



## TRANSFORMATION OF PROSPECTIVE TEACHERS' PEDAGOGICAL BELIEFS DURING A PRE-SERVICE B.Ed. PROGRAMME IN PAKISTAN

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### ABSTRACT

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Teachers' pedagogical beliefs play a vital role in the process of teaching and learning. These beliefs are often reflected in their practices which lead to the formation of their instructional decision making. Pre-service teacher education programs are offered in many universities of Pakistan with the aim to prepare professional teachers with strong beliefs in the value of teaching profession. Therefore, this qualitative case study aimed to explore the transformation of pre-service prospective teachers' beliefs regarding teaching skills during a Bachelor of Education (B.Ed.) program in the context of Khyber Pakhtunkhwa (KP). The data were collected from eight participants through semi-structured interviews in two phases: before teaching practice and after teaching practice. Findings revealed that pre-service teachers joined B.Ed. program with certain traditional beliefs about teaching skills that were rooted in their past experiences as students. The transformation of those beliefs took place at the time of teaching practice in a real classroom. The paper concludes that only coursework of pre-service teacher education might not be sufficient to transform prospective teachers' beliefs, rather the teaching practice should be a contributory factor in transforming their pedagogical beliefs. This could mainly be attributed to the prospective teachers' practical experiences in real classroom situations during the teaching practice. The study has important implications for teacher educators and educational researchers in terms of highlighting the important role of teaching practice in the professional preparation and development of prospective teachers.

**Contribution/Originality:** The main contribution of this paper is its focus on the role of pre-service teacher education in the development of pre-service teachers' pedagogical beliefs. This study is one of the first studies to examine the transformation of prospective pre-service teachers' beliefs regarding teaching skills and attitudes required for formation of their instructional design making and for becoming effective classroom teachers in the Pakistani context.

## 1. INTRODUCTION

Teachers' beliefs play a central role in guiding their teaching practices (Khader, 2012). According to Barcelos (2003), beliefs are practical modes of perceptions which lay a foundation for the demeanor of an individual. Similarly, Khader (2012) considers beliefs as a set of personal ideas generated and deeply rooted in the psychological and rational contents of the teachers that guide their teaching behavior. There is a substantial amount of literature

that supports association between teachers' beliefs and their teaching practices (Whitley, Gooderham, Duquette, Orders, & Cousins, 2019). Further, teachers' beliefs have direct influence on their choice of instructional practices (Wang & Du, 2016; Wu, Palmer, & Field, 2011) that ultimately shape classroom environment and students learning outcomes (De Vries, van de Grift, & Jansen, 2014). Teaching practice is often a reflection of teachers' beliefs about the teaching learning process. Beside practices, teachers' teaching strategies, their planning processes and their relationship with the learners are deeply influenced by their beliefs (Bashirrudine, Khan, Younas, & Dayan, 2012; Vartuli, 2005). It is argued that teachers' beliefs regarding the usefulness of one or other teaching strategy may lead to adopting those strategies in the classroom settings (Debreli, 2012).

In pre-service teacher education programs, teacher educators often hold certain beliefs. These beliefs are rooted in their past experiences as students at school, or during pre-service teacher training (Hargreaves, 2000). Furthermore, Meirink, Meijer, Verloop, and Bergen (2009) have categorized teachers' beliefs into two main categories: subject matter oriented and student oriented. The former refers to the traditional understanding of teaching that focuses on the transmission of knowledge without students' involvement. On the other hand, students' oriented beliefs are more constructivists in nature that mainly focus on students' engagement in learning and considering teachers as facilitators (De Vries et al., 2014).

It is important to note that teachers' beliefs about pedagogical skills are not open to quick transformation as these beliefs are deeply rooted in their prior experiences (Liu, 2011). Therefore, it requires time, efforts, and opportunities to 'give up' past beliefs and establish new pedagogical beliefs. With the changing dynamic of education teacher education institutions around the world aim to prepare professional teachers that can align their classroom practices to societal demands. It is mainly because teachers' beliefs not only influence students' learning but also promote interest towards personal development (Vermunt & Endedijk, 2011).

