of my qualitative data. I noted the themes with a view to identifying connections between them that may be in the form of
singularities, similarities and variations. Themes generated from the ICT interactive workshop observations field-notes and questionnaires were compared and combined with themes from the interviews and blog comments. Research findings were then analysed based on these combined themes (sub-categories) under their respective key areas (key categories). Moreover, authentic excerpts were extracted from the qualitative data. Throughout this process, extensive data coding occurred to discern patterns and themes (Fontana & Frey, 2005). At the end of the coding process, key areas (categories) and themes (codes/sub-categories) were identified for analysis. When the major themes emerged as the main points of the investigation, they were then written up as part of the research findings. Finally, the codes were categorised to create a hierarchy of concepts or themes. Themes were refined in reference to the literature and validated through discussion and consultation with my supervisors. The main themes and categories that emerged from thematic analysis are analysed in chapter four and discussed in chapter five.

3.8 ETHICAL CONSIDERATIONS

Creswell (2009) stated that the researcher has an obligation to respect the rights, needs, values and desires of the informants. No major ethical issue, harm, risk, or possible hurt was anticipated from my proposed study. Moreover, before initiating the data-collection process, an ethics application was submitted to the RMIT Human Research Ethics Committee (HREC) and approval was taken for research. Written consent for participation was taken from all the teacher-participants. Prior to commencing any data collection, I submitted plain language statements to all the participating teachers and obtained informed consent from them. As an act of courtesy, I had taken a verbal consent for data collection from the principals and vice-principals of all the three schools. Since the participants were private school teachers, consent from India’s, and more specifically, Mumbai’s education board or committee was not
required. Moreover, I assured my participants that the finding of my research would not affect their employment as any information they give would be solely used for the research purposes and would NOT be disclosed to their employer (school). Also participation by teachers was completely voluntary and not related to their work duties. Before data collection, I asked participants’ permission for audio recording (during interviews) and participant observations (during ICT interactive workshops). No reference to participants was made within the final report. Pseudonyms were used to maintain the participants’ confidentiality. I also employed security measures to transport the research data back to Melbourne from Mumbai. All data was preserved and secured according to RMIT University guidelines and requirements.

3.9 CHAPTER SUMMARY
This chapter has discussed the methodological framework chosen for this study including the rationale for the implementation of the methodology. The research design for this study is a descriptive and interpretive case study. Questionnaires were used to evaluate their skills, attitudes, barriers and needs at the start of the case study. ICT interactive workshop observations, face-to-face interviews, questionnaires and blog-posts were used as qualitative data collection methods. A descriptive statistical method was used to analyze the quantitative data of the questionnaire. The chapter closes with the framework for data analysis and development of the study, and a discussion on the ethical considerations for this study. Having explained how this research was designed, the next chapter reports the findings and data analysis.
CHAPTER 4
FINDINGS AND ANALYSIS

4.1 OVERVIEW
The introduction chapter and literature review chapter revealed that although English is the lingua franca of day-to-day living in India, change and improvement in the instructional and professional development practices of teachers is nonetheless at the initial stage. As outlined in the previous chapter; the ICT attitudes, ICT barriers, professional development needs, and the prospects of blog-based professional development of 32 English teachers in three schools of Mumbai were investigated. This chapter presents and analyses the findings of this study.

First, it looks at the factors that affect teachers' commitment and motivation to change their professional development and ICT mediated teaching practice: it examines the potential of online learning through blog-based collaboration and active professional discourse for effective integration of ICT in teaching of English in Mumbai schools. The factors were investigated and analysed using an interpretive approach; descriptive statistics, open coding and thematic analysis. In an effort to investigate the effectiveness of breakthrough alternatives of professional development in Mumbai, particularly in the area of the English teaching population, a blog-based model of professional development was adopted.

4.2 DEMOGRAPHIC BACKGROUND
This section brings together teachers’ background characteristics such as gender, age, educational level, and teaching experience. However, the demographic background details of the teachers were not statistically significant to the study, and were just to obtain contextual information about the participants rather than investigate whether these characteristics could influence teachers’ ICT readiness and adoption of ICT in teaching.
4.2.1 Gender
All the participants (32 English teachers) were females and represent 100% of the research sample. This is representative of the general gender demographics of teachers of English across all of Mumbai. Female teachers overwhelmingly dominate the primary and secondary school education in India.

4.2.2 Age
56.3% of teachers participating in this study were in their 30s, while 34.4% and 9.3% were in their 20s and 40s respectively. See Figure 2.

![Figure 2. Teachers’ age](image)

4.2.3 Educational qualifications
Majority of the participants (24 teachers) were graduates. Only eight teachers (25%) had post-graduate qualifications. See figure 3.
4.2.4 Teaching experience

Figure 4 indicates that out of 32 teachers who participated in the study, 26 teachers (81%) had less than 10 years of teaching experience, while only 6 teachers (19%) had more than 10 years of teaching experience.

4.3 ICT FAMILIARITY, KNOWLEDGE AND COMPETENCY

Teachers in this study had used ICT tools in teaching and some had handled a wide range of varying ICT applications for teaching purposes. Teachers answered whether they had used
any of the following seven ICT tools in teaching of English; namely audio speakers, voice recorder, LCD projector, laptop, interactive whiteboard, mobile phone, tablet, as shown in Table 1. The findings indicate a gap in teachers’ advanced ICT knowledge and skills. I found that 81.2% of teachers had used audio speakers in teaching of English. The majority (78.1% & 71.9%) had used laptop and LCD projector respectively, whereas only 18.8% had used voice recorder for instructional purpose.

<table>
<thead>
<tr>
<th>ICT Tools</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio speakers</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>81.2%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Voice recorder</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>18.8%</td>
<td>81.2%</td>
</tr>
<tr>
<td>LCD projector</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>71.9%</td>
<td>28.1%</td>
</tr>
<tr>
<td>Laptop</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>78.1%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Interactive</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>whiteboard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31.3%</td>
<td>68.7%</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>40.6%</td>
<td>59.4%</td>
</tr>
<tr>
<td>Tablet</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>9.4%</td>
<td>90.6%</td>
</tr>
</tbody>
</table>

**Table 1. Teachers’ Familiarity with ICT Tools**

Although all three participating schools had interactive whiteboards installed in every classroom, only 31.3% of teachers had used interactive whiteboards in teaching. This means that although all 32 teachers had access to IWB technology in their classrooms, 22 teachers had never used IWB for teaching purposes. Overall, according to the results, all the participating teachers were familiar in general about using technology in teaching. However, less than half (40.6%) had used mobile phones for instructional purposes, and very few teachers (9.4%) had experience of using tablets for classroom teaching of English. During the interviews, it was discovered that most teachers were familiar with tablets and used them in their personal lives but restricted using them for instructional purposes as their schools
prohibited the use of mobile phones and/or Internet in teaching. One teacher shared the same issue during her interview:

*My favourite ICT tool is mobile phone as it is quick and handy. But unfortunately last year our school banned the use of cell phones by students and teachers in the classroom.* [Interview 1: Sarika]

Furthermore, three responses from interviews indicate that when teachers wanted to integrate ICT in teaching of English, they relied on PowerPoint presentations. The following quotes illustrate:

*I have incorporated technology by way of PowerPoint presentations.* [Interview 2: Dipika]

*In our school we have taught students through PowerPoint and CDs and other things. The main thing is PPTs that we make in schools.* [Interview 3: Alisha]

*We can also insert videos in PowerPoint presentations and make the lessons more interesting and effective.* [Interview 4: Vimi]

Teacher Alisha’s comment that in her school, apart from PowerPoint and CDs, she had taught students through ‘other things’ gives an impression of her lack of ICT knowledge and skills beyond PowerPoint and CDs, as she did not elaborate what she meant by ‘other things’ and instead goes back to PowerPoint by stressing that the main technology tool that the teachers in her school used for teaching was PowerPoint.

The ways in which they used ICT in their teaching was limited to a narrow range of ICT tools and resources (mostly PowerPoint presentations). However, teachers perceived themselves as competent in ICT, although they responded more enthusiastically, confidently and favourably towards basic ICT competencies rather than advanced ICT competencies. Overall, the results obtained show that teachers had used ICT in some form for teaching of English.
With regard to teachers’ ICT knowledge and familiarity, the results in Table 2 indicate that only 21.9% of teachers confirmed that they have received sufficient ICT training during pre-service teacher education program. This suggests a low level of emphasis placed on developing the ICT knowledge and competency of the teachers in the present study during their initial teacher training. In contrast, 40.6% of teachers were positive that their school conducted regular ICT training sessions for in-service English teachers. Moreover, while 65.5% of teachers acknowledged their use of ICT for formative and summative assessment and to provide students with feedback on progress, only 21.9% of English teachers prepared lessons with a basic reference to ICT integration.

<table>
<thead>
<tr>
<th>Teacher’s ICT Knowledge &amp; Competency</th>
<th>SD %</th>
<th>D %</th>
<th>N %</th>
<th>A %</th>
<th>SA %</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have received sufficient ICT training during pre-service teacher education program</td>
<td>11</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>34.3%</td>
<td>25.0%</td>
<td>18.8%</td>
<td>18.8%</td>
<td>3.1%</td>
</tr>
<tr>
<td>My school conducts regular ICT training sessions for in-service teachers of English</td>
<td>1</td>
<td>11</td>
<td>7</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3.1%</td>
<td>34.4%</td>
<td>21.9</td>
<td>37.5%</td>
<td>3.1%</td>
</tr>
<tr>
<td>I use ICT for formative &amp; summative assessment and to provide students with feedback on progress</td>
<td>-</td>
<td>6</td>
<td>5</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18.8%</td>
<td>15.7%</td>
<td>43.7%</td>
<td>21.8%</td>
</tr>
<tr>
<td>I prepare lesson plans with a basic reference to ICT practice</td>
<td>6</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>18.8%</td>
<td>37.5%</td>
<td>21.8%</td>
<td>18.8%</td>
<td>3.1%</td>
</tr>
<tr>
<td>I find it easy to select appropriate ICT resources for my teaching</td>
<td>10</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>31.2</td>
<td>28.1%</td>
<td>18.8%</td>
<td>18.8%</td>
<td>3.1%</td>
</tr>
<tr>
<td>I use ICT for communication and collaboration with other teachers of English</td>
<td>6</td>
<td>13</td>
<td>7</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>18.8%</td>
<td>40.6%</td>
<td>21.8%</td>
<td>18.8%</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2. Frequencies and Percentages of Teachers’ ICT Knowledge and Competency

This disparity between ICT training and ICT integration is clearly evident as although 40.6% of teachers confirmed that their school conducted regular ICT training for in-service teachers, this did not confirm the teachers’ effective application of ICT for instruction: 56.3% of teachers did not use ICT for teaching purposes. Moreover, 59.3% of respondents did not find
it easy to select appropriate ICT resources for teaching. Interestingly, during the ICT interactive workshops sessions, few teachers referred to harnessing ICT to transform their learning. For instance, when asked during the ICT interactive workshops, no teacher made a reference to Web 2.0 teaching-learning experiences with other English teachers. No teachers referred to using the web to assist each other in developing their ICT familiarity, knowledge and competency. In fact, a majority of teachers (59.4%) did not use ICT for communication and collaboration with other English teachers.

This shows that although teachers perceived themselves to be competent in ICT, most teachers used it in the educational processes other than teaching and professional learning, and disregarded its integration in the same. There are strong contradictions in the findings of this section of the questionnaire where although the school conducted regular ICT training sessions for their in-service teachers, the teachers did not prepare lessons with basic reference to ICT practice. And although teachers used ICT for formative and summative assessment and to provide students with feedback on progress, they did not use ICT for communication and collaboration with other English teachers.

4.4 Key themes

The four key areas and associated twelve themes that emerged from the thematic analysis and coding of responses to ICT interactive workshop observations, questionnaires, interviews and blog comments are tabulated in Table 3. I classified the four key areas (categories) into twelve themes (sub-categories) for further consideration. All four key areas and twelve themes are elaborated in this chapter.
### DATA EXCERPT

<table>
<thead>
<tr>
<th>A1. We have yearly workshops in the school on basic ICT skills for new teachers but it is not very useful for English teachers due to general training.</th>
<th>A. Professional development practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2. As a pre service teacher, I got familiar with educational technology, but didn’t know how to link it to my practice teaching sessions.</td>
<td>A2. Lack of ICT focus in initial teacher training.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B1. The school’s computer lab is always booked for lessons. There is no Internet access in the staff room.</th>
<th>B. ICT barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2. I don’t have much time left after class because of lesson planning, teacher meetings, students’ extra-curricular activities. There is a lot of workload on me. I don’t have time to prepare or search ICT resources for teaching English.</td>
<td>B1. Inappropriate/inadequate ICT infrastructure.</td>
</tr>
<tr>
<td>B3. I feel that ICT has made English teaching more enjoyable therefore English learning more enjoyable in the process. Technology keeps my students focused so I guess they’d be learning more.</td>
<td>B2. Shortage of time.</td>
</tr>
<tr>
<td>B4. I think it [teaching] is all about teacher confidence in her teaching skills and technology is just a new-age trick.</td>
<td>B3. Perception of benefits.</td>
</tr>
<tr>
<td>B5. If my students see that I am not clued up as to how to operate a new application on the system, I feel embarrassed and the students lose confidence in me.</td>
<td>B4. Resistance to change.</td>
</tr>
<tr>
<td>B6. There is no teamwork among teachers to use technology. I always prepare my ICT resources on my own.</td>
<td>B5. ICT anxiety.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C1. School must build a virtual community of English teachers as learners. Subject teachers must often get together to discuss lesson plans and weekly planning. The same can be done to share English teaching resources.</th>
<th>C. Professional development needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2. For regular interaction of English teachers for planning, sharing ideas and resources, school should set up its discussion forum for subject teachers to share lesson plans and teaching resources.</td>
<td>C1. Teacher-centred professional development.</td>
</tr>
<tr>
<td></td>
<td>C2. School support and culture.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D1. You share your ideas with the one source and simultaneously with all the blog members. I think that’s really amazing. You just ask question everybody wants an answer for. And the answer to your query is the answer for everybody.</th>
<th>D. Prospects of blog-based professional development</th>
</tr>
</thead>
<tbody>
<tr>
<td>D2. I enjoyed your presentation very much last month and have already started to put into practice some of those ideas and some that I’ve found on your blog.</td>
<td>D1. Teacher perceptions about blogging for professional development.</td>
</tr>
<tr>
<td></td>
<td>D2. Teacher participation in the blog.</td>
</tr>
</tbody>
</table>

---

**Table 3. Participant Themes**

76
4.5 PROFESSIONAL DEVELOPMENT PRACTICES

4.5.1 Sole reliance on formal in-service ICT professional development

Even though teachers claimed that their schools conducted regular professional development programmes for them (as shown in Table 2), several issues regarding the effectiveness of such programmes were also raised in teachers’ qualitative responses. One of the most concerning issues highlighted was the negative perceptions amongst teachers who viewed professional development as series of activities that was detached from the actual classroom engagement often resulting to teachers feeling that their professional development experience was pointless. The following comment is representative of the teachers' view of the issue:

_The ICT workshops we attend at our school don’t give us adequate skills to enable English teachers to mix ICT in English teaching._ [Questionnaire: Jaya]

Teachers mentioned that the one-day, episodic professional development, mandated by their school, generally lacked teacher follow-ups and discussions following the training. They were satisfied neither with the ICT training conducted by their schools nor with external ICT workshops and conferences. Teachers were not consulted about their depth of ICT understanding, or their reflection on its impact on their classroom teaching and student learning outcomes. At times, teachers had to pay from their own pockets for training in the name of professional development qualifications upgrade. Teacher Rashmi echoed this frustration:

