

Factors of Pre-service Teacher Education Affecting the Elementary School Teachers' Preparedness in Punjab

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Abstract

Teacher education plays a crucial role in preparing future teachers. The quality of teachers is directly linked with the quality of the pre-service teacher education and training. This study aimed to measure the factors affecting pre-service teacher education in Punjab. The findings of this study would help strengthen the quality of pre-service teacher education. The sample was comprised of 400 elementary school teachers in Punjab. This study was based on the Pre-service Teacher Education (PTE) framework (Zeki et al., 2019). The study adopted a quantitative research approach. The descriptive statistics, inferential statistics, and path analysis were conducted for the data analysis. The AMOS 20.0 software was used for the testing of the pre-service teacher education model through Structural Equation Modeling. Results revealed that pre-service elementary teacher education needs to reconsider the overall teacher education program at the general level, curriculum, teaching practice, teacher proficiency, the relevance of theory, and teacher's preparedness. Future studies can be conducted to develop a strategic plan for the improvement of pre-service teacher education.

Keywords: Curriculum, preparedness, relevance, teacher education, theory and practice

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Introduction

Teachers are considered to be agents of change in a society. It is the reason teacher education researchers and policymakers have exclusively focused on improving teacher education during the last decade. Educational reforms and policy changes have driven the significance of teacher education programs by introducing reforms to bring about desired quality. The effect of educating quality teachers would result in quality education.

The quality of teachers is essential for effective teaching and learning process. The process of teacher education is a crucial process for establishing the quality of educational activities in the school. *"Although teachers and teacher educators are the most important factors in the education systems, in many countries, the opinions of teachers and teacher educators are not taken into account and excluded from decision-making."* (Gödek, 2004). He clarified that as modifications were being produced in teacher education, consideration was given to the concepts of neither teachers nor other stakeholders, and therefore the changes did not fulfill the requirements.

Despite common issues, teacher education problems vary from nation to nation as the priorities and requirements. *"There is no school magical-policy mix that can be applied in each situation"*(Musset, 2010). Given this concept and the prevalent issues of teacher education, it is becoming essential for all nations to evaluate the present condition of their pre-service teacher education (PTE) and its significant factors in order to meet the requirements. It is essential for the improvement of teacher education.

There is a need to address the existing issues at the grassroots level, particularly by turning the spotlight on the student teachers in pre-service teacher education. Pre-service teacher education needs to be considered in the light of significant factors for sustainability.

It is necessary for research that its different dimensions should re-examine a problem, actors, and dynamics as well as from a different perspective (Caires, Almeida & Vieira, 2012). The present study primarily aims to evaluate the significant factors of current pre-service teacher education practices in Punjab to provide suggestions for the improvement of the pre-service teacher education in order to meet the needs and requirements, primarily in Punjab, a province of Pakistan.

Statement of the Problem

Pakistan is facing educational crises, with 22.6 million out of school children (ASER, 2018). Punjab is a populated province that took its sheer part with 72.2 % male and 54.3% female literacy (PBS, 2019). The non uniform education system and low-

quality education results in high dropout rates of the students as well as low-quality skills (ASER, 2018). Researchers have studied various factors of the quality education and educational problems in Pakistan, i.e., educational policy analysis, curriculum, assessment system, and educational financing. The teacher is one of the essential components of an educational system. There is less research available to assess the effect of different factors on the teacher's preparedness in Punjab. There is a need to understand whether pre-service teacher education is not emphasized with its significant factors for the preparedness of the prospective teachers. This study aims to find out the effect of different factors that affect the preparedness of teachers in Punjab.

Objectives of the Study

This study has objectives to:

- 1- Measure the factors for the preparedness of pre-service teachers
- 2- Find out the inter-association of the factors of pre-service teachers for preparedness
- 3- Assess the impact of different factors on the preparedness of the pre-service teachers

Significance of the Study

This research would contribute significantly to the pre-service teacher education system by defining the strengths and weaknesses of the current pre-service teacher education program in Punjab. Examining the factor of pre-service teacher education for teacher preparation may provide understanding and opportunities for teacher education, educational managers, planners, and curriculum designers to improve the current situation. The review of teacher education in terms of preparing pre-service teachers for teaching would provide directions to address the current challenges.

