

# Exploring the Effects of Teacher Education on Teacher Quality and Student Achievement in Pakistan

Mabrukh Zabid\*, Mehvish Saleem\*\*

## Abstract

*Amongst a variety of resources present, a teacher is considered to be the primary tool for enhancing the process of student learning. To be able to act as effective “agents of change” for their student, the teacher needs to enhance personal and pedagogical skills which can primarily be achieved through teacher education. This paper aims to be contributing to a broader understanding of language teacher education in the context of Pakistan. Employing a case study research method, the present study explored how teachers’ pre-service education affects teacher quality and student learning. A total of two tertiary-level novice teachers and seven first-year undergraduate students from a public sector university in Pakistan participated in this study. Data were generated using teacher observation, teacher and student interviews, document analysis including teacher lesson plans and diary, course outlines and students’ work samples. Thematic analysis of the data showed contradictory results between the classroom practices of the teachers and their effect on students’ learning. The teacher with pre-service education used the appropriate methodology and made well-informed decisions which resulted in the improvement of students’ learning. In contrast, the other teacher used traditional modes of teaching. Though happy with the classes, students found no practical use of what they learnt in the lessons. The study concludes that pre-service teacher education should be made compulsory for individuals who wish to become teachers.*

**Keywords:** *Pre-service Teacher Education, Teacher Quality, Student Learning, Qualitative Research*

**JEL Classification:** *I23*

## INTRODUCTION

Both students and parents see the teacher as an agent of change (Olaitan, 1983) and this cannot be truer in the context of Pakistan, were not just the socio-cultural norms, but also religious values put the teacher on a high pedestal and teacher is seen as someone who has the potential to shape the lives of their students. Although this is true, sadly, in our context, most

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*Correspondence:*

<sup>1</sup>*Institute of Business Management, mabrukh.zabid@iobm.edu.pk*

<sup>2</sup>*Assistant Professor, Institute of Business Management, mehvish.saleem@iobm.edu.pk*

of the teachers lack the proper knowledge and training to bring about this change (Crandall 1998). The students are force-fed information which they retain only for their exams and forget at their earliest convenience. One of the main characteristics that influence student learning and achievement is the quality of a teacher (Kubanyiova, 2012). While there is a substantial number of research studies conducted in the international contexts such as USA and China which suggest the need for effective policies promoting and influencing teacher education (Hammond, 2002; Gore, Lloyd, Smith, Bowe, Ellis, and Lubans, 2017; Kubanyiova, 2012; Li, Zhu, and Lo, 2019), in the context of Pakistan, research on teacher education in general, and language teacher education in particular, remain ignored.

Moreover, many studies have shown the positive influence of teacher education on the teachers' quality and student achievement (Ashton & Croker, 1983; Blomeke, Olsen, and Suhl, 2016; Burroughs, Gardner, Lee, Guo, Toutou, Jansen, and Schmidt, 2019; Desimone, 2009). In the context of Pakistan, however, there is a lack of research that provides evidence to shape teacher education policies, a concern which is very common in the developing country context (Rehmani, 2006).

Bearing in mind these gaps, this paper aims at studying the role of pre-service teacher education in Pakistan in order to provide insights into how it affects the quality of a teacher and student learning.

## **LITERATURE REVIEW**

Teacher education typically focuses on two aspects, namely; education that is, developing knowledge and learning and teaching and, training that is, developing skills for the practical application of teaching (Crandall 1998). The fundamental purpose of equipping teachers with knowledge of teaching and helping them to develop professionally is not just for the teachers themselves to gain a higher status in their field (Oalitan, 1983) but it is also that teachers can be able to do what is expected of them; to provide students with the best possible education using appropriate methodologies enabling learners to be successful not just in their exams but in their life also (UNESCO, 2000).