_We don’t get ICT trainings as such in our school. The only training they gave us was like a year ago and if the teacher wants more training she will have to spend from her own pocket. That is welcomed!_ [Interview 5: Rashmi]

Teachers also worked in isolation and it was common for them to have minimal interaction with their colleagues. Teacher Indira shared her individual learning experiences:
I make my own modules and feed it into the smart class system for other teachers’ use but I don’t know how much other teachers use it. I am never satisfied with what is available.... My school’s ICT training is usually a generalised training going by everybody’s capacity, so I go a little ahead to research and get a little more knowledge. [Interview 6: Indira]

Their professional development experiences came in the form of workshops and courses that were delivered by outside experts, and received by teachers in isolation, without teacher interaction and follow-up. The teachers commented on the often-frustrating nature and lack of helpfulness of most of the professional development they had received. For the most part, teachers were not consulted about what could be most helpful and their professional development workshops focused mainly on ICT hardware and operation and were often led by people who had limited understanding of the English subject and the pedagogical implications of ICT in teaching of English. As teachers were not usually consulted for their professional development needs, they often perceived their professional development experience to be extraneous to the improvement of their teaching practice. This in turn made it difficult for the teachers to incorporate the knowledge and skills gained from the professional development experience into their practice. The following comment is a representative of the teachers' view of the issue:

I have limited ICT knowledge. We have yearly workshops in the school on basic ICT skills for new teachers but it is not very useful for English teachers due to general training. [Questionnaire: Fatima]

Teachers demanded that they did not just need ICT support in the form of workshops, but instead they needed access to mutual support and collaboration throughout their careers as they tried to integrate technology into their teaching.
English activities can be quickly prepared using ICT when English teachers work together as a team. But sadly that’s not happening in my school. [Questionnaire: Varsha]

Teachers accepted that they were expected to use innovative methods in teaching and also acknowledged that the inclusion of ICT could help them in achieving this ‘dynamism’. Teacher Vimi explained:

I think the teacher today has to meet the challenges of the modern society and he or she is expected to use modern technology to maintain her dynamism in her teaching. Teachers should always keep updating their knowledge and skill. [Interview 4: Vimi]

One teacher acknowledged that ICT must be used on a daily basis by teachers and should be a part of everyday teaching. However, she shared that other subject teachers of her school were more computer savvy and used technology in the class. There was a misconception among some English teachers who viewed technology as a tool useful only for teachers of Math, Science and Geography. She also suggested that ICT cannot be practiced in isolation and must be a joint effort of all the subject teachers, more importantly English teachers.

ICT has to be something that just becomes a part of what we all teachers do on a daily basis. But only Math, Science and Geography teachers of my school who are computer savvy use technology in the class. ICT has to be a joint effort of the school and all the subject teachers. [Questionnaire: Fatima]

One teacher’s response about training in relation to their professional development in ICT pointed to the limitations of traditional approaches that they had practiced till now, and in particular, focused on change in professional development strategies for subject teachers.

......nowadays it is the trend of online learning, self learning and e-learning also. I don’t really think we should totally rely on traditional training anymore. [Interview 7: Kaplana]
Driven by the need to create relevant and exciting teaching experiences, the teachers were very interested in including ICT in their classroom. Moreover, appropriate professional development was a growing need stated by teachers as they found short-term workshops and teacher preparation during the course of one year not sufficient for better and effective ICT integration in teaching. Teachers also acknowledged that collaborative and innovative blog-based experiences could provide them with relevant knowledge, skills, and greater confidence to teach with ICT.

4.5.2 Lack of ICT focus in initial teacher training

Teachers brought up the issue of the lack of ICT focus in teacher education as an obstacle for them to incorporate the ICT tools in the classrooms. Many teachers received a formal one-off ICT training during their teacher education; they did not receive an in-depth and subject-specific pedagogical ICT training at the teachers’ training colleges or universities where they were trained, and therefore, they did not get opportunities to understand the significant roles of the ICT tools pertaining to their subjects.

The data collected from ICT interactive workshop observations, questionnaires and interviews show that the teachers had not experienced a comprehensive training program during initial teacher training that aimed at both the technical and pedagogical skills needed to enable the appropriate use of ICT tools in teaching. The focus was on merely teaching ICT, and not on pedagogy that is adaptable to change. The disconnection between training in technical skills and training in pedagogical skills of utilising technology in teaching was obvious in making the ICT training during teacher education outdated and ineffective. Teachers admitted that although they had good ICT skills in terms of their own personal use, they were not open or comfortable to changing their pedagogical practices and were therefore
unable to transfer these skills to using ICT in the classroom. This is evident in Bindiya’s statement:

As a pre service teacher, I got familiar with educational technology, but didn’t know how to link it to my practice teaching sessions. [Questionnaire: Bindiya]

In addition, after receiving training in ICT at their school, the teachers were still not able to make full use of that training as the skills they had been taught were not enough for them to integrate ICT in the subject of English. Teachers disclosed that they lacked proper guidance and practical models of ICT integration during practice teaching, leading to a disparity between their expectations of ICT use and their actual use. Teachers suggested:

The use of ICT training would become better if it is used in classrooms right from B.Ed. teaching practicum. [Questionnaire: Beena]

Technology should be a mandatory addition to B.Ed. practice teaching so that teachers have a first-hand experience of technology in use. This will in turn influence the way they use technology when they become in-service teachers. [Questionnaire: Sarika]

Pre service teachers must be exposed to ways in which technology can be used right from teacher training practicum. [Questionnaire: Bindiya]

Teacher Tara pointed out that emphasis of ICT use by student-teachers during practice teaching could prepare future teachers to be regular users of ICT for instruction:

In my opinion, emphasis on ICT use during practice teaching can be a good encouragement and could improve future teacher’s ICT outlook and skills. [Questionnaire: Tara]
Moreover, the teachers did not take any initiative to collaboratively learn and improve their ICT competence due to less emphasis given on online networking during teaching practicum. One teacher particularly emphasised the use of blog-based ICT training and asynchronous online networking during teacher education.

*I wish we had something like blogs or online communication compulsorily practiced right from B.Ed days. At least it would have saved a lot of our energy and time in preparing lesson plans for every practice teaching lesson during that super squeezed session. We would have been saner then.* [ICT Interactive Workshop: Sarika]

All in all, teachers stressed that a lack of encouragement to use ICT during teaching practice and in schools worsened the lack of their ICT integration; for new teachers as much as experienced ones, integration required both access to ICT in the classroom and the motivation to use it right from initial teacher training.

**4.5 ICT BARRIERS**

**4.5.3 Inappropriate/inadequate ICT infrastructure**

Technology seemed in place at all the three participating schools. As illustrated in Table 4, teachers responded to ICT availability and accessibility in their schools. Findings reveal that 43.7% of teachers agreed that computers were available in every classroom of their school. Although computer availability did not assure Internet access in the classroom; as only 25% of teachers reported that computers were connected to the Internet in every classroom of their school. Possibly, this lack of Internet in the classroom affected teachers’ use of online technologies for teaching and compelled teachers to rely on offline ICT tools such as PowerPoint, as stated earlier. Moreover, apart from the classroom, only 50% of teachers could easily access computers and Internet, even though 62.5% of teachers had enough
computers in their school. There was a gap in computer availability (as claimed positive by 62.5% of teachers) and accessibility (as claimed negative by 50% of teachers) in the schools.

<table>
<thead>
<tr>
<th>ICT Availability &amp; Accessibility in the School</th>
<th>SD %</th>
<th>D %</th>
<th>N %</th>
<th>A %</th>
<th>SA %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computers are available in every classroom of my school</td>
<td>1 3.1%</td>
<td>6 18.8%</td>
<td>5 15.6%</td>
<td>14 43.7%</td>
<td>6 18.8%</td>
</tr>
<tr>
<td>Computers are connected to the Internet in every classroom in my school</td>
<td>5 15.6%</td>
<td>10 31.3%</td>
<td>9 28.1%</td>
<td>7 21.9%</td>
<td>1 3.1%</td>
</tr>
<tr>
<td>Teachers can access computers and Internet easily in my school</td>
<td>1 3.1%</td>
<td>8 25.0%</td>
<td>7 21.9%</td>
<td>11 34.4%</td>
<td>5 15.6%</td>
</tr>
<tr>
<td>There are enough computers for teachers to use in the school</td>
<td>1 3.1%</td>
<td>5 15.6%</td>
<td>6 18.8%</td>
<td>15 46.9%</td>
<td>5 15.6%</td>
</tr>
<tr>
<td>I can easily find technical support when using ICT in the classroom</td>
<td>5 15.6%</td>
<td>3 9.4%</td>
<td>11 34.4%</td>
<td>12 37.5%</td>
<td>1 3.1%</td>
</tr>
<tr>
<td>My school computer is regularly updated with software and applications</td>
<td>4 12.5%</td>
<td>3 9.4%</td>
<td>8 25.0%</td>
<td>15 46.9%</td>
<td>2 6.2%</td>
</tr>
</tbody>
</table>

Table 4. Frequencies and Percentages of ICT Availability & Accessibility in the School

Teacher Sonal’s comment sheds light on the cause of this gap. Effectively introducing technology into schools was also largely dependent upon both availability and accessibility of ICT resources (e.g. hardware, software and communications infrastructure). Evidently if technology could not be accessed by the teacher, then it may not be used.

_The school’s computer lab is always booked for lessons. There is no Internet access in the staff room. And I don’t have much time left to use the lab after the lessons._

[Questionnaire: Sonal]

Most participants were very vocal in voicing the infrastructural obstacles they faced on a daily basis in integrating ICT for teaching. Some teachers referred to a lack of resources physically available at the school, while others referred to outdated resources that were available. In some cases, teachers at schools with well updated resources were still experiencing problems in applying the technology, as a result of the organisation of those resources and lack of proper training.
We have LCD projectors, laptops, and audio-video recorders in our school but most of us don’t use them since we have not received sufficient training about how to use it in the teaching of English. [Questionnaire: Sarika]

One teacher confessed that although she and her students enjoyed ICT in her English class, insufficient, outdated and sometimes faulty digital tools were time wasters, and discouraged her to practice ICT mediated teaching in the classroom. This directs attention to lack of technical support for teachers.

My students and I enjoy using computers and other digital tools in English class, but the available digital tools are not sufficient to meet both teaching and learning needs. The technology is sometimes faulty and I waste time trying to get a computer to work or finding that it requires time consuming updates. [Questionnaire: Rashmi]

ICT support in schools influenced teachers to apply ICT in teaching, without wasting time troubleshooting hardware and software problems. But several teachers shared that the breakdown of a computer caused interruptions, and if there was lack of technical assistance, then it was likely that they would not use ICT in teaching. Also, the teachers were uncomfortable about using ICT because of fear of equipment failure, since no one would give them technical support in case there was a technical problem. Therefore, if there was no technical support for teachers, they became anxious or frustrated resulting in their unwillingness to use ICT. 40.6% of teachers expressed a lack of technical support in their school when they used ICT in their classroom for teaching. Also, 53.1% of teachers observed that their school computer was not regularly updated with software and applications. Teacher Kalpana noted:

Sometimes when the computer is not compatible with the teaching resources I downloaded at home, it doesn’t work and takes away a lot of my class time. [Questionnaire: Kalpana]
A critical issue related to technical support pertained to the school culture and administrative attitude towards adequate technical staffing. If the school underestimated or exploited the technical expertise, this lowered the teachers’ enthusiasm and interest for ICT.

The ICT co-ordinator in my school is also my schools’ ICT teacher. When I have a technical issue, I just don’t know what to do. Generally he is unavailable. I don’t blame him. But my school needs an ICT team if my school wants teachers to use ICT. [Questionnaire: Mukta]

One teacher especially highlighted the need for teachers to have better access to ICT for their own use, such as for the planning and preparation of lessons.

I don’t have a computer at home. And the school’s computer lab is always booked for lessons. There is no Internet access in the staff room. And I don’t have much time left to use the lab after the lessons Teachers who have computer and Internet access at home make more use of ICT. Sharing of computer during schools hours is least convenient. Teachers who don’t have a computer at home must be permitted by the school management to take home the school laptop. [Questionnaire: Sonal]

An important point highlighted by Sonal’s comment was lack of ICT access due to improper distribution of ICT resources in the school: the computer lab was always booked for lessons and there was no Internet in the staff room, easily discouraging the teacher not to use ICT in teaching.

4.5.4 Shortage of time
A dominant theme throughout the findings was the issue of time. Please refer to Table 5. The time needed to learn using ICT was the biggest factor discouraging teachers to use ICT with the highest response of 53.1%. Teachers explained that they did not have sufficient time to incorporate ICT onto their daily classroom instruction as they needed hours to check relevant
web sites, prepare ICT materials for lessons, much before the teaching session. Teachers pointed out that a great deal of work was required in preparing accurate ICT materials, and lack of time restricted them from exploring materials for potential use with ICT. Many teachers admitted that their workloads influenced their acceptance of ICT in classrooms. One teacher said:

*I don’t have much time left after class because of lesson planning, teacher meetings, students’ extra-curricular activities. There is a lot of workload on me. I don’t have time to prepare or search ICT resources for teaching English.* [Questionnaire: Chetana]

Some teachers did not wish to integrate ICT into English lessons because of their focus on examinations and syllabus completion. They also revealed that it was difficult to integrate ICT in the classes which consisted of large number of students. Moreover, teachers were burdened throughout the year with students’ assessments, markings, evaluations, school events and extra-curricular activities. Teachers also had out-of-school teaching workload. A comment from one of the teachers supports this barrier:

*As a teacher, I have so much to do, even after school hours; something additional is possible only when all work together, not alone.* [ICT Interactive Workshop: Dipika]

Furthermore, some teachers did part-time private tuitions and so even when ICT workshops were organised externally by their school, they never attended. One teacher explained:

*It seems impractical and impossible to me. I can’t rely on the salary I get for being a teacher, so I have another job after school hours to be able to support my family. Even if I want to learn something new to improve my teaching or share ideas with other teachers online, I can’t. I just don’t have time. Although I wish I could.* [ICT Interactive Workshop: Nisha]
Pre-teaching activities like planning and preparing ICT related lessons were all quite time consuming. Teachers also needed time for troubleshooting technical glitches in the classroom. Lessons that integrate ICT were a time consuming activity from the teachers’ perspective and mentioned by teachers on several occasions of data collection:

*English lessons with the use of technology require too much time. I need to find materials, websites, check whether they are relevant and all this by my own. I can’t just prepare them like that. I need at least 1-2 days and I have time only on a Sunday which I want to keep for my family.* [Questionnaire: Varsha]

Teachers ICT usage was also influenced by the exam-oriented and result-oriented school culture where syllabus completion was the teachers’ first priority.

*......adding more activities or spending extra time on ICT teaching resources will sidetrack me from the primary purpose which is completing the syllabus before the end of the school.* [Questionnaire: Hansa]

One teacher was of the opinion that in comparison to teachers of other disciplines, she had more work and less time. This is why even though she accepted that ICT is effective, she considered it time consuming and unnecessary.