Pre-service teacher education programs have been found effective in transforming the beliefs of the pre-service teachers about teaching profession and their teaching skills (Sheridan, 2016). In pre-service teachers programs, prospective teachers bring certain beliefs that are embedded with their personal experiences as a school student (Hargreaves, 2000) that can be changed over time through their exposure to new concepts and experiences. Teaching practice is one way to provide an opportunity to pre-service teachers to transform their beliefs by practically implementing the learned concepts and theories in real classroom situations (Ertmer, 2005; Han, Shin, & Ko, 2017). This change in beliefs occurs mainly due to gaining an insight into the concepts and skills of teaching through concrete experiences (Korthagen, 2017).

The general purpose of the pre-service teacher programs is to develop beginning teachers with strong personal and professional beliefs about teaching. Such teachers are expected to have the ability to transform classroom teaching from traditional (one-way and subject oriented) to modern (constructive and active teaching). Thus, pre-service teacher education institutions in Pakistan have been making efforts to overcome the challenges of the country's education system (including scarcity of professional teachers with strong pedagogical dispositions (Memon, 2007). In this regard, many pre-service teacher education programs including B.Ed. are currently being offered by the universities across the country. Keeping in view the importance of teachers' beliefs about pedagogical skills, the 'national professional standards for teachers in Pakistan' are focused on strengthening teachers' pedagogical beliefs along with their practical teaching skills (Government of Pakistan, 2009).

The primary aim of B.Ed. programs is to prepare teachers who have better understanding of modern pedagogical skills and who can stimulate the quality of teaching learning inside the classroom. However, without changing the beliefs of prospective teachers, it would be difficult to improve classroom practices. Therefore, the structure of B.Ed. program is designed in a manner that can transform teachers' beliefs about pedagogical practices. The B.Ed. program is comprised of course work related to different pedagogical strategies along with teaching practice. Teaching practice provides an opportunity to pre-service teachers to implement the theoretical knowledge in real classroom. Several studies have been conducted on pre-service teachers' beliefs in Pakistan. For instance,

self-efficacy beliefs of teachers (Caprara, Barbaranelli, Steca, & Malone, 2006; Tschannen-Moran & Hoy, 2007) beliefs about the purpose of education and the role of teachers (Dayan, Perveen, & Khan, 2016; Demirbolat, 2006) and language teachers' beliefs about learning English language (Bashirrudine et al., 2012; Debreli, 2012; Mattheoudakis, 2007). However, there has been limited research on the transformation of pre-service teachers' beliefs about teaching skills. Therefore, this study mainly focused on the transformation of pre-service teachers' pedagogical beliefs through teaching practice in B.Ed. program at one of the public sector teacher education institutes in Khyber Pakhtunkhwa, Pakistan.

The study, therefore, explored possible answers to the following research questions:

1. What beliefs do pre-service teachers have about teaching skills at the beginning of the training program?
2. Do pre-service teachers' initial beliefs change after the completion of the teaching practice? If at all, what type of changes do they experience in their beliefs about teaching skills?

## 2. METHODOLOGY

This qualitative study employed a case study approach. A qualitative design allows individuals to construct social reality through interaction (Merriam, 2009) which makes it possible for researchers to explore phenomena of research interest in detail (Creswell, 2012). A case study approach enables the researchers to capture the complexity of the participants' action, perception and interpretation (Merriam, 2009). Such a design, therefore, suits the purpose of this investigation, which aims at understanding the complexity of novice teachers' learner-teacher transition and the degree of control they have over their initial years of teaching.

A total of eight purposively selected participants, enrolled in the B.Ed. program, participated in this study. The criteria for selection of participants included: one, having a master's degree prior to B.Ed.; two, having completed coursework of B.Ed. and are ready for teaching practice. The instructional period in the program lasted for a maximum of nine months out of which a period of one month was spent by the pre-service teachers in local secondary schools getting practical teaching experience called teaching practice (teaching practicum). This teaching practice took place after the completion of the content related areas. Before teaching practice, pre-service teachers attended the teaching methodology courses during the first eight months of the training. They were then sent to selected public and private schools of the district. Each student spent a period of four weeks in the school and taught two or three subjects to elementary and secondary students.