Literature Review

As we are living in a rapidly changing and advanced world, it is essential to give complete growth and development to coming generations through the abilities, expertise and other qualities needed to deal with successive and continuous changes. This development can be achieved through education, and as the essence of education, teachers play fundamental roles in giving the necessary education in a community by enhancing student learning and accomplishment (Lasley, Siedentop, & Yinger, 2006). Each nation has its criteria while devising its system of education; this system is founded on the social, cultural, political, and economic values of the nation. In this way, systems of education reflect the norms and expectations of their respective societies.

The standard of teacher education impacts mostly the performance of educational activities conducted by teachers in institutions, and teachers generally reflect on how they were trained. For effective teaching and learning procedure, quality teachers are vital, and education of pre-service teachers is crucial to the teachers' in-service training and for their professional development.

National Education Policies of Pakistan have given immense value to teacher education. The National Education Policy (1979) had recognized the importance of teachers' vital role in the successful implementation of educational policies. The teacher was claimed to be the center of gravity for the whole instructional system. The performance of Pakistan's pre-service teacher education had been questioned and always criticized due to its poor quality but strangely never been discussed sincerely till 2009.

National Education Policy (2009) emphasized not only to recognize the importance of pre-service teacher education in enhancing educational quality. Moreover, several systematic attempts and programs have also been launched to improve the effectiveness of pre-service teacher education in Pakistan for the first time in history (Ministry of Education Pakistan, 2009).

As per the National Educational Policy (1998-2010), the standard of teacher education includes policy development and planning, creation and management of teacher training programs, availability of suitable facilities for educational organizations, pre-service and in-service professional development for educators, curriculum content, methods, assessment techniques, teaching material and other resources linked to teachers are regularly enriched. It requires appropriate teacher training facilities to be provided.

The National Educational Policy (2017) emphasized that teaching requires content knowledge, specialized skills, and dispositions that can be learned better in face-to-face practical modes. Therefore, initial teacher education programs would be offered generally through face-to-face modes providing field-based and practical learning opportunities. Other modes (distance and virtual) will ensure extensive use of technology blended with a significant proportion of face-to-face teaching-learning, mentoring, and monitoring.

Quality of teacher education (TE) depends on all stages of teacher training, i.e., pre-service, in-service, and continuous professional development. In the way of "*the training before teachers enter the profession and take up employment in a range of different education institutions*" (UNESCO, 2011), pre-service teacher education is highly crucial for setting the foundations of teacher proficiency.

Menon stated that “*Teacher education institutions should have a clear statement of the vision and mission, which reflect the teacher education goals and objectives, and are compatible with the regional, national and global expectations that provide direction to the effective functioning of the institution and helps in maintaining appropriate linkages among different components*” (Menon, 2007).

Theoretical framework. Pre-service teacher education is designed to provide participants with insights and thoughts to guide them in their careers. Pre-service teacher education, therefore, plays such a significant role in the professional development of teacher candidates that they are expected to be prepared to deal with the realities and challenges of the school and classroom setting (Kennedy, 1999). This research is based on a theoretical framework developed by Zeki, Iqbal, Asghar (2020). A practical and successful pre-service teacher education to prepare a teacher candidate depends on several predominant factors such as pre-service teacher education in general, curriculum, teaching practice, the relevance of theory with practice, proficiency, and preparedness (Zeki, Iqbal & Asghar, 2020).

Pre-service teacher education in general. Pre-service teacher education equipped prospective teachers with the knowledge and different skills and abilities. Darling-Hammond (2006) acknowledged that “*there are multiple ways of configuring the knowledge needed by teachers with regards to Pre-service teacher education. In articulating the core concepts and skills that should be represented in a common curriculum for teacher education*” (Darling-Hammond, 2006). It showed in mind that teacher education is not only about developing professional skills or knowledge or practice; it is complicated with all aspects. Pre-service teacher education strategies depend on a state's education policy to state the expectations of stakeholders as well.

It is also stated in teacher education literature that teacher education provides critical thinking skills, abilities, and expertise to student teachers. These can be identified as developing an understanding of teaching methods in addition to essential abilities in teaching knowledge in the content area (Kukla, Acevedo & Toma, 2009) and learning about distinct sources of knowledge, learning about reasoning, and logical thinking (Floden & Meniketti, 2005).