*ICT is a time consuming activity. English teachers have more work to do than other subject teachers. I agree that it is effective, but it is not necessary.* [Questionnaire: Nisha]

In addition to the lack of time for preparation and training, there was the lack of time in the classroom. In Mumbai, each class lasts for 40 minutes only. Thus, when there was a lot to cover in that period, some teachers could be less likely to use technology where they believed it wasted time. 34.4% of teachers lamented that shortage of class time was also a barrier in ICT integrated teaching. In this context, ICT-use became an extra burden for those teachers
who just wanted to finish the textbook on schedule for school exams. Even teachers who were eager to use ICT in their classes preferred to use simple devices/applications that did not take a great deal of class time.

<table>
<thead>
<tr>
<th>Factors Discouraging the Teacher to Use ICT</th>
<th>SD %</th>
<th>D %</th>
<th>N %</th>
<th>A %</th>
<th>SA %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleagues’ negative views about ICT hinder me to use ICT in the class</td>
<td>3</td>
<td>9.4%</td>
<td>10</td>
<td>31.3%</td>
<td>2</td>
</tr>
<tr>
<td>School views about ICT discourage me to use ICT</td>
<td>2</td>
<td>6.2%</td>
<td>6</td>
<td>18.8%</td>
<td>9</td>
</tr>
<tr>
<td>Society views about ICT hinder me to use ICT</td>
<td>14</td>
<td>43.8%</td>
<td>8</td>
<td>25.0%</td>
<td>3</td>
</tr>
<tr>
<td>Shortage of class time hinders me to use ICT</td>
<td>8</td>
<td>25.0%</td>
<td>8</td>
<td>25.0%</td>
<td>5</td>
</tr>
<tr>
<td>Time needed to learn using ICT prevents me to use ICT</td>
<td>5</td>
<td>15.6%</td>
<td>7</td>
<td>21.9%</td>
<td>3</td>
</tr>
<tr>
<td>ICT distracts my students from the subject material.</td>
<td>11</td>
<td>34.4%</td>
<td>11</td>
<td>34.4%</td>
<td>4</td>
</tr>
<tr>
<td>Systems are slow; it would be quicker to use a book</td>
<td>9</td>
<td>28.1%</td>
<td>11</td>
<td>34.4%</td>
<td>7</td>
</tr>
<tr>
<td>Requirements of qualifications discourage me to use ICT</td>
<td>10</td>
<td>31.3%</td>
<td>8</td>
<td>25.0%</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 5. Frequencies and Percentages of Factors Discouraging the Teachers to Use ICT

Slow systems (15.6% of teachers) and requirement of qualifications (21.8% of teachers) were minor factors that discouraged English teachers to use ICT. Even after facing several obstacles in the integration of ICT, findings also indicate that most teachers (68.8% of teachers) did not consider that ICT distracted their students from the subject material.

During the ICT interactive workshops, teachers said that after spending most of their day teaching, and with other commitments such as attending staff meetings and parents-teachers association meetings, they had precious little spare time. Moreover, some teachers also gave private tuition during out-of-school hours. By and large, teachers responded that they required time and new opportunities to assimilate ICT changes into their pedagogical strategies and to become confident in their delivery.
4.5.5 Perception of benefits

The teachers’ perceptions about the relevance of ICT to their subject and the benefits of ICT integration in teaching-learning magnified or reduced the effect of practical difficulties they encountered. Although many teachers in this study had the ICT equipment to integrate ICT into teaching and learning activities, their perception of the benefits that ICT could foster for them and their students, determined the effectiveness of the technology, and not by its utter presence in the classroom. Generally, teachers’ attitudes towards ICT integrated teaching were positive.

<table>
<thead>
<tr>
<th>Teacher’s Attitude Towards ICT</th>
<th>SD %</th>
<th>D %</th>
<th>N %</th>
<th>A %</th>
<th>SA %</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT has improved the presentation of my teaching material</td>
<td>-</td>
<td>2</td>
<td>6</td>
<td>18</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18.8</td>
<td>53.1</td>
<td>21.9</td>
<td></td>
</tr>
<tr>
<td>ICT makes English lessons more fun for my students</td>
<td>-</td>
<td>3</td>
<td>3</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.4</td>
<td>9.4</td>
<td>40.6</td>
<td>40.6</td>
</tr>
<tr>
<td>The use of ICT in teaching and learning excites me</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>3.1%</td>
<td>9.4</td>
<td>12</td>
<td>50</td>
<td>25.0</td>
</tr>
<tr>
<td>ICT knowledge leads to my professional development</td>
<td>-</td>
<td>1</td>
<td>6</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td></td>
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Table 6. Frequencies and Percentages of Teachers’ Attitude Towards ICT

Most of the items in Table 6 were agreed by teachers concerning their attitudes towards ICT. 53.1% of teachers agreed that ICT had improved the presentation of their teaching material. The majority of teachers (81.2%) confirmed that ICT made English lessons more fun for their students. A large number of teachers, that is, 75.1% stated that the use of ICT in teaching and learning excited them. Moreover, 78.1% believed that ICT knowledge led to their professional development, 71.9% of teachers considered that ICT gave them more confidence as an English teacher, and 53.1% of teachers strongly agreed that they were interested in
learning more about using ICT. However, majority (75%) of teachers confirmed that they found using ICT time consuming. The teachers expressed that they need to spend more time in getting prepared to use the ICT as they were not well equipped with the knowledge and skills required.

Overall, teachers regarded that ICT is an important and useful tool to help them convey or present their teaching interestingly, as their students looked forward to classes conducted with ICT as compared to traditional and conventional method of teaching. Teacher feedback and consent was identified as a major ingredient of successful professional development initiatives, as it helped them to make sense of their newly developed skills in light of their own needs and practices in classrooms. They acknowledged that ICT was effective and useful in teaching of English and had a positive impact on their students’ learning. Open-ended questions in the questionnaires revealed that teachers perceived the integration of ICT as a necessary and effective part of their pedagogy. The following selected quotations are representative of the view expressed:

*Teaching is effective with ICT. I spend less time on my preparation for English lessons. I am not saying that ICT is the answer to all teaching and learning but I would rather prefer to make use of one than not.* [Questionnaire: Vimi]

*I think that the choice of technology adds a great deal to my teaching of English, adds to my students’ motivation for learning and often helps me in presenting a topic in an exciting and new way.* [Questionnaire: Dipika]

Another important theme emerging through the open-ended questions was the relative advantages of integration of ICT for better student attention and concentration. Many teachers stated that using a variety of ICT materials, methods and equipment in the classroom helped them to attract and maintain students’ attention and concentration. The following comments echo the teachers’ perceived benefits:
Blending technology with English improves students’ interest. ICT has made it simple for English learners to concentrate because the content can be taught in many ways. [Questionnaire: Indira]

I feel that ICT has made English teaching more enjoyable therefore English learning more enjoyable in the process. Technology keeps my students focused so I guess they’d be learning more. [Questionnaire: Sunita]

By including an ICT dimension to their lessons, I have the chance to engage more students and guide a more involved and energetic class. [Questionnaire: Rashmi]

Teachers’ use of ICT can be influenced by the views of their colleagues, school, and society. Table 5 shows that 53.1% of teachers believed their colleagues’ negative views about ICT hindered their use of ICT in the classroom. 46.9% of teachers admitted that their school views about ICT discouraged them to use ICT in teaching. If teachers saw no need to question or change their professional practice, then they were unlikely to make use of ICT. Overall, teachers who did not realise the advantages of using ICT in their teaching were less likely to make use of ICT. But teachers’ positive perception of ICT did not assure its effective integration in the classroom. To sum up, teachers ICT perceptions differed substantially on whether they felt ICT made their jobs easier or added to their workloads.

4.5.6 Resistance to change
Information obtained from teachers during the ICT interactive workshops revealed that the teachers who were used to the traditional textbook teaching method did not desire to use ICT tools in their lessons, and more specifically, for their professional development. While very few teachers explicitly expressed beliefs that ICT was at odds with their beliefs and values regarding teaching of English itself, there were fixed mindsets exhibited by a number of the teachers during the workshop; even among those who actively embraced ICT. Moreover,
some teachers defended themselves as too experienced to adapt to the new ICT tools and did not want to accept the ICT methods of teaching. Those teachers did not regard themselves fully-equipped, comfortable or efficient in using ICT as they felt more confident with their traditional teaching styles. Teacher Pratibha discussed the importance of traditional mediums and the conventional nature of English.

*I think it [teaching] is all about teacher confidence in her teaching skills and technology is just a new-age trick.* [Questionnaire: Pratibha]

She was the most vocal in expressing her belief that ICT was not a tool for teaching and that teaching of English did not require any new skills. She expressed her view that ICT was really overrated. Teacher Pratibha further explained that she was very comfortable with her style of teaching, and although this could have kept her from adopting the best teaching methods, she did not accept it, and rather defended her views with confidence. The following comment supported this barrier:

*In my opinion, it is not essential to use ICT as an English teaching tool. Two years back I gave all my English lessons during the B.Ed. practice teaching without the use of ICT and got a distinction for my performance. Also my work as an in-service English teacher is appreciated and my students score well in English.* [Questionnaire: Pratibha]

A majority of teachers perceived ICT to offer advantages to classroom teaching and learning; but some of the teachers struggled to see specific benefits and methods for use, and believed that ICT is ineffective in teaching of English or ICT does not have positive impact on their students’ learning. Responses confirming this negative attitude and resistance to change are as follows:
It [ICT] is useful sometimes, especially to break the repetitiveness in teaching and learning of English grammar. Use of ICT once in a while is alright. [Questionnaire: Kalpana]

ICT is helpful to an extent, but it does not excite every type of learner and not relevant to every unit in the syllabus. [Questionnaire: Priya]

But, the idea of resistance to change as a barrier to ICT could not only be attributed to teachers’ attitudes. The school as an institution was in itself resistant to the kinds of change needed for the successful integration of ICT. The following response demonstrates this attitude:

No. I am not very fluent with technology.... And my school is not very particular about training us to use ICT in teaching. [Questionnaire: Bindiya]

The school’s role in their teachers’ professional development also incorporated a serious issue discussed earlier in the chapter: the school did not consult the teachers for their own professional development. ICT initiatives were taken and withdrawn by the schools, without the consent or awareness of the teachers. One teacher shared:

I think it [blog/online community for teachers] is a very good idea. I think we had tried it but I don’t know why it didn't work out. Because I remember just two years back when they had started it, we were asked to type the lesson plans in the school portal, which only we had access to it, but I don't know why it didn't continue. I am not sure. It may be an administrative decision. I am not sure. But we teachers found it useful. [Interview 8: Nisha]

Two teachers suggested that for changes to occur in their teaching practice, they should be given the responsibility for their own learning and professional development.

To be honest, I never used blogs for sharing English resources with other English teachers. But now I feel I should. It is something that we ourselves will have to change in us. [Interview 9: Madhu]
I think what you said that having blogs you know where the teacher community of the entire Mumbai city, if they can share their experiences and resources, I think that would be very good. If we could have something like that, I think it will be very very good. Because we are all the time learning, I mean nobody can say that I know everything. Teachers might come up with some different kinds of insights relating to teaching which some other person teacher, some other teacher, some other school might find it useful. [Interview 8: Nisha]

Overall, this resistance could be seen in terms of teachers’ unwillingness to change their teaching practices, and also in terms of schools as institutions: finding it difficult or unnecessary to facilitate innovative practices involving ICT.

4.5.7 ICT anxiety
ICT anxiety and anxiety about change were key factors limiting teachers’ use of technology. Some teachers were worried about showing their students that they did not know how to use the equipment, and therefore, with this kind of anxiety, they were less willing and/or able to make use of ICT in their teaching. In addition, students’ attitudes and expectations of their teachers’ competence in ICT were likely to contribute to teacher anxiety. Primary to these anxieties was fear of embarrassment when using ICT due to the fear of ICT tools breaking down in a lesson. In fact there were also strong links shown by teachers between the barrier caused by a fear of doing damage to ICT equipment, and the barrier caused by a lack of teacher confidence. This anxiety was therefore likely to prevent such teachers from attempting to use the technology at all, even before there was a chance for any potential technical problems to occur. And if technical malfunction occurred, often with delayed support and delayed solution, then reduced confidence in the technology’s worth had a negative impact on the rate of teachers’ take-up of ICT. Moreover, teachers who did not
consider themselves well skilled in using ICT felt anxious about using it in front of students who perhaps knew more than they did. One teacher lamented:

*If my students see that I am not clued up as to how to operate a new application on the system, I feel embarrassed and the students lose confidence in me. Even with all the content knowledge that I have, sometimes I just stand there and click buttons.*

[Questionnaire: Simi]

Moreover, teachers’ negative experiences affected perceptions of the ease of use and relevance of ICT, reducing their confidence and increasing their anxiety. This is evident in Maya’s comments:

*Technology has dulled my senses and therefore I have started using it moderately. I do love it but I get headaches because of technology all day.*  [Questionnaire: Maya]

4.5.8 No collaboration and teamwork among teachers

Many teachers in this study considered sharing of teaching ideas with each other as a professional development activity and valued sharing activities because they were considered to be directly related to the classroom and their school context. A professional learning community involves teachers working collaboratively to identify and work with the issues and challenges raised by teaching and learning in shared contexts. Such collaboration involves dialogue about issues and problems related to teaching and learning and to students’ progress. Though teachers in the present study had a wealth of experience and academic qualifications, many felt that they had not achieved as much as they had wanted in terms of ICT use in the classroom. They found themselves disappointed with both those teachers who did not integrate ICT in teaching and those teachers who were not providing their ICT ideas to other teachers who wanted to use ICT in teaching but lacked knowledge and skills.
Teachers accepted often working in isolation from other teachers of the same subject, and in some cases, working in isolation from other teachers in the school.

There is no teamwork among teachers to use technology. I always prepare my ICT resources on my own. [Questionnaire: Tina]

Right now I am doing it by myself. I have not received a formal training. But I will be looking forward for a very good training which will enhance my capabilities and maybe I'll learn more about it [ICT]. [Interview 2: Dipika]

Professional learning communities and collaborative networks are a vital part of the professional learning culture. Teachers suggested that they could overcome daily problems regarding implementation of ICT by working with more experienced colleagues who might be able to offer ideas of ICT integration both during and after professional development. But the teachers acknowledged that lack of collaboration and teamwork among teachers as one of the influential barriers that obstructed their use of ICT in teaching. The following response echoes their difficulty:

I am new in this profession and not very good with technology....The teachers in my school have more ICT knowledge than me but very few English teachers share their ideas with each other. [Questionnaire: Nitya]

Moreover, with increased pressure for student achievement, teachers struggled within this time bound system of inadequate professional development. Teacher Rashmi commented that she expected support from other teachers with more ICT experience:

Skilled teachers can become internal ICT teachers who could teach English teachers who are inexperienced in technology. [Questionnaire: Rashmi]
Through collaborative professional development initiatives, they believed they could get ideas from some of their colleagues using successful teaching strategies with ICT.

4.5 PROFESSIONAL DEVELOPMENT NEEDS

4.5.9 Teacher-centred professional development

One of the key suggestions of the respondents was adequate consideration of the teachers’ needs, ICT experiences, learning styles and their school culture while planning professional development activities. Teachers also expressed the need for having frequent networking, collaboration and follow-up within their subject community. Many teachers said they wanted a professional community of English subject teachers to exchange ideas and best practices for their classrooms. One teacher explained:

School must build a virtual community of English teachers as learners. Subject teachers must often get together to discuss lesson plans and weekly planning. The same can be done to share English teaching resources. [Questionnaire: Varsha]

This need for collaborative opportunities far outstripped any other reason for joining teacher networks for professional development. A majority of teachers confessed that they had wasted time and resources on ineffective professional development which was not personalised, contextual or able to empower them.