The data were collected through semi-structured interviews, which were conducted at two points i.e. pre and post the teaching practice. In the pre-teaching practice interview, a series of questions related to the prospective teachers' beliefs about teaching were asked from the participants. The purpose of the first round of interviews was to document participants' initial beliefs prior to attending actual classrooms. These were conducted in the premises of the teacher education institute when the pre-service teachers had their initial orientation and subject related sessions but had not yet begun their teaching practice. As soon as the participants completed their teaching practice of four weeks in the school, the second phase of the interviews took place. The interviews were conducted in the participants' respective schools where they were teaching as prospective teachers. All the interviews were audio recorded. Since the participants were non-native speakers of English language, the interviews were recorded in their national language *Urdu*. The audio recorded interviews were then transcribed and translated into English.

The data were analyzed through thematic analysis approach (Creswell, 2012) that was carried out in three main steps i.e. coding, categorization and theme development. In the first step, initial codes were assigned to each segment of the data. After initial coding, a thematic map was developed and extracts of relevance from coded data were collated within themes. Once all thematic maps were developed, the coded segments were classified according to each thematic category. Categories of relevance were grouped together into themes and sub themes. In order to refine the themes, all the coded extracts were read carefully and given names. The findings were presented in two themes: initial beliefs and transformed beliefs with support of evidence.

### 2.1. Participants Demographics

Altogether, eight prospective teachers who were enrolled in the B.Ed. program in the selected university participated in this study. All the participants were females having average age of 25 years. They held academic qualification in different subjects including science, social sciences, and literature. Some of the participants had received their schooling in public schools while others had studied in private schools. This diversity helped in understanding their initial beliefs they brought from their schooling. Importantly, none of the participants held any prior teaching experience. Most of them were keen to join teaching as a profession. Some of the participants, however, had joined B.Ed. program due to family pressure rather than with their own intentions of becoming future teachers.

## 3. FINDINGS

The analysis of data revealed the following major themes regarding how the beliefs of participants went through a change during teaching practice in the pre-service teacher education program. The themes have been presented under two broad categories: Initial Beliefs of Prospective Teachers about Teaching, and Transformation of beliefs about the process of Teaching. Figure 1 is a diagrammatic representation of this thematic analysis.

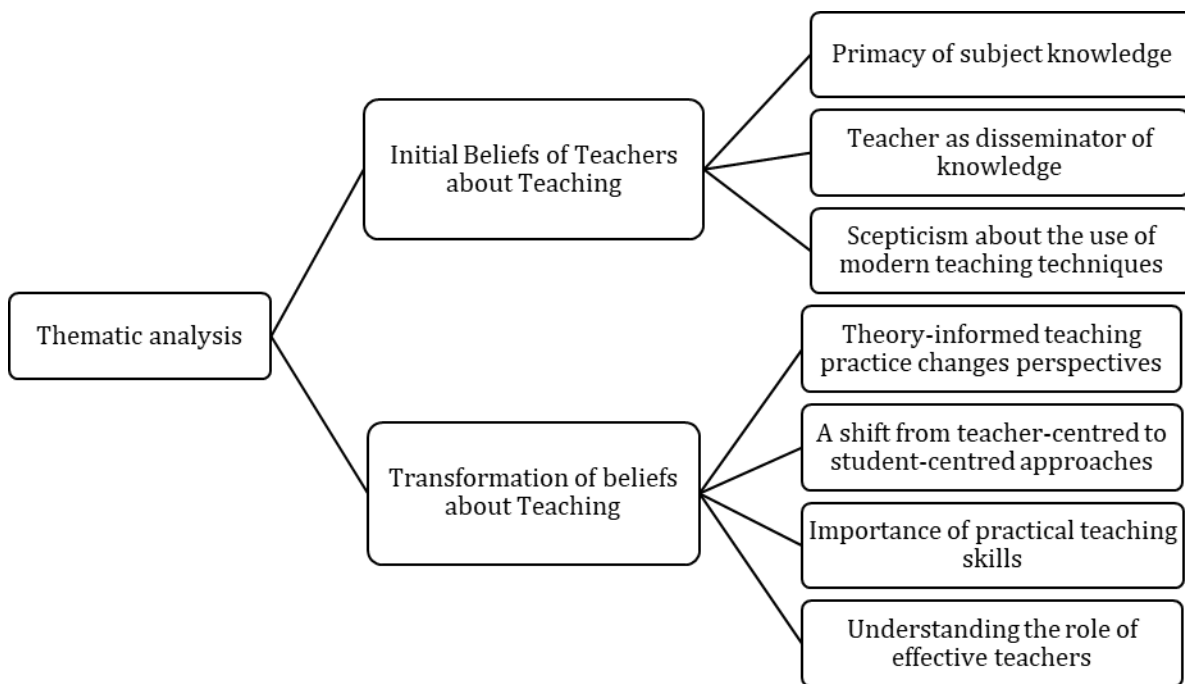


Figure 1. Thematic analysis – Transforming teachers' beliefs.