Forkosh- Baruch (2018) emphasizes the education of prospective teachers to transform teacher education with Information and Communication Technologies (ICT). The basic idea was that the technical side of the practice as a stand-alone training element is appropriate for the pre-program stage, i.e., the ICT skills threshold is needed for pre-service teacher education, although it is also continuously discussed during the time teacher's preparedness.

H01: There is no impact of teacher education in general on overall teacher preparedness of the teachers.

Curriculum. The curriculum plays a significant role in the field of teacher education. Teacher education offers prospective teachers with a forum to obtain the necessary understanding, skills, and establish good attitudes, beliefs, and values. It can be achieved with the guidance of the given curriculum. The curriculum is students' designed interaction with educational content, equipment, resources, and procedures to assess the achievement of academic goals. The quality of teachers obtained in any organization relies entirely on the curriculum which they have been given throughout their phase of preparation. The teacher education curriculum establishes the quality of teacher education (Patankar & Jadhav, 2013).

The teachers are considered a significant resource in the process of teaching and learning. So they must have a high level of abilities and knowledge in content and pedagogy in a global classroom (Pawilen, 2018). A balanced and comprehensive curriculum for teacher education should be a harmonious combination of discipline, pedagogy, and practice (Osaki, 2001). The curriculum for teacher education should have the right connection between undergraduate and specialist programs, theory and practice courses, research, and science (Shengli, 1999).

The curriculum for teachers in Pakistan was developed by the Provincial Bureau of Curricula of various Provinces and the Higher Education Commission of Pakistan. Secondary education is usually taught in English, and Urdu is often used as a language in the classroom. However, as provided in the associated syllabus, the methods & methodology differs from institution to institution (Khan, 2015).

National Teacher Education Accreditation Council (NACTE) (2009) has created the National Accreditation Standards for Teacher Education Program Accreditation. These standards were created by an approved structure and studied and evaluated by practitioners and policymakers at the provincial and national levels and by specialists on teacher education program accreditation at a global level. Based on national policies, the curriculum is formulated, communicating with all contributors, and ensuring periodic and frequent updates. These standards describe the demands for particular and vital parts of a teacher training program and may be used as guidelines by any teacher education program. The first standard curriculum and instruction recommend the development of an efficient and thorough curriculum for pre-service teacher preparation.

Process of curriculum development. The curriculum is developed for teachers under the regulations of national professional education standards. The curriculum provides a comprehensive overview of the program that is adaptive, up-to-date, and

suitable for various fields of future teachers' qualified, personal, current, and future development.

The curriculum of content and program description:

- The content of the curriculum is sufficiently inclusive to represent efficiently and include a teacher's problems and requirements.
- The content of the curriculum is suitable and appropriate to establish a teacher's desired understanding, abilities, and structures.
- The content of the curriculum involves both theoretical and practical information.
- The content of the curriculum offers the institution with a wide range of learning opportunities and school practice.
- The content of the curriculum is reconcilable with society's modifying and rising demands.

The curriculum report contains the program period (semesters, number of years, and credit hours) and outline of the subjects. The program's course credit hours and length of time fulfill the Higher Education Commission's minimum requirements. The sequential degree program's course credit hours and length are comparable to appropriate and equivalent qualifications.

The content of the curriculum and the length of the program/subjects are mutually compatible. The program involves a necessary information and communication technology implementation course. The technology of information and communication is incorporated into the curriculum. For each course, the curriculum or its syllabus outlines include lists of web pages and suggested latest version books.

H₀₂: There is no impact of the TE curriculum on teachers preparedness

Teaching Practice

Teaching practice is a time when there are possibilities for pre-service teachers under traditional circumstances of schools in designated schools for teaching practice of pre-service teachers to gain some knowledge and experience by practicing and actively engaging in different teaching and learning activities in the school. In teaching practice, prospective teachers are introduced to some new knowledge, experience, and expertise so that they can understand that how teachers deal with many challenging roles and responsibilities by having proper training in the classroom (McGee & Fraser, 2001).