4.5.10 School support and culture

Schools themselves could be collaborative learning communities. But none of the three participating schools supported and nurtured web-based collaborative engagement among subject teachers. Teachers asked for a school environment where the school recognised the importance of subject teachers’ needs and involvement in professional development decision-making and professional development implementation. They suggested that the school could
play an active part in supporting and promoting this culture of collaboration and innovation in personalised professional development that was subject-specific and context-specific. One teacher suggested:

*For regular interaction of English teachers for planning, sharing ideas and resources, school should set up its discussion forum for subject teachers to share lesson plans and teaching resources.* [Questionnaire: Chetana]

The factors that influenced teachers’ use of technology in the classroom could be either disablers or motivators. The most important disablers that were highlighted by the ICT interactive workshop observations, questionnaires and the interviews included lack of access to the Internet, lack of effective pre-service and in-service training in using ICT for teaching, and most importantly, lack of time. Teachers who used ICT in teaching commonly faced technical issues and delays in technical support. They believed that insufficient technical supports at schools and little access to Internet prevented them from using ICT in the classroom. Also, some of the teachers had negative experiences in the past when they shared their educational resources with other teachers and believed that teacher networking and collaboration must be developed as a relationship and not a one sided effort. Shortage of class time was another significant barrier for the teachers to integrate ICT into the curriculum and teachers considered time to be the biggest obstacle in improving their ICT competence and use. On the other hand, the most important ICT motivators were teachers’ positive attitudes towards technology, the belief that technology improved students’ results, and the perception that ICT made classroom teaching and learning very interesting and enjoyable. Moreover, teachers believed that personalised professional development and collaborative professional development activities, such as asynchronous online networking with other teachers outside school hours was a more effective and helpful form of professional development than the
traditional forms of ICT training. Teachers also expressed the need for a better school culture and support for effective professional development in ICT.

4.5 PROSPECTS OF BLOG-BASED PROFESSIONAL DEVELOPMENT

4.5.1 Teacher perceptions about blogging for professional development

Attempts to integrate technology in teaching provoked a variety of responses from teachers and many agreed that ongoing professional development was essential for school improvement, as it could empower them to address the challenges they faced in their everyday teaching. But several teachers also argued that their existing professional development programs were insufficient and they viewed such professional development as something that they needed to passively complete.

The responses gathered from all participants also throw light on teachers’ beliefs that teacher collaboration could raise morale, enthusiasm, receptiveness to new ideas and all this could help them implement ICT and transform their teaching practices. Teachers’ comments further highlight that if they were eagerly involved in their professional development, and teamwork among teachers was improved, they could adopt and integrate ICT into their teaching. In a workplace setting where teachers were isolated from each other for the majority of the day, most participants agreed that effective use of blogs was one method of bringing educators together. An interesting finding from my research study was that teachers expressed the importance of collaboration and informal learning for professional development and the ways in which online communities and social networking (both face-to-face and online) could help them grow as professionals.

A majority of teacher responses to their professional development needs indicate a shift in the nature of professional development from working alone in the isolation of their classroom to
working in collaboration with their colleagues and caring to share. Teachers suggested that a collegial relationship cultivated by the teachers could change the form of teachers’ professional development, and instead of having unfrequented workshops for teachers, professional development programmes could be redesigned to be more collaborative in nature. When asked what do teachers perceived they needed in order to improve their professional competence in ICT, their comments below illustrate their need for new methods of professional development; taking into account teacher collaboration, networked learning, varying levels of ICT experience, and time constraints:

*Learning with other English teachers in an online social setting. Work on ICT development as a team, when, with ideas of more people, better teaching strategies can be shared and refined. [Questionnaire: Dipika]*

*Collaboration and sharing practice. Development of support networks will help in developing more innovative uses of ICT in English teaching. [Questionnaire: Nitya]*

Teachers’ responses suggest that most of them considered that collective participation in professional development was more likely to afford opportunities for active learning of ICT and was more likely to be coherent with their past ICT experiences. Moreover, teachers insisted that professional development that involved collective participation, especially for subject-specific teachers was believed to be able to sustain the changes made to their teaching practice. This could be made possible by building subject-specific online teacher partnerships for discussing their subject-specific concepts, skills and problems that arose during their teaching experiences.

Out of the 32 participants in this study, 20 teachers (62.5%) subscribed to the blog. Moreover, many teachers were interested in the prospects of blog-based professional development for in-service teachers. The following quote exemplifies their views:
I believe that it encourages us socially, because we find the opportunity, ease and freedom to deliver our ideas possible without the fear of being judged or evaluated, unlike a training workshop. It will possibly make us more secure in that environment. [ICT Interactive Workshop: Madhu]

Teachers found blogs to be useful for teacher teamwork and sharing of ICT ideas. The following statement, made by one of the teachers during the workshop, confirms the same:

You share your ideas with the one source and simultaneously with all the blog members. I think that’s really amazing. You just ask question everybody wants an answer for. And the answer to your query is the answer for everybody. [ICT Interactive Workshop: Indira]

However, when asked whether blogging could be taken seriously as a medium for teacher professional development in their schools, teachers Indira, Alisha and Neelam said that blogging was not something they and other teachers were currently in the habit of doing for their professional learning and it could take time, effort and change in attitudes to do so. They also indicated that teachers could have no inclination to use it unless they were motivated or mandated by their schools to practice new and innovative forms of professional learning.

Yes as the technology is growing. But there is a lot of reluctance in the Indian set-up, especially teachers. They still have their old chalk and board mentality so they are still not able to get out of that. When you are ahead, when you want to do things differently, then there is disparity between the classrooms....so you have to be at par with the ignorance also. It will take a long time in India for teachers to get into that. Even smart class technology is not fully utilised in my school...teachers don’t want to take the effort....so where is the technology actually being used?....My colleagues refuse to grow. [Interview 6: Indira]

I am not sure. Can blogs really replace training? I mean how it is possible to learn IWB technology with blogs? [ICT Interactive Workshop: Alisha]
Blogging can spoil other teachers who don’t post any resources or share any ideas. They get everything ready on their plate. But what will assure their contribution? [ICT Interactive Workshop: Neelam]

I don’t know how blogs work in the Indian scenario because the teachers are already burdened with so many things in the school that I don’t think that most of them will really have time to blog or put up ideas. I am sure they would want the blog to take ideas but I don’t know how many will actually share their ideas. [Interview 10: Neelam]

Moreover, some teachers found the notion of shared resources and Web 2.0 collaborative learning particularly difficult to practice. When I asked Teacher Indira whether she blogs for professional learning, she said:

*English teachers are the most hardworking and we never have time for blogging. If I am done with my corrections, I think I would just love to sleep. I don’t think I have time for any blogging.* [Interview 6: Indira]

But, when I asked her (Teacher Indira) whether she belongs to any online community, she said that

*On a personal level I do have a Facebook ID….rather I am quite addicted to social networking.* [Interview 6: Indira]

Overall the teachers’ responses imply that the design and delivery of teacher professional development courses/programmes will be successful if all teachers participate equally. Teacher Neelam suggested:

*Only if everybody uses blog with the right attitude for professional development, it is useful. If teachers use it to improve what they already know and then share it with other teachers, then it is going to help the community. Otherwise if teachers are going to blog, only to take what is already there, I think it will actually be detrimental because actually no one would be using their brains to do things. So then there will actually be a very few who will be active bloggers.* [Interview 10: Neelam]
Teachers acknowledged that blogging:

- Was a new concept for them
- Was very useful in sharing ideas with other teachers
- Allowed them access to other teachers’ ideas
- Helped them in keeping a good record of their own experiences

However, teachers also admitted that:

- They had no time for blogging
- Blogging was not their preferred form of professional development

4.5.12 Teacher participation in the blog

Teachers in this study had never used blogs or been part of any online teacher community for teacher networking and professional development. Teachers were more familiar with Facebook as online social networking tools but they did not use it in teaching English or for their professional development. However, many teachers showed an interest towards blog-based professional development and believed that with the help of an online teacher community, the barriers of the isolated staff-room cubicles could be broken down by collective ideas and experiences of technology successes and failures, and a culture of collective knowledge could be developed. Sandhya’s blog comment highlights her positive perceptions about ICT and also her reflections on the outcomes she had seen by using ICT in her classroom; a reflective practice possibly influencing other teacher-members of the blog:

*I believe ICTs are of benefit to all children, especially for those with ESL. The fact that it can be self-paced, repeated when needed, students can choose specific areas of interest or learning needs; the list of benefits is endless.* [Blog comment: Sandhya]
When it came to the roles teachers performed in the classroom, teachers in the study favoured more innovative roles accompanied with ICT that they acknowledged made learning process more enjoyable, easy and more appropriate for learners’ needs and expectations. However, roles expecting teachers to take an active part in innovative forms of professional learning process proved to be unachievable for teachers in the current study. There was a discrepancy between teachers’ beliefs concerning professional development and their actual practices. Teacher Rashmi commented about her dilemma in convincing her colleagues to practice ICT in their teaching. But, she was also hopeful, excited and curious about the future prospects of academic blogging by teachers in India:

I am always trying to get the teachers in my department to want to do this. But teachers sometimes feel there is just no time in the day when they have families to take care of- they think PLNs are too time consuming. We say we want our students to become lifelong learners, but don’t always practice what we preach. [Blog comment: Rashmi]

I’m really curious whether blogging and some of its close alternatives will really catch on in the next few years in Indian education…..high time it does! [Blog comment: Rashmi]

If the ICT interactive workshops helped the teachers in exploring innovative teaching practices with ICT, the blog helped them to share with their peers and researcher on the blog about the application of those innovative teaching practices. Through the medium of blogging, teachers were seen sharing their post ICT interactive workshop experiences and initiatives towards changes in their teaching practices, either incorporated voluntarily by themselves or mandated by their schools.

I enjoyed your presentation very much last month and have already started to put into practice some of those ideas and some that I’ve found on your blog. [Blog comment: Maya]
I've been playing around with Voice thread since your workshop last month, and my students seem to be really enjoying. I can’t wait to see what a useful resource it will surely become as I use it more and more. [Blog comment: Aisha]

Teacher Indira posted that her school had just taken an iPad initiative for teaching and she was researching about creating a podcasting team for her class students:

At my school we have just started working with technology. I teach grade 6 and my pupils have Ipad of their own. It’s a part of a Pilot-project and we are just in the beginning, so it’s rather exciting for all of us. Among the aims for the first year is to create a podcasting team. I’m just doing a little research now, the links in this article is very helpful. [Blog comment: Indira]

Similarly, teacher Aisha gained awareness about the VoiceThread application during the ICT interactive workshop and shared on the blog that her students already seemed to be enjoying the application of VoiceThread application in her English class:

I’ve been playing around with VoiceThread since your workshop last month, and my students seem to be really enjoying. I can’t wait to see what a useful resource it will surely become as I use it more and more. [Blog comment: Aisha]

Teacher Sarika and Teacher Neelam shared their classroom teaching experiences using TED talks that were posted on the blog:

These speakers are excellent! Thanks for sharing Atiya Ma’am! I used it in one of my poetry classes for grade 8 students. This is something new for them……so initially I was not sure….but they thoroughly enjoyed it……since the content is very mentally and emotionnally provocotive…..this led to a good discussion post viewing…..thanks! [Blog comment: Sarika]

Very helpful for discussion or debate class……I used a couple of ted talks in my English class last week….students enjoyed it thoroughly…very good tool to improve their public speaking skills also. [Blog comment: Neelam]
Teacher Simi and Teacher Nitya shared on the blog about their classroom teaching practices using YouTube. However Teacher Meenakshi replied about issues related to internet connectivity when using YouTube in the classroom:

*I use YouTube to introduce the background or setting....very helpful to draw the students attention.* [Blog comment: Simi]

*These videos also can be a very good resource for improving our students’ interpretation and translation skills from Hindi to English language. Also useful for dramatisation.* [Blog comment: Teacher Nitya]

*YouTube is a great tool for entertainment and learning... but not with issues of internet connectivity and site blocking in the classroom.* [Blog comment: Meenakshi]

Moreover, teachers were also enthusiastic about starting their own online community. Teacher Divya shared on the blog that she was interested in starting an online community for her student using Facebook:

*Is there a tutorial on wordpress.com that gives detailed instructions on how to link your blog posts to your students’ Facebook accounts? I am curious to start my own blog and all my students have Facebook accounts. Let’s see whenever I get the time to do so.* [Blog comment: Divya]

Each month I posted a new technology-related topic or resource and opened a discussion relating to its application in the classroom setting. The blog setting provided an online source of ICT materials related to classroom teaching of English. For some teachers, it was their first exposure to the use of ICT applications in teaching:

*Thank you for sharing this.... I did not know anything about it before reading your post....* [Blog comment: Sunita]
Teachers proactively participated in professional discourse on the blog after the ICT interactive workshops. However, I observed that teachers did not communicate with each other and comments by teachers were only directed at the researcher. Figure 5 shows...
screenshots of some of the blog comments made by the teachers. The feature of sharing ideas was the most frequently acknowledged advantage of blogging by teachers. The typical expressions by teachers about blogging often started with a brief statement acknowledging the benefits of blogging, followed by a feeling of frustration on how it could be used, and more importantly, when it could be used. However, they were mostly immediate teacher responses (blog comments) captured after the ICT interactive workshops and teacher interviews.

Although ideally, the sense of community could bring English teachers back to the blog often to check for new posts and responses, and although blogging enabled them to work in teams interactively, teachers' participation at the end of the academic year in Mumbai was the lowest, and their participation was much less than that of the other periods of participation. The extent of this teacher networking and collaboration for their professional learning faded with time. Table 7 explains the same.

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Table 7. Teachers' Blog Entries

In spite of receiving email notifications through blog subscriptions, many teachers did not post their ICT ideas on the blog; the ideas that they had shared earlier during the face-to-face workshops. As mentioned earlier, out of 32 teacher participants, 20 teachers voluntarily subscribed to the blog, out of which, seven teachers posted more than one blog comment, nine teachers posted only one blog comment, and four teachers did not post any comments at all. The remaining twelve teachers did not subscribe to the blog nor did they participate in blogging. Although teachers interacted with me through their comments on the blog posts and reflected on their classroom practices; very few actually questioned, networked or
collaborated with other teachers (members of the blog). Very few blog comments made by the participants were related to providing suggestions/advice to other teachers’ queries, offering reflections, or collaborating with other teachers. The majority of blog comments made by teachers were related to either appreciation, or sharing their classroom teaching experiences, lessons and resources.

After the mid-term examinations and festive holidays in Mumbai during the month of October, blog inputs by teachers significantly decreased, and in comparison to the months of July, August and September, teachers in this study became less active on the blog. The teachers’ responses did provide an insight (discussed in the next chapter) into the impediments that English teachers in Mumbai faced pertaining to their professional development and ICT integrated teaching.

4.6 CHAPTER SUMMARY

Teachers in this study had used ICT tools in teaching of English and few teachers had handled a wide range of ICT applications for teaching purposes. However, teachers predominantly relied on PowerPoint when integrating ICT in teaching. It was observed that teachers restricted using mobile phones or the Internet for instructional purposes as their schools prohibited the use of mobile phones and/or Internet in teaching. Although the schools conducted regular ICT training sessions for their in-service teachers, few teachers prepared lessons with basic reference to ICT practice. And although teachers used ICT for formative and summative assessment and to provide students with feedback on progress, very few used ICT for communication and collaboration with other English teachers. Teachers viewed their professional development practice as a series of inadequate, inappropriate and ineffective activities that were detached from their actual classroom teaching practice. Also teachers did
not receive an in-depth and subject-specific pedagogical ICT training at the teachers’ training colleges or universities where they were trained and therefore, they did not get opportunities to understand the relevant use of the ICT tools in teaching of English.