### 3.1. Initial Beliefs of Teachers about Teaching

Analysis of initial beliefs of prospective teachers resulted in the development of three sub themes: Primacy of subject knowledge, Teacher as disseminator of knowledge, and Skepticism about the use of modern teaching techniques. These themes have been elaborated in the following sections.

#### 3.1.1. Primacy of Subject Knowledge

At the beginning of the training, all the participants had similar beliefs about teaching skills. These beliefs were value laden from their past experiences as school and college students and through their common routine observations of their teachers. It was reported that *“teaching is a universal job, anyone having understanding of content can teach”* (P-ST 1) and that: *“many teachers have no specified teacher training certificate, still they can teach in school”* (P-

ST 7). Other participants had similar views: “*subject mastery is more important for becoming an effective teacher than pedagogical skills*” (P-ST 8). The participants believed that getting a Master’s degree makes a person an expert teacher, a good manager of the classroom and a good communicator. A number of respondents believed that teachers do not need to prepare lessons daily or as a regular routine. Once a lesson is prepared, that would be enough for years. For instance, one of the respondents shared:

*A single preparation of a lesson would be enough forever and would not need any modification. A Masters student can teach any topic easily. (P-ST 4).*

### 3.1.2. Teacher as Disseminator of Knowledge

Interestingly, several participants held a very limited understanding of the process of teaching, for example, (P-ST 3) explicitly stated:

*All the teachers need to cover the course content in due time, making notes of the content for the students and letting them to memorize it for the upcoming examination. Teachers are lucky enough to have textbooks, they just need to finish the assigned chapters in specific term – all t our teachers were doing this.*

While recalling past experiences as a student – a participant shared:

*In school, the senior teachers read out lessons from the textbooks which we were supposed to copy in our notebooks. The teacher would then check it. There was no activity, no interaction among students. For me, teaching is quite easy job as teacher has nothing to do except the mentioned procedures. (P-ST, 1).*

In regard to students’ learning in classroom, a participant shared:

*In classroom a teacher’s role should be guiding students towards learning the concepts that are documented in the textbooks. We have been introduced to the skills to engage students actively in learning through questioning and discussion. I do not think that our students can ask questions or participate in discussion as they do not have ideas about topics, which the teachers teach. (P-ST, 5).*

### 3.1.3. Skepticism about the Use of Modern Teaching Techniques

There seemed a skepticism about the use of modern teaching techniques among the participants of the study. This skepticism seems to have been offshoot of the participants’ beliefs in traditions methods of teaching, their following of the teaching that they themselves observed as students, and in their belief that the kind of infrastructure needed for the use of modern teaching techniques is not available in schools. While probing about the modern approaches to teaching, one of the participants raised her concerns:

*I think the way our teachers taught us was effective. We have learned from those teachers. I am concerned that how we can implement different teaching strategies in our classroom as there is scarcity of resources in schools. All these strategies demand a lot of efforts and time to be effectively implemented inside the classroom. (P-ST, 2)*

## 3.2. Transformation in Beliefs about the Process of Teaching

Analysis of data revealed a visible transformation in participants’ beliefs about teaching skills and strategies during their teaching practice in the actual classroom. This transformation can be presented in the following sub-themes: Theory-informed teaching practice changes perspectives; a shift from teacher-centred to student-centred approaches; importance of practical teaching skills; and understanding of the role of effective teachers.