The present study draws on the theoretical framework proposed by Prediger (2019), which conceptualizes content-specific teacher expertise by taking into account an individual teacher's situated practices in order to cope with the contextual needs in simulated or real classrooms and their interactions with the fundamental categories, orientations, and pedagogical tools. The content-specific teacher expertise framework includes five constructs namely a) jobs, which are characterized as complex contextual needs of content teaching relevant to the content of professional development; b) practices, which involve the teachers' repeated pedagogical practices for managing with these jobs; c) pedagogical tools which are implemented to manage the job; d) orientations which involve subject-specific beliefs that guide teachers' perceptions (e.g. beliefs about the subject); e) categories, which refer to conceptual knowledge that appear from content knowledge and pedagogical content knowledge. This framework details components of teacher education essential for teacher quality and student achievement.

### *Teacher education and teacher quality*

Many researchers argue that the two principal ways in which teacher quality can be achieved

include the development of pedagogical skills and attention to processes in teacher training (Crandall 1998). Ashton and Crocker (1987) in their paper analyzed a total of 7 studies to find out the link between a teacher's course work and performance in class. The course work included both the professional development of the teacher and the content knowledge of their respective subjects also. The results of their analysis show a significant link between the coursework and performance in class. Four out of seven studies concluded that there was a positive relationship between the two factors. For example, Perkes (1968) found in his study that the science teachers who had more credits interacted with students more, asked more hypothetical questions and emphasized more on principles that have real-life applications. In comparison to this, he found that teachers who had fewer credits were more likely to follow traditional teaching methods like lecturing and asking factual questions.

Similarly, Ferguson and Womack (1993) also report that teacher education is fundamentally essential to enhance the quality of teachers. They compared the literature present between teachers who only had content knowledge and those who also had certification and credits of teacher education and concluded that it was the education course work that predicted the effectiveness of the teacher in class.

### *Teacher education and student achievement*

Hammond (2002) in her analyses suggests that a growing body of literature now shows that amongst all other factors that influence student learning and achievement, most of it is credited to the professional development of teachers. Analyzing studies done across the US she concluded that students of US as compared to those of other countries achieve good in reading internationally but not in math, coincidentally teachers in the US who teach reading are those with more credits because since the 1980s the policies encouraged a lot of training and development for teachers that centred on reading. As compared to this, teachers who teach math generally have weaker qualifications.

Joyce and Showers (2002) in their book on teacher training and development also stress that enhancing student learning is only possible when teachers also learn how to learn, and it is just as important as their professional development and acquisition of new knowledge. If done so successfully, it is one of the main factors through which teachers learn how to deal with different kinds of learners and aspects of the curriculum, and these collectively generate an environment that enables student learning - something which is what all proper training and development strive to accomplish.

Additionally, according to a report by the institute of educational sciences, US department of education (2007), professional development can be translated into student achievement through three main steps. First is the professional development itself, which should be of substantial quality. This development then leads to an increase in the level of skills and knowledge in students. Next, this gained knowledge improves the classroom practices of the teacher, which in turn then enhances student learning. Now, although all this is true, even if one step is missed in between or not appropriately implemented, student achievement will not take place.

However, amongst the literature on teacher education in Pakistan, most of it points out the issues and challenges only (Ali, 2011; Gopang, 2016). Highlighting factors such as the quantitative expansion of teacher education over qualitative expansion to be one of the main

reasons that teachers lack basic knowledge of how to teach (Aziz et al., 2013) but a deeper understanding of language teacher education and how it affects teacher quality and student learning is almost nonexistent in the context of Pakistan.

Pakistan needs more effective and substantial programs that focus on the qualitative expansion of teacher education instead of just quantitative. The importance and need for our teachers to be educated in different aspects of teaching which includes not just content knowledge but also knowledge of how to teach before they step into a class full of learners cannot be stressed enough (Borg, 1998; 2006).

This study aims at extending understanding of pre-service teacher education at the higher education level in Pakistan. It will address the following research questions:

- 1 How does pre-service teacher education affect teacher effectiveness?
- 2 In what ways does pre-service teacher education affect students' learning?