Computers were available in every classroom of the schools. But few teachers could easily access the Internet in their classroom, computer lab, or staff room. Several teachers shared that the breakdown of a computer caused interruptions and if there was lack of technical assistance, then it was likely that they would not use ICT in teaching. A dominant theme throughout the findings was the issue of time. Pre-teaching activities like planning and preparing ICT-related lessons were all quite time-consuming for the teachers. Many teachers also admitted that their workload (in and outside school) influenced their use of ICT in classrooms. Some teachers did not wish to integrate ICT into English lessons because of their focus on examinations and syllabus completion.

Generally teachers’ attitudes towards ICT integrated teaching were positive. Teachers regarded ICT as an important and useful tool to help them convey or present their teaching interestingly as students looked forward to classes conducted with ICT as compared to traditional and conventional method of teaching. They acknowledged that ICT was effective and useful in teaching of English and had a positive impact on their students’ learning.

Teachers accepted often working in isolation from other subject teachers in their school. However, they considered sharing of ICT ideas with each other as a professional development activity and valued sharing activities because they considered it to be directly related to their classroom and their school context. Teachers also expressed the need for having frequent networking, collaboration and follow-up within their subject community. Teachers asked for a school environment where the school recognised the importance of subject teachers’ needs and involvement in professional development decision-making and
implementation. They suggested that the school could play an active part in supporting and promoting this culture of collaboration and innovation in personalised professional development that was subject-specific and context-specific. Teachers found blogs to be useful for teacher teamwork, collaboration and sharing of ICT ideas. Teachers proactively participated in professional learning on my blog after the ICT interactive workshops. However, the same could not be said with the passage of time as the extent of blog-based teacher networking and collaboration for their professional learning faded with time. What was more interesting that even after having gone through in-service training on ways of integrating ICT tools in the teaching of English, the teachers were not carrying out ICT integration in teaching and professional learning. What was amiss? The findings suggest that there are far more serious and complex issues to address. These are discussed in the next chapter.
CHAPTER 5
DISCUSSION

5.1 OVERVIEW

The findings discussed in this chapter shed light on the complexities of integrating ICT in teaching of English and professional development of English teachers in Mumbai. The research reported is the first of its kind conducted in the Mumbai context. The purpose of this research was to determine the usefulness of blogs for the professional development of primary and secondary English teachers in Mumbai.

The literature review in Chapter Two proposed that the framework for an effective professional development program for teachers should be school-based, teacher-led, ongoing, reflective and collaborative. The context and significance of this study was presented and explained in Chapter One. I adopted a case study approach [see 3.1], situated in three schools in Mumbai, and incorporated both quantitative and qualitative methods [see 3.2] for data collection and analysis. The data was collected by means of four different instruments: ICT interactive workshop observations, questionnaires, interviews and blog comments. By using different sources and approaches, I intended to strengthen the reliability of the results. The findings and analysis of data were represented in Chapter Four.

Informed by related literature and supported by evidence from the study, this chapter examines and answers the research questions [see 1.3]. The findings are discussed below to provide an answer to the prospects of reflective and collaborative professional development of English teachers through blogging.
5.2 RESEARCH QUESTION ONE

What are the attitudes of English teachers in Mumbai towards the use of ICT for classroom instruction and their professional development?

Teachers’ attitudes have been identified in other studies (Prestridge, 2012) as hindering ICT integration in teaching and learning. The human factor was imperative in this study, not only in terms of skills and competencies, but also with regards to beliefs and views regarding ICT integration. Therefore, there was a need to determine the ICT attitudes of teachers. Responses to the current investigation indicate that the majority of teacher-participants held positive attitudes towards ICT integrated teaching of English [see 4.5.5]. The teachers believed in the power of ICT within the teaching environment, and that the technology environment helped them to enhance student learning. The findings also show that nearly all (81.2%) teachers were optimistic that ICT made English lessons more fun for their students, and 75.1% of teachers acknowledged that the use of ICT in teaching and learning excited them. Moreover, a majority (71.9%) of teachers considered that ICT gave them more confidence as an English teacher, and 78.1% reported that ICT knowledge led to their professional development [see 4.5.5]. This resonates with similar findings identified by (Bordbar, 2010; Kulkarni, 2012; Kumar & Kumar, 2003; Narasimham, 2012; Rajasekar & Vaiyapuri, 2007). These studies demonstrated that teachers had positive attitude towards using ICT in teaching.

This study has investigated teachers’ attitudes towards ICT adoption for teaching and professional development, and the results, in congruence with Prestridge (2012) demonstrate teachers’ positive attitudes towards ICT integration more so because they acknowledged its effectiveness in the teaching and learning process. Their beliefs in regard to the importance of ICT for their students’ learning of English, and to themselves for their professional development were often expressed during the data collection process. Teachers were uncertain about the impact of formal and long practiced professional development programs...
on their ICT practices. But teachers still had positive attitudes towards integrating ICT into instruction regardless of their ICT background. They preserved these positive feelings despite receiving insufficient ICT training from the schools where they worked. Their positive attitudes towards the use of ICT in the classroom also reflected on their need to learn to use ICT more effectively. Moreover, it is very surprising yet hopeful to find that although teachers did not receive regular and sufficient ICT guidance, either in pre-service education or in-service training, they had a positive attitude, interest and curiosity towards ICT integration. The teachers expressed that having ICT in the teaching process supported better learning experiences. They considered ICT as a viable educational tool that could bring about different improvements to their schools and classrooms.

On the whole, the teachers were very positive in their attitude towards ICT as they felt that ICT changed the way students learned in the classroom and also found it effective in student learning. Teachers’ positive attitude towards ICT is important as this may pre-dispose them towards adopting new and innovative forms of professional learning that are ICT enriched, that is, using ICT to learn about ICT.

The effective implementation of a new form of professional learning, such as blog-based professional development, clearly depended on teachers’ readiness towards ICT. Those who perceived ICT to be useful in promoting classroom teaching-learning were more likely to integrate ICT more easily in their professional learning. The primary agents for working this new form of professional learning in this study were the teachers. Getting the teachers to ‘buy in’ was central when a new form of professional learning (blog) was involved, especially for those teachers who were not convinced that technology was worth the time and effort. The first essential prerequisite of this blog-based professional development study then was to develop positive beliefs in teachers about blog-based professional development that included the idea that teachers can lead their own professional development through online
professional interaction, mutual sharing and collaboration. However, the already existing positive attitude of teachers in my study towards blogs was an added advantage to the implementation of the blog. Their positive attitude was a catalyst to make changes in their professional learning more inviting for them. This positive finding really stands out and gives rise to a hopeful consideration of the future prospects of blog-based professional development; and the need for state, schools and teachers themselves, to carefully regard its potential in overcoming the major ICT barriers and fulfilling their ICT needs, which is discussed in the next sections.

5.3 RESEARCH QUESTION TWO

What are the major barriers to effective integration of ICT in teaching of English and professional development of English teachers in Mumbai?

Confirming the research findings in previous studies by Carr and Chambers (2006a, 2006b, 2006c), the current findings indicate that lack of time, lack of school support, lack of ICT accessibility, lack of teacher collaboration, and resistance to change were the prominent factors hindering teachers’ readiness, confidence, or ease in using ICT for instructional or professional development purposes.

5.3.1 Lack of time

Over half (53.1%) of the teachers in this study accepted that time needed to learn using ICT prevented them to use it and 65% found using ICT to be a time-consuming activity [see 4.5.4]. 28.1% of teachers faced difficulty in accessing computers and the Internet in their school, and 46.9% mentioned that the Internet was not available in their classrooms [see 4.5.3]. Bhalla (2012) also found in his study that insufficient time for planning, preparing, and using ICT based instructional material was the most dominant barrier. More than half of
the teachers (51.3%) in my study considered that the time needed to learn using ICT was the biggest factor discouraging them to use ICT [see 4.5.4].

But few teachers (18.8%) in this study used ICT for communication and collaboration with other English teachers [see 4.3]. The time needed to learn ICT prevented 53.1% of teachers from using it [4.5.4]. Although 40.6% of the teachers confirmed that their school regularly conducted ICT training sessions for in-service teachers, only 22% of teachers found it easy to select appropriate ICT resources for their teaching [see 4.3]. This means that teachers were not receiving appropriate and subject-relevant ICT training from their schools.

However, using ICT collaboratively for professional learning in ICT with other teachers of the same subject area is very a time-effective, relevant and constructive practice. It could be a potential solution to teachers’ biggest problem in professional learning – lack of time. Darling-Hammond & Richardson (2009) noted that the most successful practice of professional learning for teachers is collaborative and congenial, and the most successful arrangement to achieve this is through professional learning communities. Although teachers need professional development, there are very few opportunities in Mumbai schools which have limited resources and limited release time, to bring teachers together in a physical space. Teachers are very busy professionals with minimal discretionary time, but if they have to stay current and sustain their profession, blogs could be a way to help them to do it at their own pace. By leveraging the Internet combined with collaboration, teachers could benefit from asynchronous professional learning, regardless of the day of the week, or time of day. Scheduling and implementing a blog-based learning practice is much less time consuming than planning and running in-service days and staff meetings. This study claims that through blogging, teachers can take advantage of anytime, anywhere access to their learning and their peers, participating in their own time, even if it is before, during, or after school.
While teacher responses show that ICT inaccessibility was a factor hindering the use of technology in the classroom, findings highlight that the difficulties faced by teachers in including ICT in their daily teaching and professional learning were not so much the consequence of scarcity in ICT resources or Internet access (although both sometimes still constituted a problem) as they were the result of scarce technical support, hierarchical school organization, the lack of genuine training for incorporating subject-specific ICT resources, and lack of collaborative school culture. Teachers’ ICT practices were deeply influenced by heavy workload, tight schedule and exam-oriented school culture [see 4.5.4]. The findings suggest that blog-based professional learning could help teachers to overcome those influences and guide their own learning through collaboration. The flexibility of blogs could allow teachers to work collaboratively in their own time, in their own space, using an asynchronous format that meets their professional learning needs. Discussions and resources shared on the blogs, relevant to the subject teachers, could support them in their subject areas of need.

5.3.2 Professional isolation

Teachers’ views revealed that active participation in knowledge sharing was unachievable in part because of the conventional structure of working in Mumbai schools that was based on autonomous classrooms in which each teacher was working as an isolated practitioner, and the schools’ sole focus on syllabus completion and exam results made it complicated for teachers to practice innovative and collective learning processes with ICT [see 4.5.4]. Teachers were affected by rigid and counterproductive school routines. Their professional development typically happened before or after school or in the holidays, thereby imposing on teachers’ personal time. Professional development also took place during planning or preparation intervals, which reduced time required for other tasks. Subsequently, due to
teacher workloads, the teachers had very little time during school hours to share ideas with each other and refine their teaching. Teachers who compromised personal time or preparation time often experienced isolation from struggling alone to use ICT [see 4.5.8]. Most participants were habituated, quite possibly due to their school cultures, to work in isolation. Comments by Teacher Tina and Teacher Dipika confirmed that there was no teamwork among teachers in their schools to use technology and therefore they always prepared their ICT resources on their own [see 4.5.8]. Also, Teacher Nitya’s response illustrates that many teachers were not in the practice of giving and receiving information from each other (which, although is an attitudinal issue); certainly, in several cases, the result-oriented and formal cultures of schools did not encourage such knowledge sharing among teachers [see 4.5.8]. Teachers were unable to take advantage of Web 2.0 networking to know each other’s pedagogical know-how accrued among them. In this respect, my study reinforces Somekh (2008), who advocates that little on-site technical support; absence of school support; lack of organizational change; lack of access time; and prevailing views on education are not simple issues, and they are limiting many innovative forces in the pathway to effective professional learning in ICT, in addition to frustrating already demotivated teachers.

This study suggests that online interaction through blogging with other teachers could offer a great social circle of like-minded professionals able to connect with one another and eliminate professional isolation. This study suggests for teachers, what Sugata Mitra's ‘hole-in-the-wall’ project advocated for student learning, that is, the power of learning with and from each other. It echoes Mitra’s (2003) study, as it illustrates the prospects of English teachers learning with and from each other when given a tool (blog). With online communities of practice this can be realised. Teachers in my study lacked time and opportunities to learn from each other, and work collaboratively. This study suggests that teachers could learn most effectively and easily when their learning is intensive,
collaborative, relevant and sustained over time. With the help of blog-based online community, the teachers could very well participate in learning the way other professionals do—continually, collaboratively, and on the job—to tackle frequent ICT issues and serious ICT complexities where they worked. By creating online peer-to-peer exchanges, teachers could further reflect and grow their own skills and knowledge, while serving as a resource for fulfilling other teachers’ ICT needs. With the ability of asynchronous and self-paced communication through blogging, teachers could capitalize on collaboration within their time and establish a large network among other teachers.

5.4 RESEARCH QUESTION THREE

What do teachers in Mumbai perceive they need in order to develop their professional competence in ICT?

Results of this study indicate that teachers’ professional development needs were not considered a priority by the school and their learning was more driven by their school hierarchy and less by the teachers themselves. Moreover, the ICT training the teachers in this study received during their teacher education was inappropriate and inadequate as it was merely theoretical, and lacked practical and pedagogical aspects of ICT integration in teaching [see 4.5.2]. The majority of teachers were pessimistic about receiving sufficient ICT training during their pre-service teacher education program [see 4.3].

Teachers called for subject-specific ICT training, a supportive school approach, and teacher collaboration for teacher-driven professional development [see 4.5.1, 4.5.6, 4.5.8, & 4.5.10]. Findings indicate that the issue of training teachers in the subject-specific use of ICT, rather than merely training them in the skills of using ICT equipment, was a crucial one. Majority of the teachers (59.3%) found it difficult to select appropriate ICT resources for teaching. This could be because they had not received subject-specific training in ICT. One way to achieve
this could be to foster collaborations between teachers for social learning within their subject-area needs. However, teachers, aware of the hierarchical set-up of their schools, knew that innovations in teacher professional development could be possible only with school approval, intervention and support.

Teachers are unlikely to transform their teaching (and learning), if their ICT skills are isolated from their pedagogical inquiries (Prestridge, 2008). Current research findings coincide with studies by Padwad (2006), Padwad (2008a) and Stiler and Philleo (2003), which report that inappropriate ICT training (both pre-service and in-service), that does not link ICT with pedagogy, results in low levels of ICT use by teachers. Moreover, like the works of Bedadur (2012), Duncan-Howell (2009), and Holmes, Preston, Shaw and Buchanan (2013), this study suggests that professional development has to be linked to teaching practice and teacher needs for success. Teacher Sarika’s observation reveals that combining both teachers’ needs for competency in using ICT and competency in subject-specific pedagogical application in teaching was required for transformative outcomes of professional development or else time, training and equipment were wasted [see 4.5.3].