### 3.2.1. Theory-Informed Teaching Practice Changes Perspectives

In coursework the participants went through theoretical knowledge about teaching and various teaching strategies. Theoretical knowledge in isolation, however, could not transform their beliefs. The teaching practice, on the other hand, not only provided them with an opportunity to test their teaching skills in real classrooms but also transformed their beliefs towards the learners. For example, one of the participants stated: “*I never thought of such a*

classroom where students were very active and continuously asking questions about my background” (P-ST, 5); likewise, “since this generation is technologically oriented, they are bold and confident” (P-ST, 7). While analyzing the initial beliefs related to teaching skills, a participant described:

*Teaching is an art, my initial beliefs that anyone having subject mastery can teach effectively –is not true. In order to have effective lesson delivery, a teacher needs to be well-prepared. I think a teacher should be an actor in the class, because s/he faces unexpected situations in terms of students’ questions that generate discussion. Sometimes the prior planning might not work appropriately so the teacher needs to have another plan too. (P-ST, 4).*

Another participant reported a very interesting experience related to ‘individual differences’ among students inside the classroom:

*During teaching practice, I learnt how to handle individual differences. I observed that sometimes the slow learners did not try to learn; as a result, they lagged behind. I tried different activities with such students and achieved desired results which I consider a skill. A student in my class was mischievous according to all teachers. She used to become furious for little things. I treated her sympathetically, talking to her about little things for example, her likes and dislikes. As a result, I got wonderful results. I started encouraging and praising her in the class. With the passage of time I felt her relaxed and patient. I came to the conclusion that if a teacher does not have the skills of handling individual difference s/he could not be a good teacher. (P-ST, 3).*

### 3.2.2. A Shift from Teacher-Centred to Student-Centred Approaches

A visible shift from teacher-centered to students-centered teaching approaches was evident from the responses of the participants. Specifically, the respondents shared views about their changing beliefs towards different teaching approaches included ‘reward and praise’, ‘students’ engagement in the learning activities’ and ‘a well-planned lesson’ according to students ‘mental level and interests’. The most notable was the changing role of being a teacher i.e., from someone delivering the course content to someone as a facilitator of students learning. In addition, they regarded pedagogical skills more important than subject mastery after their teaching practice. Some of their insights are reflected in the following quotes from the interviews with the participants:

*I personally observed during long term teaching practice that when I appreciated students for their work, they enjoyed, felt good and tried to be better next time. Therefore, in order to encourage them and let them learn quickly, I always arranged small activities for them. I think all these are skills. (P-ST, 1).*

*Based on my experience of teaching practice, I believe students are highly creative and they just need to be encouraged by teachers. This encouragement could be a sentence in their notebook or a pat on the back. For example, when my students got a star or ‘good’ on home tasks, I always found them better next time. That is why I use these incentives frequently. (P-ST, 8).*

*When I was teaching ‘division’ in mathematics, I tried to link the lesson with daily life examples. When I shared the example of distribution of ‘apples’ among children by their mother, I asked them to share one such example from their routine observation too. I was really surprised to see that most of the students started sharing their observations by giving me examples. This small activity enabled me to make the lesson more interesting by giving value to their thoughts. (P-ST, 2).*

### 3.2.3. Importance of Practical Teaching Skills

Prospective teachers believed that it is important for becoming effective classroom teachers to have exposure to practical classroom teaching. The following quotes represent this view.

*To explain contents to students is not an easy job. It needs proper skills. Some people can explain things in a good way with little knowledge but there are teachers who cannot make students understand even with higher degrees and more knowledge. The difference is that of skills. In training, I learnt many skills related to teaching. For example, planning*

*and presenting lessons by following 4P's Model as it enabled me to motivate my students for learning new concepts, engage them in activities and manage the classroom effectively. (P-ST, 6).*

*I realized the importance of audio-visual aids for making lessons interesting and effective. I believe using this material is a skill. For an effective teacher, the judicious use of audio-visual aids is important. (P-ST, 3).*

*A wonderful realization was that a child has a restless nature and I have to be patient. I cannot force a child to sit like a robot at his/her particular seat in the class, which I previously did not have at all in my head. Similarly, a teacher must realize if one student learns something immediately; the others may not learn it even in four days. So a teacher should have the skill of understanding his/her students with patience. (P-ST, 4).*

#### 3.2.4. Understanding the Role of Effective Teachers

The participants developed insights into the role of effective teachers and teaching. For instance, effective teachers must possess the ability to “manage their class effectively”, “give students an opportunity to ask questions”, “use a variety of instructional strategies in order to make teaching interesting for students” and “have command over subject matter and pedagogical skills”. The presentation of data so far is reflective of the evidence in this study regarding transformation of the participants’ beliefs about teaching as a dynamic rather than static profession that is grounded in continuous learning and professional development. The presentation so far also indicates the transformational nature of the practical components of initial teacher education programs such as the B.Ed. program in this study.