## **RESEARCH METHODOLOGY**

This study is situated within the social-constructivist paradigm and upholds the constructivist view that “knowledge and truth are created rather than discovered, and that reality is pluralistic” (Richards, 2003, p. 3). Recent approaches to the study of language teacher education have emphasized on more holistic, qualitative insights (Borg, 1998; Kubanyiova, 2012). In an attempt to gain a deeper understanding of teacher education, this study employed a case study research method, which can yield rich, in-depth and contextualized data (Yin, 2014). Using a longitudinal case study framework, data were generated with one male and one female tertiary-level, ESL (English as a Second Language) teacher and seven undergraduate students at a university in Pakistan over six months. Teacher participant in this study was selected using a purposive criterion-based sampling technique (Ritchie, Lewis and Elam, 2013), which included exploring experiences of teachers with and without pre-service training so that, they could reflect upon their diverse teaching experiences. The participants were selected given their willingness to engage in the research for a prolonged period and their ability to reflect on their experiences.

The first participant, Alice (a pseudonym), was a novice teacher at a university in Pakistan where she was teaching English language Compulsory course in a Bachelor's degree program. Alice had a Master's degree in English Linguistics and also completed a course on teaching the English language during her master's course work. She was 27 years old when she began her teaching at university following six months of teaching in a school in Pakistan.

The second participant, Max (a pseudonym), was also a novice teacher teaching English language Compulsory course in a Bachelor's degree program at a university in Pakistan. Max completed his Master's degree in English Literature and had no prior teaching experience. Also, he did not have any pre-service teacher education before teaching at the university level. He was 26 years old when at the time of this study. While from Alice's class, a total of five students namely Salman, Ahmed, Anum, Tasneem and Hafsa (pseudonyms) agreed to be a part of this study, only two students namely Ayesha and Talha (pseudonyms) volunteered from Max's class.

Data were generated using three different data collection tools. This includes teachers' reflective diaries, in which the participant teachers recorded their experiences regularly. Teacher reflective diaries focused on how the participant teachers introduced a new topic, what techniques they used, how they managed the class, how much of the content covered in class was applicable and useful outside the classroom, and as these were English language classes so what improvement did the students make in any of the four language skills. Then, semi-structured interviews were conducted with teacher participants to explore teachers' language learning beliefs, decision-making processes, and personal perception of their in-class teaching-learning practices. Finally, documents were analyzed which included course outline of the language teaching course that Alice studied, course outlines used by the participant teachers in their respective classes, lesson plans, writing samples of the students, Teacher reflective diary written by Alice, and the course pack used by Max to teach the students. All possible ethical issues were taken care of, the participants had signed their consent forms willingly, and all efforts to keep the participants anonymous and confidential were also made.

The data were coded line-by-line using the data management software, Atlas.ti. The data were then analyzed using thematic analysis (Braun & Clarke, 2006; 2013) which involves identifying, analyzing, and reporting themes or patterns within data. Throughout the analysis, the two sets of data from individual teachers were compared, and the finding and discussion that follow are considered in light of the social constructivist perspective.

## **RESULTS & DISCUSSION**

The findings of this study show that pre-service teacher education positively affects teacher effectiveness. The data analysis revealed that the participant teacher with pre-service training that is, Alice was more successful. She used appropriate methodologies and used a variety of teaching techniques and tools which displayed not only her quality as a teacher, but it also enhanced the learning experience and outcomes of her students. She had full awareness of language learning beliefs. She shared in an interview that an in-depth theoretical understanding was developed during her course work, and she understood better what could be expected from the learners. She also discussed how her course work helped her realize that rote learning is not the only way, but one has several options to choose from keeping in mind the students' needs and the context of teaching. These findings draw a similarity with earlier research which also showed that effective teaching requires pedagogical knowledge (Depaepe & Konig, 2018; König et al., 2011, 2014), which can primarily be acquired in real-teaching contexts.