Findings of the current study confirm that teachers were lacking an environment of situated professional development where they could work on their school-specific, classroom-specific and subject-specific problems of their own choosing and where their learning related directly to their practice, discipline and context [see 4.5.1 & 4.5.10] (Vavasseur & MacGregor, 2008; Wei, Darling-Hammond, & Adamson, 2010; Whitehouse, McCloskey & Ketelhut, 2010). The majority of the teachers (75%) in this study were optimistic about ICT and were still interested in learning more about using ICT [see 4.5.5]. They also considered blogs as the sustained, ongoing, collaborative, and convenient form of professional development [see 4.6].
Current findings reflect what Carr and Chambers (2006b) reported from their study of teacher professional learning in an online community, where they identified lack of reflective practice culture in schools and lack of teacher motivation to participate hindering the success of breakthrough and innovative professional development initiatives. The ICT usage of teachers in this study was significantly influenced by the exam-oriented and result-oriented school culture where syllabus completion was the teachers’ first priority [see 4.5.4]. The findings also concur with Pandit Narkar’s (2012) study, which point out that educational administrators and school managers in India seem to view teacher professional development “mainly in terms of achieving better examination results” (p.31), but a better dialogue between the educational administrators, school managers and teachers is necessary for sustained teacher development. Noted weaknesses were that the formal training of teachers was not directly relevant to teachers’ subject-specific needs [see 4.5.1 & 4.5.10]. It was also noted that the formal training did not take into account teacher needs or prior experience with ICT. Teachers also complained during workshops that most formal training conducted by their schools had been held after school hours and during weekends which led to scheduling problems for some teachers and to outright resentment from others towards professional learning.

Current results seem similar to research done by Burns (2007), where it was found that the professional development that teachers in India experienced most, i.e. trainer-driven formal workshops, was the professional development they valued least. This study supports the claims of Bate (2010), Groff and Mouza (2008), and Tearle (2003) who suggested that discipline specific technologies, educational philosophy of the teacher, and the socio-cultural context of the school should be included explicitly within professional development programs initiated by the school. Similar to the study of Scott and Scott (2010), the findings of this study also suggest that current teacher professional development in Mumbai mostly
emphasizes a “directive” method and prescriptive information dissemination with little emphasis on teachers’ interaction and collaboration. However, in similar lines of Boyle Lamprianou, and Boyle (2005); Gaible and Burns (2005); and Hall and Davison (2007), this study also demonstrates that web-based teacher learning could not totally replace formal face-to-face ICT training of teachers. This indicates that blogs could offer additional benefits to other forms of professional development and they can be tried together as a means of professional development, taking the best of both worlds. Scott and Scott’s (2010) study had similar findings regarding the perceived importance of the synergy between face-to-face and online discourse. While teachers could be encouraged by their schools to participate in ample professional development initiatives which are ongoing, teacher-directed informal learning need not be used as the sole means of professional development. Instead, informal teacher professional development could be used to complement and extend formal professional development.

5.5 RESEARCH QUESTION FOUR

How do English teachers in Mumbai perceive the role blogging could play in their professional development?

Teachers in my study acknowledged that collaborative and innovative blog-based professional development experiences could potentially provide them with greater readiness, confidence and ease to teach with ICT [see 4.5.11]. They believed in the effectiveness of teacher learning within a community of reflective and collaborative practice. Almost all of the teachers emphasized the usefulness of blogging in professional learning [see 4.5.11]. They considered that blogging could benefit them and frequently mentioned during the data collection process that through blogging they could learn a lot by sharing their views with other members of the community [see 4.5.11]. A prominent finding was that the teachers
appreciated the structure of the blog: the blog created a socially safe environment which is free of judgement for posting responses [see 4.5.11]. This finding reflects findings from other studies (Kim, 2008; Lankshear & Knobel, 2003; Loving, Schroeder, Kang, Shimek, & Herbert 2007; Lunyal, 2012; Murugaiah, 2010; Prestridge, 2014; Ray & Hocutt, 2006a; Toner, 2004; Zandi, Thang, Krish, 2014), which advocated that mostly teachers had positive attitudes towards educational blogging for professional development.

However, some teachers, such as Teacher Chetana and Teacher Rashmi, were unsure that the practice of blog-based reflection, networking and collaboration for professional development was worthy of their time and efforts. When asked whether blogging could be taken seriously as a medium for teacher professional development, Teacher Indira said Indian teachers were very reluctant to try something new and it could take a long time in India for teachers to get used to blog-based professional development [see 4.5.11]. Also Teacher Rashmi’s comment reveal that it could be frustrating for teachers who spent considerable time (mostly outside school hours, i.e. after school or during weekends), and money (sometimes from their own pockets) to learn new methods of instruction and professional development that could not be sustained in the long run [see 4.5.1].

This discrepancy could be attributed generally to teachers’ lack of time [see 4.5.4 & 4.5.11] and lack of attitudinal change. Online communities are successful when time is provided for teachers to test new learning methods and to receive follow-up support as they face problems of implementing changes (Duncan-Howell, 2009; Ingvarson, Meiers & Beavis, 2005). Noteworthy evidence in this study came from discussions with teachers during ICT interactive workshops where only a small number of teachers (18.8%) admitted that they had integrated ICT tools on a daily basis for communication and collaboration with other English teachers [see 4.3]. In general, teachers had not used ICT to radically change their professional
development practices, although, ICT was used by 65.5% of teachers for formative & summative assessment and to provide students with feedback on progress [see 4.3]. This echoes what Chattopadhyay (2013) reported from his study of digital literacy development of Indian educators, where he identified that the use of web tools for personal socialisation attracts more attention from Indian educators than their use for teaching and collaborative professional development.

Overall, teachers in this study looked forward to the use of blog-based method of teacher professional development in the Indian set-up [see 4.5.12]. However, more time and support may be required for innovative blog-based practices of professional learning.

5.6 RESEARCH QUESTION FIVE

What are the prospects of web-based reflection, networking and collaboration for the ICT professional development of English teachers in Mumbai?

This study examined the extent to which teacher participation and reflection occurred on the blog and how effective that was in building a collaborative network that could lead to teachers’ professional development. This objective was accomplished firstly by analysing teachers’ responses to interactive workshops, questionnaires and interviews to gain a clearer idea of the constraints that the teachers faced in ICT integrated teaching and secondly by analysing teachers’ blog comments for evidence of participation and reflections in blogging for their professional development. The blog represented a space for the teachers to expedite online discussions of teaching English. It provided an ICT exposure that made them aware of the usefulness of ICT and also helped them to learn how to integrate the technology to support teaching [see 4.5.12]. Blog was used in several ways by the teachers: to report implementation of ICT strategies suggested by the researcher on the blog, to express positive responses to ICT integration in classroom teaching, and to voice concerns over ICT
implementation [see 4.5.12]. Teachers’ blog comments revealed that the teachers learned a lot about ICT integration in teaching from participating in the blog’s environment [see 4.5.12]. The teachers’ participation in the blog indicated a heightened sense of awareness on the blog towards ICT integrated teaching practices and experiences [see 4.5.12]. They posted comments related to developments in their teaching practices due to the blog, shared new ideas, or took a stand on an ICT issue [see 4.5.12]. Although the teachers’ participation in the blog reduced with time, the results give some insights on how teachers’ sharing of their practices within the blog community facilitated their learning through awareness and assisted them to develop professionally in the domain of teaching English with technology [see 4.5.12].

Results of this study reveal that most of the teachers (62.5%) engaged in some level of blogging activity, and their blog entries examined demonstrated some level of reflective writing [see 4.5.12]. This indicates that almost two-third of the teachers realised the benefits of blogging for professional learning, carried positive attitudes towards blog-based professional development, and integrated blogging into their regular practices of professional development following a more subject-specific and self-paced approach. The findings demonstrate that using blogs generated reflective practices to a certain extent in allowing teachers to express their experiences, thoughts, share their doubts and struggles in teaching English with ICT [see 4.5.12]. Teachers’ shared about their developed ICT awareness and understanding to engage in interactions between the researcher and peers who share certain approaches to their teaching practice [see 4.5.12]. Teachers used their views on links to applications shared as resources on the blog by the researcher, such as YouTube, TED Talks and VoiceThread, as the focus of their personal reflection [see 4.5.12].

Teachers participated at the start of the research project with a lot of enthusiasm, but their level of participation faded with time possibly due to school workload and socio-cultural
impediments. This could also be due to several other factors such as a lack of confidence in e-learning through blogging, lack of time, lack of positive school culture, lack of teacher networking, long-confirmed reliance on face-to-face training workshops, and resistance to change. Also, teachers may have become accustomed to their school policies for their professional development. Thus, in this context, teachers’ participation in an external platform (my blog) for their professional development became a token engagement with the passage of time [see 4.5.4 & 4.5.12]. Quite possibly, teachers lacked the motivation to become involved or were resistant, fearful or apprehensive about professional development on an online space where they were required to openly share their doubts, mistakes or failures with their peers or the researcher.

Teachers acknowledged the importance of professional development in ICT, at the same time neglecting ICT enabled professional development that was useful in making them more capable and confident in ICT [see 4.5.12]. Probably they perceived any new form of professional development as additional work that was time consuming and ineffective in their everyday practice. Teachers’ perceptions of professional development seemed to be in some case incompatible with their actual practices [see 4.5.12]. The low posting levels also could be attributed to the fact that posting was not compulsory (not implemented by the school or education authorities). In addition, low response levels could be the result of teachers’ discomfort with the degree of transparency necessary for the benefits of the network to take effect. This finding does not lend support to the results of investigations into online communities and teacher discourse as sources of professional learning by Cruz-Yeh (2011), Manouchehri (2002), Menon (2012), Murugaiah (2010), Yang (2009), Zandi, Thang, and Krish (2014), where teachers effectively used Web 2.0 technology to become reflective practitioners and it happened through peer networking and sharing of classroom practices.
Chalmers and Keown (2006) acknowledged that collaborative professional development requires more time than other professional development methods.

Current findings have implications for policy changes that disregard the sole reliance on short-term learning; which gave little encouragement for teachers to collaborate and did not result in benefits to the wider teaching-learning community. Although teachers complained about excessive workload and lack of time, teachers embraced (while only for a short period of time) the social and collaborative aspects of blog-based professional development as a time-saving medium of learning. The teachers surveyed indicated a clear preference for both face-to-face environments and online communities for professional development. Perhaps it was a question of terminology, and teachers did not instantly associate social networking with learning. Referring to the likes of Duncan-Howell (2009), I feel that the use of the terms ‘blogging’ and ‘professional development’ led the teachers to focus their response on the cognitive rather than the social (collaborative) activities, the latter (perhaps) perceived by many teachers as what one was not supposed to do when involved in professional development [see 4.5.11].

Also, the degree of teacher-school resistance to change was repeatedly found to be a critical variable hindering the teachers’ use of ICT in this study. Some teachers had formed an ICT resistance, quite possibly because this resistance was supported by their schools [see 4.5.6]. Similarly, Baylor and Ritchie (2002), Darling-Hammond and Richardson (2009), and Godwin-Jones (2003) accounted for the idea that teachers easily adapt technologies in both teaching and professional learning when they are open to change, whether this change is imposed by the school or as a result of self-exploration. Following their views in this regard, this study also recommends that schools should include a changed vision for their teachers’ professional development that nurtures decision-making, ownership, responsibility and
development of learning by teachers themselves, rather than implementing systems solely from the level of policymakers.

Teachers actually could establish a time-saving and cost-saving venue of Web 2.0 collaboration outside the walls of their own school. But, more than half of the teachers (59.4%) never used ICT for communication and collaboration with other English teachers. Surprisingly, although teachers used social networking on a personal level, they did not have time for blog-based professional development [see 4.5.11]. Or was it due to their lack of knowledge of blogging for professional development. In suggesting learning new pedagogies through a new way of participating in professional development could be problematic. Perhaps the use of other Web 2.0 networking tools, such as Facebook or Twitter, might be a better approach since they were familiar with it and it could offer a way in to new method of learning.

Is it a possibility that their interest was suppressed by their school’s outdated policies? Teacher Sarika shared during her interview that she did not use the Internet or mobile phone for teaching because her school restricted teachers to do so [see 4.3]. This echoes what Rahman and Borgohain (2014) reported from their study of the continuing professional development practices of secondary schools English teachers of Assam region in India, where they identified that the teachers’ use of Internet for updating their professional competence in teaching English was found to be low. They advocated that since the professional development needs of individual teachers vary, teachers should be encouraged by their schools to take control of their own professional development rather than suppress them. Teachers should realise they don’t have to work inside a box, and that there is no need to work in isolation as a worldwide learning network out there, filled with thousands of
educators willing to step in and help each other. This calls for a mind shift about Web 2.0 technology from personal to professional networking.

My findings also reflect the findings in Gupta’s (2014) study on the use of social media for the professional development of English teachers, which revealed that the use of Web 2.0 technology for the continuous learning and professional development of teachers is yet to gain adequate popularity in India [see 4.5.4, 4.5.6, & 4.5.8]. As advocated in the previous studies of Duncan-Howell (2009); Garet, Porter, Desimone, Birman, and Yoon (2001); and Power (2011), a longer period is needed to engender an online and collaborative learning community of teachers which supports critical reflection, teacher involvement, teacher control, backed by the school support for social learning in which the cognitive activities of professional development can be complemented by social connectivity to build a more collaborative network of teachers. The results seem similar to research done by Prestridge (2014), where lack of time, guidance and support were found to affect reflective action in the context of professional learning.

The collaborative and reflective approach to professional development promoted through this study is a response to the long practiced, outdated and formal professional development programs mandated by schools in India. This suggests the need to practice peer support and networking beyond the formal training and this can be possible through the easily reachable online social networks and Web 2.0 tools. Moreover, current findings reveal that time-consuming and expensive ICT workshops mandated by the schools for their teachers were rarely followed up with their teachers’ feedback and suggestions; which is very vital to the realisation of innovative and improved ICT integrated classroom practices. This finding is in line with the Sari, Lim, and Pagram, (2010), who advocated that although better proficiency with ICT will enable teachers to learn and engage more actively in an ICT-based online
learning environment, the positive ICT attitudes to learn and try using ICT beyond personal communication, student assessment or school administration purposes, and the types of communication tools, ICT access and school support could influence how far teachers could be able to exploit the potentials of innovative professional development. Also, parallel to the studies of Pandit-Narkar (2012), Phelps, Graham, and Kerr (2004), this study proposes a teacher-driven and teacher-centred approach which strives to develop lifelong collaborative learning strategies in teachers. An important characteristic of this approach of professional development is that, rather than imposing school determined objectives and expectations on teachers, the school encourages them to collectively achieve subject relevant knowledge and understandings; those related to their ICT skills, attitudes, confidence, and school environment.

The schools in this study had modern, innovative, state-of-the-art infrastructure for their students. However, as far as professional development practices of teachers, the schools were content with promoting traditional and formal professional development practices, something their teachers always had done, and although their teachers were doing a satisfactory job, they were not developing to any extent beneficial for pedagogical improvement or change. 46.9% of teachers in this study believed that their school’s views towards ICT discouraged them to integrate it in teaching [see 4.5.5]. Similarly, more than half of the teachers (53.1%) considered that their colleagues’ had negative views toward ICT [see 4.5.5]. The findings are in congruence with Carr and Chambers’ (2006c), who identified two major barriers to online communities of teachers—schools undervalue the significance of collective reflection and sharing of practice in the teacher community, and therefore classroom teachers do not find any purpose or motivation to use online communications tools as an integral part of their professional practices.
Resources and time are lost. Developing countries do not have resources to lose or time to waste. Change is what learning is all about. There is a lot that English teachers in Mumbai could learn through online communities, taking advantage of each other’s teaching experiences and ICT practices in the classrooms. Padwad and Dixit’s (2014) ‘Think Tank’ project in India revised the role of teacher professional development in India from something controlled by the state to a more relevant and comprehensive practice in which teachers took centre stage. Similarly, this study reiterates that instead of an authoritative structure of professional development controlled by less representative and less inclusive groups like the ‘expert committees’ (which are so typical in the Indian scenario), a collaborative structure of collective professional development involving all possible stakeholders is an effective way of making better sense of the challenges and solutions in professional development. Moreover, professional development initiatives such as this will be more relevant when they are strongly influenced by local cultures and situated appropriately in the socio-cultural environments of the school. Prince and Barrett (2014) explained that: “In an Indian teacher’s case, the school principal, the block or district education officer, the state machinery or even national policy might man the travel desk” (p. 23). Teacher professional development thus needs to be seen as holistic and decentralised, with a focus on professional discourse and a climate of interaction for the system as well as for individuals (Hawkes, 2000; Light, 2009; Padwad & Dixit, 2012).