## 4. DISCUSSION

This study indicated that generally pre-service teachers join initial teacher education programs with certain beliefs that are rooted to their past experiences as school and college students. Like other studies (Boz, Ekiz-Kiran, & Kutucu, 2019; Huang, Wang, & Teng, 2021) the findings of this study highlighted the influence of past experiences and observations on the beliefs of pre-service teachers about teaching skills. It is crucial to understand that most of these beliefs about teaching skills are ‘subject oriented’ (Meirink et al., 2009) where traditional and one-way teaching is considered as an effective teaching strategy. For instance, a majority of participants seemed oblivious to the use of any interactive activities or audio visual aids in the process of learning. Therefore, for an effective teacher education program there must be sufficient components that could provide opportunities to prospective teachers to reflect and transform their prior pedagogical beliefs (Korthagen, 2017). Without changing their initial beliefs about teaching, merely learning skills would not increase the quality of teaching learning inside the classroom.

As evident from the findings of this study, pre-service teacher education program such as the B.Ed. has contributed towards transforming pedagogical beliefs of the pre-service teachers. The B.Ed. program is comprised of two main components: one, theoretical, that is, coursework – where pre-service teachers are introduced to various pedagogical courses and theories; two, teaching practice in which pre-service teachers have to work in real classroom settings in order to experience the applicability of their theoretical understanding. The findings of this study suggest that only theoretical understanding might not be sufficient to change the beliefs of pre-service teachers, rather the teaching practice might have substantial contribution in the transformation of their pedagogical beliefs (Chai, Khine, & Teo, 2006).

It is important to note that teaching practice is not regarded as a sole component for bringing change in the participants’ beliefs, rather course work also seem to have contributed in this process. In the course work, participants were introduced to certain pedagogical concepts in order to get familiarity with modern approaches of teaching, whereas in the teaching practice they had opportunities to implement and test their pedagogical concepts. The transformation in their beliefs took place as a result of successful implementation of the newly learned concepts.

Despite the role of teacher education in the transformation of teachers' beliefs and practices, Akbar, Akhtar, Hussain, and Abiodullah (2013) argued that there could be discrepancies between teachers' beliefs and their classroom practices. Besides, it has also been found that the learnt practices were discarded after initial years and traditional practices were adapted again (Westbrook et al., 2009). There could be several reasons for this discrepancy. For example, teachers' authoritarian role that they never want to give up, teachers' pedagogical and personal epistemological beliefs, school culture that may not allow changes in teaching practices and this might also be a result of insufficient resources available for the application of modern teaching methodologies (Chai et al., 2006). In order to bring alignment and sustainability between teachers' beliefs and their classroom practices, one must consider the importance of pre-service and in-service continuous professional development programs.

This study also reported sufficient evidence regarding the transformation of pre-service teachers' pedagogical beliefs. For instance, a majority of the participants realized that teaching is a more comprehensive concept than merely a process of delivery of the subject content. Similarly, their beliefs towards students' engagement in the process of learning were also transformed. Moreover, findings also revealed that certain incentives like verbal praise, a pat on the back or just a smile on the face of the teacher proved to be great motivating factors for students in the process of learning. These incentives enabled pre-service teachers to achieve the desired objectives.

The findings of this study are in congruence with Guskey's model of teacher change (Guskey, 2002). This model suggests that sustainable change in teacher practices may occur after teachers' beliefs and attitudes have gone through significant transformation. Similarly, the findings of this study also correspond to the work of Huang et al. (2021) who reported a stage-wise transformation of teachers' beliefs. In the light of the study of Huang et al. (2021) it is argued that the transformation process took place in three stages: one; realization, two; disagreement, three; transformation. In the first stage of 'realization' the participants realized the importance and value of modern pedagogical approaches that can stimulate their students' interest and engagement in learning. For example, initially the participants were of the view that they will teach the students in the way they were taught by their teachers at school. However, once they entered the real classroom during teaching practice, they realized the needs of students and the demands of 21<sup>st</sup> century education. In the second stage of 'disagreement', the participants began reflecting on their initial beliefs and newly learnt beliefs. In many cases, they started comparing the teaching practices of their schoolteachers with their own teaching practice. In this way, there appeared disagreement between their current beliefs and the new realities. In the third stage of 'transformation', the beliefs of pre-service teachers seemed to have gone through a change. They started teaching through audio-visual-aids, planned activities for students and encouraged students' participation in the teaching-learning process. As a result, pre-service teachers established a connection between their learning and its applicability in real classroom situation that led to the development of personal pedagogical beliefs.