While analyzing the data from interviews and observations, one of the most recurrent themes that came up was that the students had heightened self-esteem in connection to the teacher's positive and encouraging attitude towards her class. This not only led them to improve their speaking skills but also encouraged them to ask more questions in the class and led them to view errors as learning opportunities. These findings help address the second research question of the study and show that pre-service teacher education affects students' learning. All five students said that their language skills had improved one way or the other; Anum said that her speaking and academic writing both improved during the semester, she was able to give specific examples of tenses and how she had a better sense of maintaining tenses in her writing. Four out of five students exhibited that awareness of why they were being taught the way they were being taught, and they found that the language skills they learnt were beneficial

in their everyday life. Even a student, Ahmed who expressed concern that he thought that the classes were below his level and he already had the skills that the teacher was trying to teach, he still came to class because he found the teachers teaching style exciting and different from others. Interviews with Alice and an analysis of the outline of the course she took showed a strong connection of her pre-service course work with her quality as a teacher and its positive influence on student learning and achievement, which has also been confirmed by earlier studies on teacher quality and student achievement (Harris & Sass, 2011; Kraft, 2015). In Alice's own words:

*"I would never have understood that learning could (and should) be personalized to the individual or would have learned a more healthy way of approaching learner errors if I had not studied TESL (Teaching of English as a Second Language), this course not only gave me a language to explore these problems in but it also gave me literature to consult if I had problems."*

On the other hand, an analysis of Max's data suggests his lack of knowledge about language teaching. Also, the data revealed that he followed flawed models of language teaching. During an interview, it was found that the shapes his teaching methodologies according to how he was taught as a student and when asked about his language learning beliefs, he expressed that he was not aware of the different theoretical beliefs that could shape the ways one teaches language. This lack of awareness was also transferred to his students. Ayesha, a student when asked about her classes with Max, thought that the teacher was "okay" and that his traditional style of teaching was what she expects from teachers at this level. According to Max, other teaching strategies like the use of group work suited better only to young learners.

Data analysis of student interviews showed that when compared to the students of Alice, Max's students were only concerned about passing exams and found no use of these language classes outside the classroom or in their real life. Students also reported that they lacked basic awareness of language learning and thought that they did not need these classes; most students were irregular and were not motivated enough to come to an early class. Moreover, the data from the interviews with students showed a contradictory result. On the one hand, Talha thought that he did find the classes exciting and learnt grammar; however, interestingly enough, he found no use of what he learned in life beyond his exams. Throughout the semester, the teacher used traditional teaching methods which included lecturing, asking the students to do grammar exercises from their books and use of factual questions.

Thus, the present study provides insights into how pre-service teacher education affects teacher effectiveness. The data revealed that while Alice, who had pre-service training, used appropriate methodologies and used a variety of teaching techniques and tools, Max, who did not receive any pre-service education employed flawed models of language teaching. Moreover, the study provides an understanding of how pre-service teacher education helped Alice's students in improving their speaking skills as well as encouraged them to ask more questions in the class and view errors as learning opportunities. Interestingly, an analysis of the data of Max's students revealed that while some students found the lectures to be interesting, others felt these were not as effective. It would be useful for future studies to explore in more detail students' learning achievement about pre-service teacher education.

## CONCLUSION AND RECOMMENDATIONS

This study concludes that teacher education plays a vital role in student learning. The education system in Pakistan needs to make every effort to try and provide students with the best possible learning experience so that they can become lifelong independent learners and contribute their part in making this world a better place to live in. For this purpose, teachers, teacher educators and policymakers have a huge responsibility to incorporate teacher education program which can help support teachers and enhance the quality of teaching and learning in ways that promote teacher and learner autonomy (Cheon, Reeve and Vansteenkiste, 2020). Although as presented in the literature, there is substantial evidence from international contexts that teacher education has a direct effect on student learning, this study provides insights about an under-researched context that is, Pakistan. This study calls for more support for an initiative that can promote pre-service teacher education in Pakistan. For this purpose, perhaps it might be useful to look at some of the existing pre-service teacher education programs to a better understanding of what pre-service teachers are expected to know and do (Ellis, Alonzo, Nguyen, 2020).

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