Taking a whole school ICT leap can be a major challenge, and teacher professional development is generally seen as the ‘bridge’. But this ‘bridge’ will be less frequently built through traditional professional development programs. While most approaches to teacher professional development concentrate on skill development of individual teachers, a previous study by Popovic and Subotic (2012) and the findings of the current study describe a school-based approach that focuses on teachers’ ICT attitudes, beliefs, and confidence, and on
building a reflective and collaborative culture within the school that supports teacher contribution, not conformity. This research presents findings, similar to the findings of Borko (2004); Pandit-Narkar, (2012); Phelps, Graham and Thornton (2006); Phelps, Graham, Watts and O'Brien, (2006), which indicate that significant outcomes of time and support can be achieved by schools through a bottom-up approach, not only relevant to ICT learning and integration by the teachers, but in building a whole-school professional learning community which promotes collaborative and supportive partnerships between school leaders and subject teachers.

5.7 CHAPTER SUMMARY

This discussion chapter helped in identifying the ICT attitudes, ICT barriers and ICT needs of teachers in my study; and it also helped in determining whether blog-based professional development supported reflective and collaborative practice of professional learning among English teachers in Mumbai. Based on the discussion, it is clear that the blog-based approach to professional development for English teachers in Mumbai was a success as it generated new learning opportunities for teachers who were also largely enthusiastic about their new experience of online learning. They had positive attitudes towards ICT and acknowledged its effectiveness in classroom teaching and professional learning. Teachers demonstrated an interest to embrace technology that fosters collaboration and reflection for their professional learning. However, the blog was not used extensively and consistently by teachers for their professional development as findings demonstrate that teachers’ engagement in blog-based professional development reduced with time. So what issues hindered their online reflection, networking and collaboration over a period of time?
I found that teachers faced many barriers in ICT integrated classroom teaching and professional learning; time being the biggest barrier. There was not enough time for teachers to collaborate and that teachers' time was tight was no surprise. Teachers had teaching workload, school pressure to complete syllabus on time, large-scale assessment and marking. Their schools had a very exam oriented approach and that’s why the teachers’ primary aim was to complete the syllabus on time. Moreover, many teachers had out-of-school-hours workload as they had private tutoring jobs. This left no time for teachers to engage in new and innovative forms of professional learning, especially if those forms were not supported or mandated by their schools. While teachers knew that the blog could supply them with a huge database of free ICT resources for teaching English, they did not have time to engage in blog-based reflection, networking and collaboration. Maybe they needed more time to feel comfortable and confident about using a social learning tool even though they were excited about their new learning opportunity.

The value of teacher reflection, networking and collaboration could not be easily reconciled in education settings where school-mandated professional development programs traditionally supported product over process. Based on the professional development practices imposed on teachers by their schools, teachers were not exposed to ICT integrated teaching strategies, relevant to their subject needs and preferences. Blog was not the chosen form of long-term professional development for the teachers in this study. They merely followed what they were told by their school management. Teachers needed more school support and encouragement to practice teacher-centred and teacher-controlled professional development.

Also, teachers were still unaware of the cognitive aspects and the professional significance of online social learning. This means that not all teachers were familiar with the suitability of
Web 2.0 networking in their professional lives. And even if this study had helped them develop a positive attitude, knowledge and understanding towards online reflection, networking and collaboration, was that reinforcing enough for them to indulge in long-term blog-based professional development? Reflective practice and collaboration between teachers was not yet a critical component of their professional development, maybe because schools were too hierarchy-oriented to allow teacher-directed and teacher-controlled professional development. They did not consider teachers’ needs and preferences regarding the formats of their learning. This study suggests that a change in ICT practice for professional development could be possible with a change in attitudes and perceptions of teachers and their schools; when all the agents of change could be involved to bring about a change.

The results gave insights into the efficacy of blogs when used by English teachers in Mumbai for their professional development. These results demonstrated the potential usefulness of blogs in promoting reflective practice and collaboration with practicing teachers. I argued that innovation in classroom teaching and professional learning must be led by teachers. However, this study demonstrates that the blog was utilised effectively for reflective and collaborative purposes, only in a short time frame. Online communities could take longer to develop and may need more time and diverse interventions to get them to a significant networking and collaboration. Perhaps that was the major issue – the study was too small (sample) and too short (time frame) to expect to generate a sustaining online professional learning community. This could have accounted for the decrease in blog-based teacher reflection, networking and collaboration.

Professional development activities that change the outdated teaching-learning practices of teachers, cultivate role changes, boost teacher confidence and morale, improve their working conditions, and reduce their workload, can rekindle their enthusiasm for learning and expand
their ICT knowledge and skills. This study investigated a promising ICT approach to professional development for English teachers in Mumbai. Of course, ultimately, it is important to keep in mind, and to ensure that the aim of this research was not to promote technology for technology’s sake. Rather, the aim was to introduce a paradigm shift in the in-service training system for English teachers in Mumbai; that is highly centralised and heavily bureaucratic in nature. The discussion of findings revealed that sufficient time and supportive school culture could help the teachers to be more confident and open about embracing online teacher networks for professional development. The next and final chapter gives implications for future blog-based reflective and collaborative teacher professional development initiatives in ICT based on the current findings, analysis and discussion. It also recommends focuses of further investigations.
CHAPTER 6
CONCLUSION

6.1 OVERVIEW

This concluding chapter gives a summary of the research conducted and conclusions of the findings. It also provides implications for future policy and practice of innovative professional development, and also gives recommendations for further research.

6.2 SUMMARY OF THE STUDY

The study sought to investigate the attitudes of English teachers in Mumbai towards the use of ICT for classroom instruction and their professional development, the major barriers to effective integration of ICT in teaching of English and professional development, their professional development needs to develop their professional competence in ICT, and the prospects of web-based reflection, networking and collaboration for their professional development in ICT. It suggested alternative ways of professional development for English teachers in Mumbai using blog-based online learning environments. 32 English teachers from three private schools of Mumbai participated in this case study over a period of time. From 2013-2015, relevant literature was reviewed, range of qualitative data was collected from ICT interactive workshop observations, questionnaires, interviews and blog comments; and the findings were analysed and discussed to determine whether and how teachers adopted blog-based professional development. Findings revealed that teachers faced major barriers to ICT integration in teaching and blog-based professional development; lack of time being the biggest barrier. However, findings also revealed that teachers had positive attitudes towards ICT integrated teaching and professional development. The teachers believed ICT is useful for better teaching student learning. The teachers also had positive attitudes towards being part of the online professional learning community and were interested in collaborative blog-
based learning. Therefore, blogs had the potential to be an effective professional development tool for English teachers in this study.

**6.3 IMPLICATIONS**

This study has a few important implications. One of the most important pedagogical implications is that blog-based teacher professional development holds great potential in ESL contexts like India, but it should be conducted carefully and in consultation with teachers. It has to meet the needs of the English teachers it is aimed at, it must develop skills and knowledge which will improve the teaching of English in the classrooms, and more importantly, impact on student outcomes. Moreover, any attempt to replace the traditional teacher professional development programmes with online professional development programmes may backfire if teachers are not taken into confidence. Though blogs offer a collaborative opportunity to help teachers grow professionally, its future success is entirely dependent on the motivation of the participants through the support of their schools. Schools in this case could be enablers of new forms of professional development for their teachers. Schools need to be more open to change and support online networking and collaboration for teacher professional development.

The social environment of online activities for professional development is quite different from in-person interactions, therefore requiring new skills and behaviour in teachers. As teachers continue through their careers they will need guidance on new skills and professional understanding, provided that the culture of school enables this. Therefore, it could be useful to include a professional learning component that will teach participants not only how to collaborate to learn but also learn to collaborate. Teachers can also be supported and monitored while using web tools in their own learning situations. However, it is most
important that the school systems are in place to provide these professional development programmes and to support the teachers’ implementation of them in their learning.

Implementing a one-size-fits-all model of professional development is a typical error made by many schools in Mumbai which still acknowledge formal and face-to-face professional development. Schools must remember that teachers do not come in standard forms; they are irreducibly unique with unique attitudes, skills, experiences and learning needs. The schools which are rooted in mandating the traditional methods of professional learning for their teachers should be more open to organizing new learning environments. Schools have the potential to be blended learning places for teachers. The learning environment in schools of Mumbai must offer a variety of both formal and informal professional development systems, ranging from face-to-face workshops to online programs depending on teachers’ needs, so that teachers could take advantage of the methods which suit them best. Another possibility with innovative effective use of Web 2.0 technology in professional learning is by connecting teachers to larger national and international teacher communities. For this to happen, schools need to be open-minded and also encourage the use of other web-based tools for professional networking which are possibly more popular in India for personal interaction, such as Facebook, Twitter, and Skype. The schools should enable teachers with more practical opportunities based on their needs and preferences that relate ICT to pedagogy, and more time to produce and disseminate ICT-based learning material. Maybe till then, the school could appoint an ICT expert who is also a subject expert and who is in-charge of managing the school’s online professional learning platform for teachers.

Teaching can be a lonely profession. Teachers teach all day in their classrooms and enjoy brief encounters with colleagues in the teachers’ lounge/staff rooms or passing quickly in the hallway. There isn’t a lot of time to have a significant discussion about education and
learning. For many teachers in India, staff meetings and professional development workshops are insufficient and static mediums for enhancing their teaching efficiency and expertise. Teachers themselves will need to become involved, fulfilled, and motivated practitioners. This is where an online community of practice comes in. Teachers can join one, start meeting their peers online, get in conversations with other teachers in their situation, and learn ICT through online communications with other teachers trying to learn the same thing. A blog-based lifelong learning for teachers can help them to ‘connect’ with each other, synchronise ideas on a common platform and build a strong culture of sharing in the teaching community.

Most importantly, in order to enhance the utilization of ICT for educational purposes, schools should encourage their teachers to use ICT more frequently, use ICT co-operatively for their professional development, and schools should believe that collaborative professional learning through ICT may make a difference in the quality of their teachers’ work. Most elementary to the schools’ approach is the realization that the teachers must be given the tools to take the lead in the pedagogic innovations needed throughout the Indian education system.

6.4 RECOMMENDATIONS FOR FUTURE RESEARCH
My small-scale study was conducted with 32 English teachers in three progressive schools of the Mumbai prefecture. Based on the data and the conclusions drawn, the following topics for additional research are recommended:

Large-scale research on the use of Web 2.0 tools for second language teacher professional development purposes is still in its infancy in India. Future studies should include a broad range of populations in India by adding more diverse samples. In addition, further studies can be conducted in order to compare what has been found in the Mumbai context with other
similar contexts. Also, large-scale studies need to be carried out to see innovation in professional learning, when imparted on Web 2.0 platforms on a long term basis. However, successfully employing innovative professional development in India in the longer term also requires a thoughtful consideration and an in-depth investigation of external and internal barriers. There should also be action research studies to look into changes in teaching practice after teachers undergo such innovation. It will be quite interesting to know whether online professional development programmes are more or less effective than traditional professional development programmes in India.

The findings suggest that blogs have the potential to be reflective and collaborative devices for teacher professional development, when supported or mandated by schools. However, it remains unexplored whether school involvement could develop blog-based reflective practice and collaboration in the long run among school teachers in Mumbai. Future research could be carried out to understand what motivates teachers to seek out online professional development opportunities. Moreover, research exploring other mechanisms and strategies for engaging blog followers to become contributors will be very beneficial for future success in blog-based teacher learning.

There are several other emerging questions: How is the space to be created in the teacher’s busy schedule for Web 2.0 reflection, networking, collaboration and learning from one another? Who should create it? What is the role of schools in teacher professional development? Can policy makers and teachers work collaboratively to make this innovation in English Language Teacher professional development a reality in India? Can teachers and ICT experts work collaboratively to make this innovation in English Language Teacher professional development a reality in India?
My study was an attempt to explore the possibilities of employing a web-based tool for teacher professional development. I hope that my experience of building this virtual gathering place, in which new ICT ideas flourished, new methods and tools were developed, novice teachers learned about ICT integration and experienced ones became valued resources, will be useful to teachers in other contexts who are considering new forms of professional development. It is hoped that this will lead to more research and further exploration in a similar direction in the near future.

6.5 CONCLUSION
Teachers are the spine of an education system, including the Indian education system. The knowledge and skills a teacher possesses and the knowledge and skills she applies in teaching are most important influences on what students learn. But, teachers in this study were overloaded, overburdened, not very motivated, insufficiently trained, and they frequently dealt with difficult working conditions. Although being aware that by using online networking and collaboration, teachers could have easily shared authentic ICT resources, saved time and effort, reflected on their ICT experiences, and collaborated with other teachers to use ICT more effectively in the classroom, the teachers could not adopt blogs as the long-term practice for their professional development.

Perhaps the most formidable barrier to ICT enabled collaborative professional development is the conventional school culture, which usually considers a teacher's proper place during school hours to be in front of a class and which isolates teachers from each other and discourages collaborative work. It is a culture that does not set a premium on teacher learning and in which decisions about professional development needs are certainly not expressed by teachers, but by state, district, and school managers. School leaders in Mumbai should practice a changed vision for professional development, that nurtures their teachers’
involvement in decision-making, ownership, responsibility, and development of their professional learning. They must remind themselves that motivating teachers in using ICT innovatively is more crucial than acquiring a large number of computers. Sadly technology in Mumbai schools is being used not for making the teaching-learning process a pleasure for the students and their teachers but for showing off affluence to attract enrolments and making the education sector a business. None of these efforts will attain a meaningful scale and be a reality in developing locations like India unless the policy makers and educational administrators begin to envision our teachers as they do students—as learners with their own individual learning styles and backgrounds; who, like their students, need continuous school support, ongoing feedback and ongoing interaction with each other, so they can constantly improve their expertise.

Teaching solutions don’t lie in technology; they lie in what English teachers do with technology. If an educational system is to stimulate transformation, the entire system must be restructured to allow teachers to contribute more freely. The findings of my research resonate what Padwad and Dixit (2014) reported from their study of innovative professional development for English teachers in India, and identified that making provision for adequate time, breaking the hierarchy within the school system, and ensuring continuity and synergy between different formal and informal elements of professional development are important for the success of future professional development initiatives for teachers in India. Incomprehensibly, actualising a more useful pattern of teacher professional development obliges struggling against these limitations, yet it might likewise help to create a school culture that is more welcoming to teacher-led learning. The time and resources schools put into building and maintaining blog-based professional learning community for their teachers will benefit their teachers as they will engage in ongoing learning and purposeful collaboration that can have a lasting impact on their classroom practice and their students’
learning. And although it is difficult to make a convincing case in an Indian school set-up that better professional learning is one that teachers themselves create and manage, blogs are a lot more easy to produce, maintain, update and use, all controlled and driven by teachers themselves, a compelling argument for school managers and policy makers in India.