## 5. CONCLUSION AND IMPLICATIONS

This paper documented evidence about the transformation of pre-service teachers' beliefs in a pre-service teacher education program in the Pakistani context. The paper highlighted initial beliefs of pre-service teachers that were embedded in their prior experiences as students. These initial beliefs went through a transformation during a B.Ed. program mainly during the teaching practice part of the program. Importantly, the coursework component seems to have provided basis to enrich the prospective teachers' knowledge, whereas the teaching practice component seemed to have extended the opportunity to apply pedagogical knowledge in a practical sense. Thus, transformation of pre-service teachers' beliefs seems to have taken place in three stages: realization, disagreement and transformation. Based on these findings, this paper acknowledges the contribution of B.Ed. in transforming pedagogical beliefs of pre-service teachers. However, it might be interesting to see whether these beliefs have long or short-term influence on classroom practices. This calls for further research in order to substantiate the findings



of this study and to explore the possible longer-term impact of initial teacher education on the long term pedagogical practices of teachers.

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## REFERENCES

- Akbar, R. A., Akhtar, M., Hussain, A., & Abiodullah, M. (2013). Beliefs and practices of teacher educators teaching B. Ed (Hons) and ADE in universities and affiliated colleges in Punjab. *Bulletin of Education and Research*, 35(2), 91-106.
- Barcelos, A. M. F. (2003). Researching beliefs about SLA: A critical review. In: Kalaja P., Barcelos A.M.F. (eds) Beliefs about SLA. Educational Linguistics (Vol. 2). Dordrecht: Springer.
- Bashirrudine, A., Khan, N., Younas, H., & Dayan, U. (2012). Teaching of grammar: Beliefs and practices of teachers. In A. Bashiruddin., Z. Bana. &A.K.Afridi (Ed.), Education in Pakistan: Learning from research partnership (pp. 3-26). Karachi, Pakistan: Oxford University Press.
- Boz, Y., Ekiz-Kiran, B., & Kutucu, E. S. (2019). Effect of practicum courses on pre-service teachers' beliefs towards chemistry teaching: A year-long case study. *Chemistry Education Research and Practice*, 20(3), 509-521. Available at: <https://doi.org/10.1039/c9rp00022d>.
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology*, 44(6), 473-490. Available at: <https://doi.org/10.1016/j.jsp.2006.09.001>.
- Chai, C. S., Khine, M. S., & Teo, T. (2006). Epistemological beliefs on teaching and learning: A survey among pre-service teachers in Singapore. *Educational Media International*, 43(4), 285-298. Available at: <https://doi.org/10.1080/09523980600926242>.
- Creswell, J. W. (2012). *Education research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston: Pearson Education.
- Dayan, U., Perveen, S., & Khan, M. I. (2016). Change in prospective teachers' beliefs about teaching profession and teachers' role in pre-service teacher training: A case study of Pakistan. *Gomal University Journal of Research*, 32(1), 145-156.
- De Vries, S., van de Grift, W. J., & Jansen, E. P. (2014). How teachers' beliefs about learning and teaching relate to their continuing professional development. *Teachers and Teaching*, 20(3), 338-357. Available at: <https://doi.org/10.1080/13540602.2013.848521>.
- Debreli, E. (2012). Change in beliefs of pre-service teachers about teaching and learning English as a foreign language throughout an undergraduate pre-service teacher training program. *Procedia-Social and Behavioral Sciences*, 46, 367-373. Available at: <https://doi.org/10.1016/j.sbspro.2012.05.124>.
- Demirbolat, A. O. (2006). Education faculty students' tendencies and beliefs about the teacher's role in education: A case study in a Turkish University. *Teaching and Teacher Education*, 22(8), 1068-1083. Available at: <https://doi.org/10.1016/j.tate.2006.04.020>.
- Ertmer, P. A. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration? *Educational Technology Research and Development*, 53(4), 25-39. Available at: <https://doi.org/10.1007/bf02504683>.
- Government of Pakistan. (2009). *National education policy*. Islamabad, Pakistan: Ministry of Federal Education.
- Guskey, T., R. (2002). Professional development and teacher change. *Teachers and Teaching*, 8(3), 381-391. Available at: <https://doi.org/10.1080/135406002100000512>.
- Han, I., Shin, W. S., & Ko, Y. (2017). The effect of student teaching experience and teacher beliefs on pre-service teachers' self-efficacy and intention to use technology in teaching. *Teachers and Teaching*, 23(7), 829-842. Available at: <https://doi.org/10.1080/13540602.2017.1322057>.

- Hargreaves, A. (2000). Four ages of professionalism and professional learning. *Teachers and Teaching*, 6(2), 151-182. Available at: <https://doi.org/10.1080/713698714>.
- Huang, J., Wang, Y., & Teng, F. (2021). Understanding changes in teacher beliefs and identity formation: A case study of three novice teachers in Hong Kong. *Teaching Education*, 32(2), 193-207. Available at: <https://doi.org/10.1080/10476210.2019.1693535>.
- Khader, F. R. (2012). Teachers' pedagogical beliefs and actual classroom practices in social studies instruction. *American International Journal of Contemporary Research*, 2(1), 73-92.
- Korthagen, F. (2017). Inconvenient truths about teacher learning: Towards professional development 3.0. *Teachers and Teaching*, 23(4), 387-405.
- Liu, S.-H. (2011). Factors related to pedagogical beliefs of teachers and technology integration. *Computers & Education*, 56(4), 1012-1022. Available at: <https://doi.org/10.1016/j.compedu.2010.12.001>.
- Mattheoudakis, M. (2007). Tracking changes in pre-service EFL teacher beliefs in Greece: A longitudinal study. *Teaching and Teacher Education*, 23(8), 1272-1288. Available at: <https://doi.org/10.1016/j.tate.2006.06.001>.
- Meirink, J. A., Meijer, P. C., Verloop, N., & Bergen, T. C. (2009). Understanding teacher learning in secondary education: The relations of teacher activities to changed beliefs about teaching and learning. *Teaching and Teacher Education*, 25(1), 89-100. Available at: <https://doi.org/10.1016/j.tate.2008.07.003>.
- Memon, G. R. (2007). Education in Pakistan: The key issues, problems and the new challenges. *Journal of Management and Social Sciences*, 3(1), 47-55.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. CA: Jossey-Bass.
- Sheridan, L. (2016). Examining changes in pre-service teachers' beliefs of pedagogy. *Australian Journal of Teacher Education*, 41(3), 1-20. Available at: <https://doi.org/10.14221/ajte.2016v41n3.1>.
- Tschannen-Moran, M., & Hoy, A. W. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, 23(6), 944-956.
- Vartuli, S. (2005). Beliefs: The heart of teaching. *YC Young Children*, 60(5), 76-78.
- Vermunt, J. D., & Endedijk, M. D. (2011). Patterns in teacher learning in different phases of the professional career. *Learning and Individual Differences*, 21(3), 294-302.
- Wang, L., & Du, X. (2016). Chinese language teachers' beliefs about their roles in the Danish context. *System*, 61(4), 1-11. Available at: <https://doi.org/10.1016/j.system.2016.06.009>.
- Westbrook, J., Shah, N., Durrani, N., Tikly, C., Khan, W., & Dunne, M. (2009). Becoming a teacher: Transitions from training to the classroom in the NWFP, Pakistan. *International Journal of Educational Development*, 29(4), 437-444.
- Whitley, J., Gooderham, S., Duquette, C., Orders, S., & Cousins, J. B. (2019). Implementing differentiated instruction: A mixed-methods exploration of teacher beliefs and practices. *Teachers and Teaching*, 25(8), 1043-1061.
- Wu, H.-P., Palmer, D. K., & Field, S. L. (2011). Understanding teachers' professional identity and beliefs in the Chinese heritage language school in the USA. *Language, Culture and Curriculum*, 24(1), 47-60.

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