By supporting the use of blogs as a professional development tool, schools in India could create collaborative learning networks for their teachers in their specific contexts (both subject-specific and school-specific). Blogs could be a network for reflecting and sharing of practices within a community context, a community of teachers as learners with a common belief of collective learning. And although, the prospects of blog-based teacher professional development in this study was influenced by various exigencies – like the constraints of interest, time and needs – however, the spirit of Web 2.0 reflection and collaboration was encouraged in the teacher community. Teachers in this study have showed interest and potential to thrust their boundaries and actively craft challenges for themselves, learning from their own and each others’ experiences and adding to their ICT skills and knowledge, often in their own time.

A few years ago, if you had heard of a teacher based in Australia giving ICT tips to teachers based in Ghana, you might not have believed it. But today, ICT is becoming a common practice and is widely understood and accepted, even in India. Changes and developments in ICT are continuous and it is an extremely exciting time for its users. ICT could be used effectively for improving not just the way teachers teach in India, but also the way they develop professionally. It is through embracing and espousing new means of sharing, networking and collaborating, that teachers in India will be able to learn collectively, and renovate their professional development for better student outcomes. Through my research, I urge teachers, schools, policy makers, and future researchers in India to be inspired about
online communities of sharing, and to foster a love for innovative professional learning through ICT enabled teacher collaboration.
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APPENDICES

APPENDIX 1

QUESTIONNAIRE

Dear teacher,
I request you to fill in this questionnaire. Please answer all the questions as honestly as possible. I assure you that all responses will be held strictly confidential. I appreciate your time and generosity.

Ms Atiya Khan

A. Have you ever used the following tools for teaching English in your school?

1. Audio Speakers – YES / NO
2. Voice recorder – YES / NO
3. LCD Projector – YES / NO
4. Laptop – YES / NO
5. Interactive Whiteboard – YES / NO
6. Mobile Phone – YES / NO
7. Tablet – YES / NO

B. PUT A TICK (✓) IN THE BOX THAT BEST DESCRIBES YOUR SITUATION

<table>
<thead>
<tr>
<th>Sr No</th>
<th>ICT Availability &amp; Accessibility in the School</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Computers are available in every classroom of my school</td>
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<td>2.</td>
<td>Computers are connected to the Internet in every classroom in my school</td>
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<td>3.</td>
<td>Teachers can access computers and Internet easily in my school</td>
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<td>4.</td>
<td>There are enough computers for teachers to use in the school</td>
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<td>5.</td>
<td>I can easily find technical support when using ICT in the classroom</td>
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<td>6.</td>
<td>My school computer is regularly updated with software and applications</td>
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<tr>
<th>Sr No</th>
<th>Teacher’s ICT Knowledge &amp; Competency</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<td>7.</td>
<td>I have received sufficient ICT training during pre-service teacher education program</td>
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<td>8.</td>
<td>My school conducts regular ICT training sessions for in-service teachers of English</td>
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<td>9.</td>
<td>I use ICT for formative &amp; summative assessment and to provide students with feedback on progress</td>
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<td>10.</td>
<td>I prepare lesson plans with a basic reference to ICT practice</td>
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<td>11.</td>
<td>I find it easy to select</td>
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appropriate ICT resources for my teaching

12. I use ICT for communication and collaboration with other teachers of English

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Teacher’s Attitude Towards ICT</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tr>
<td>13.</td>
<td>ICT has improved the presentation of my teaching material</td>
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<td>14.</td>
<td>ICT makes English lessons more fun for my students</td>
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<td>15.</td>
<td>The use of ICT in teaching and learning excites me</td>
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<td>16.</td>
<td>ICT knowledge leads to my professional development</td>
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<td>17.</td>
<td>ICT has given me more confidence as an English teacher</td>
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<td>18.</td>
<td>I am interested in learning more about using ICT</td>
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<td>19.</td>
<td>I find using ICT time consuming</td>
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<tr>
<th>Sr No</th>
<th>Factors Discouraging the Teacher to Use ICT</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<td>20.</td>
<td>Colleagues’ negative views about ICT hinder me to use ICT in the class</td>
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<td>21.</td>
<td>School views about ICT discourage me to use ICT</td>
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<td>22.</td>
<td>Society views about ICT hinder me to use ICT</td>
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<td>23.</td>
<td>Shortage of class time hinders me to use ICT</td>
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<td>24.</td>
<td>Time needed to learn using ICT prevents me to use ICT</td>
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<td>25.</td>
<td>ICT distracts my students from the subject material.</td>
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<td>26.</td>
<td>Systems are slow; it would be quicker to use a book</td>
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<td>27.</td>
<td>Requirements of qualifications discourage me to use ICT</td>
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28. Do you think it is effective to teach English Language and Literature with ICT? Why/ Why not?
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
29. Have you experienced any difficulties in using ICT in your teaching? If yes, what are the possible reasons for this?
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30. How can English Teachers improve their knowledge and use of ICT?
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__________________________________________________________________________________________
__________________________________________________________________________________________
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C. Research Participant’s Background Information

SCHOOL LOCATION:
Suburb: ___________________ City: ___________________ Country: ___________________

GENDER: ___________________ AGE: _________________

TOTAL TEACHING EXPERIENCE: ___________________

EDUCATIONAL QUALIFICATIONS:
__________________________________________________________________________________________

Participant’s Full Name: ____________________________________________________________

Participant’s Signature:___________________________ Date:____________________
APPENDIX 2

LIST OF INTERVIEW QUESTIONS

1. How have you incorporated technology in your teaching of English?
2. How helpful is regular training on improving your ICT skills as an English teacher? Why?
3. Are you a regular blogger or do you read any blogs? If so, which ones?
4. What is your opinion about teacher blogging and the use of blogs in teacher networking and resource sharing?
5. Do you belong to any online educational communities?
6. Is teacher blogging a good tool for academic professional development of English teachers? Why?
7. What is your favourite ICT tool and why?
8. Describe the last new technology that you used in your teaching of English, and how you learned it?
9. What do you think about my blog? Did you find it useful?
10. Should schools set up blogs for their subject teachers for teacher collaboration and teamwork?
11. Would you like to be a part of an online community for teachers of English from Mumbai? Why?
APPENDIX 3

PLAIN LANGUAGE STATEMENT

Research Title: ICT enabled teaching of English in India
Research Student: Ms Atiya Khan
(Master of Education by Research student, RMIT University, Melbourne)
E-mail: s3423703@student.rmit.edu.au

Dear Research Participant,
I invite you to participate in a research project being conducted by me as part of the Master of Education by Research program from RMIT University.

Who is involved in this research project?
I am conducting research examining the attitudes and motivations of primary and secondary school teachers (teaching English to students from grades 3-10) toward ICT integrated teaching of English in Mumbai as part of my postgraduate thesis, in the School of Education at RMIT University, Melbourne. I am researching under the supervision of Dr Richard Johnson and Dr Nicky Carr, and my research has received the approval of the RMIT Human Research Ethics Committee (HREC).

What are the questions being addressed?
You will answer the following questions through my research study:

✓ What are the beliefs and views of teachers of English in Mumbai towards the use of ICT for instructional purposes?
✓ What resources can be used to excite and motivate teachers of English to practice ICT integrated teaching?
✓ What do teachers perceive they need in order to develop their professional competence in technology?
✓ What measures can be adopted to create awareness among teachers of English in Mumbai towards ICT enabled teaching?

Why is it being conducted?
My research is based on the use of technology in teaching of English, teacher networking, and academic professional development of English teachers in Mumbai. I am a teacher of English by profession and I want to understand the technological perceptions, proficiencies, barriers and motivations of teachers teaching English in Mumbai. I am also investigating to determine whether blogging can be an effective tool for resource sharing and ICT integrated classroom teaching of English. For that purpose, I have created an ICT blog consisting of many ICT resources that teachers of English can use as an effective teaching tool. The blog link is teachingenglishwithict.wordpress.com

Why have you been approached?
I am approaching teachers (both primary & secondary) teaching English to students from grades 3-10 in schools across Mumbai with an objective to obtain a broad sample of the English teaching population.

If you agree to participate, what will you be required to do?
If you agree to participate, you will be required to fill a questionnaire and give an audio-recorded interview.

What is the nature of the questionnaire and interview?
The questionnaire will take about 10-15 minutes to complete and is divided into 5 sections as follows:

- ICT availability and accessibility in the school
- Teachers’ ICT knowledge and competency
- Teachers’ attitudes toward ICT
- Factors discouraging teachers to use ICT
- Demographic/background information (age, gender, education, teaching experience etc);

The interview will take about 15 minutes to complete and I will ask questions about the teacher participant’s ICT perceptions, experiences, proficiency, barriers and suggestions. The interview will be audio recorded and professionally transcribed by me.

What are the risks associated with participation?
It is envisaged that there are NO risks to participants arising from involvement in the study. You have the right to withdraw your participation at any time. Also names of the participants will not be used or disclosed as pseudonyms (fake names) will be used.

What are the benefits associated with participation?
My research aims to identify ways to improve the use of ICT in the teaching of English at schools in Mumbai. Doing so will create an environment where all teachers of English are provided the opportunity to reach their full professional potential. Therefore, it is hoped that participants (teachers) will benefit from participation in the study.

What will happen to the information you provide?
All the information you provide will be treated confidentially. Only the investigators will have access to the data collected. Moreover, all the data will be aggregated as the investigators plan to use de-identifying technique of pseudonyms. All data will be securely retained at RMIT University for a minimum of five years after publication, before being destroyed. The data analysed may be published, and a report of the project outcomes will be provided to RMIT University as a part of the M.Ed. thesis and it will be publically accessible online at the RMIT repository (RMIT library of research papers) and may appear in academic journals or publications.

What are your rights as a participant?
Participation in the study is voluntary and you have the right to withdraw your participation at any time, without prejudice.

Whom should you contact if you have any questions? If you have questions about any aspect of the research study please feel free to contact Ms Atiya Khan (s3423703@student.rmit.edu.au).

By participating in this research, you are making a valuable contribution. We, the investigators, appreciate your input, and thank you beforehand for sharing your experiences and thoughts.

Ms ATIYA KHAN
(Research Student)
M.Ed. by Research student
Student ID: s3423703
RMIT University, Melbourne

Ethics Approval Number: CHEAN A 0000017084-01/14

If you have any concerns about your participation in this project, which you do not wish to discuss with the researchers, then you can contact the Ethics Officer, Research Integrity, Governance and Systems, RMIT University, GPO Box 2476V VIC 3001. Tel: (03) 9925 2251 or email human.ethics@rmit.edu.au
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PARTICIPANT INFORMED CONSENT FORM

1. I have had the project explained to me, and I have read the information sheet.

2. I agree to participate in the research project as described.

3. I agree:
   - to undertake the tests or procedures outlined.
   - to be interviewed and/or complete a questionnaire.
   - that my voice will be audio recorded.

4. I acknowledge that:
   a) Having read Plain Language Statement, I agree to the general purpose, methods and demands of the study.
   b) I understand that my participation is voluntary and that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied (unless follow-up is needed for safety).
   c) The project is for the purpose of research. It may not be of direct benefit to me.
   d) The privacy of the personal information I provide will be safeguarded and only disclosed where I have consented to the disclosure or as required by law.
   e) I am aware that any information provided by me will not be disclosed to my employer and my participation is not related to my employment and work duties.
   f) The security of the research data will be protected during and after completion of the study. The data collected during the study may be published, and a report of the project outcomes will be provided to RMIT University as a part of the M.Ed. thesis. Any information which will identify me will not be used.
   g) I understand that by signing below I am providing my informed consent to participate in this study.

Participant’s Consent

Participant’s Full Name: ________________________________________________________________

Participant’s Signature: _________________________________     Date: ________________________

Ethics Approval and Project Number: CHEAN A 000017084-01/14

If you have any concerns about your participation in this project, which you do not wish to discuss with the researcher, then you can contact the Ethics Officer, Research Integrity, Governance and Systems, RMIT University, GPO Box 2476V VIC 3001. Tel: (03) 9925 2251 or email human.ethics@rmit.edu.au
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ETHICS APPROVAL LETTER

RMIT UNIVERSITY
Design and Social Context College Human Ethics Advisory Network (CHEAN)
Sub-committee of the RMIT Human Research Ethics Committee (HREC)

Notice of Approval

Date: 08 May 2014
Project number: CHEAN A 0000017684-01/14
Project Title: ICT Enabled Teaching of English in India
Risk classification: Low Risk
Investigator: Dr Richard Johnson and Ms Atiya Khan

Approved: From: 08 May 2014 To: 22 July 2015

I am pleased to advise that your application has been granted ethics approval by the Design and Social Context College Human Ethics Advisory Network as a sub-committee of the RMIT Human Research Ethics Committee (HREC).

Terms of approval:

1. Responsibilities of investigator
   It is the responsibility of the above investigator/s to ensure that all other investigators and staff on a project are aware of the terms of approval and to ensure that the project is conducted as approved by the CHEAN. Approval is only valid whilst the investigator/s holds a position at RMIT University.

2. Amendments
   Approval must be sought from the CHEAN to amend any aspect of a project including approved documents. To apply for an amendment please use the ‘request for Amendment form’ that is available on the RMIT website. Amendments must not be implemented without first gaining approval from CHEAN.

3. Adverse events
   You should notify HREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.

4. Participant Information and Consent Form (PICF)
   The PICF and any other material used to recruit and inform participants of the project must include the RMIT University logo. The PICF must contain a complaints clause including the project number.

5. Annual reports
   Continued approval of this project is dependent on the submission of an annual report. This form can be located online on the human research ethics web page on the RMIT website.

6. Final report
   A final report must be provided at the conclusion of the project. CHEAN must be notified if the project is discontinued before the expected date of completion.

7. Monitoring
   Projects may be subject to an audit or any other form of monitoring by HREC at any time.

8. Retention and storage of data
   The investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

In any future correspondence please quote the project number and project title.

On behalf of the DSC College Human Ethics Advisory Network I wish you well in your research.

Suzana Kovacevic
Research and Ethics Officer
College of Design and Social Context
RMIT University
Ph: 03 9925 2674
Email: suzana.kovacevic@rmit.edu.au
Website: www.rmit.edu.au/dsc
APPENDIX 6

FIELD NOTES

Workshop 1

Workshop 2

Workshop 2 cont.

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Workshop 2 cont'd

School must set up an environment for collaboration and sharing hands-on experience during PD meeting with other schools. "Schools have to be open to the use of tools for teachers' PD. Showable tools for teachers, blogs, e-mail communication.

Workshop 3

Internet for teachers, comfortable blog is helpful for their formal workshops.

I believe it encourages us socially, begs us to find a opportunity for teachers to feel comfortable to deliver our ideas without being judged or evaluated. Unless training, workshop, it will not motivate us more secure in that environment.

Teacher education, competitiveness, presence and power change attitudes.

I wish we had something like blogs, or online communication more commonly practiced from 8-85 days. At least it would have saved all of us energy and help in preparing lesson plans of every practice teaching lesson during year. (Teacher, Prague, Krajov)

Workshop 3 cont'd

We would have been done then."

(laugh)

Change practice, school culture; initiate change, co-operative professional development, share, "teacher talk." See blogs, share workload, help each other through blogs.

I think blogs can be something, how do we become the trainers and through blogs we can teach each other.

Log in network, teachers, let contribution be of giving, more of trading.

"Blogging can spread ideas, teachers who don't post any resource or share any idea. They