Prospective teachers gain confidence, experience, and develop skills during their pre-service teacher education program through experiences at schools and courses of teaching practice. These types of courses make student teachers aware of general

concepts and with overall views and information about schools and their environment, classroom setting, students, and teachers (Kennedy, 1999).

The practice of teaching plays a significant role in facilitating student teachers to have conversations with professors and advisers and encouraging student teachers to define and recognize methods and their effects in the process of teaching and learning (Botha & Reddy, 2011).

The practice of teaching was discovered very useful in guiding pre-service teachers to develop such qualities relevant to finding problems, making choices and decisions, and identification of suitable approaches to solving problems in the environment of a classroom and was essential in building confidence in prospective teachers. Pre-service teachers also learn things linked to school leadership and management, along with additional-curricular activities. Concerning these variables, it can be concluded that teaching practice has a fundamental value. It is an essential system and program for raising the quality of teaching for pre-service teachers because it allows prospective teachers to develop different qualities, abilities, skills, and commitments than they receive as learners. For both long and short teaching practice, the duration is one-and-a-half months in the male and female schools designated by Department of Education, university education is co-education, but at the lower levels, there are entirely separate male and female institutes. The process and method of professional mentoring development are also very unusual (Khan, 2015).

Positive experiences of students during practice teaching are incredibly dependent on social interrelationships (depending on dignity, trust), the capacity to develop the interest of students in the topic of music, efficient teaching planning, class monitoring, giving and receiving feedback, establishing a positive environment. The beneficial skillfulness of personality development and professional enhancement during instructional training relies on the capacity of students to evaluate and improve individual characteristics, acquire new knowledge, and enhance the willingness to choose the profession of a teacher. Negative experiences of students reveal inconsistent thoughts and feelings (lack of self-confidence, anxiety, and disappointment). The adverse experiences of teacher relationships with learners, advisors obtained throughout teaching training are usually connected with the destructive behavior of students in school, absence of professional preparation (Rauduvaitė, Lasauskienė, & Barkauskaitė, 2015).

Ho3: There is no effect of teaching practice on teaching preparedness

Proficiency

Proficiency as factor of preparedness have been examined in the present research to know how they are confident about their preparedness by pre-service teacher education

to use various assessment and evaluation of strategies at school, dealing with students effectively, their level of awareness about national standards for teachers, teachers responsibilities and what is expected from them as a teacher.

It relies on how such abilities are intertwined, adapted, and reshaped to create teaching methods a useful technique for placing students in the shape of efficient students, prospectors, and intellectual. Upgraded training programs for prospective teachers can function as appropriate mechanisms for reaching the required objective and skills between prospective teachers into their specialized area.

O'neal, Ringler, and Rodriguez (2008) examined the teacher's perception of the readiness to teach different students. Many students speak Spanish and have chosen elementary school for instruction. The declaration of approval was sent to teachers in the fifth grade of the subject area of the school. The survey involved 24 teachers (22 women and two men). Researchers used the interview plan as an essential tool for collecting data from the survey and for interviewing participants in the focus group. Qualitative data analysis was used to analyze data obtained from interviews. The results show that the teacher training program shows that the teacher training program is currently not ready for teachers who could teach different students. It is because 75% of teachers say they are not ready to teach students in the classroom. Researchers suggest that higher education institutions should review the program's teacher education and strengthen collaboration with school districts. Besides, the teacher's curriculum should be modified to meet the needs of the student.

H₀₄: there is no effect of teacher proficiency on teacher preparedness

The Relevance of Theory with Practice

Training programs for educational teachers comprise of two main components: a. Theoretical knowledge – professional field study and b. practical knowledge. Theoretical educational knowledge covers conceptual elements of academic activity, including principles, organizational, and interdisciplinary ideas generated from consistent and structured knowledge bodies, generalizations and rules of implementation, and also understanding of particular instances, choices, and practices (Eraut, 1994).

The development of professional skills by teaching in educational organizations is contextual, casual learning achieved through relevant experience and reflection (Korthagen, 2010). Practice experience is an excellent way to educate participants on how to act as teachers, while theoretical knowledge is seen as illusory (Smith & Lev-Ari, 2005). The broader the practical knowledge, the more it encourages the advancement of knowledge and the development of teaching and learning ideas, including the use of educational resources (Ethel & McMeniman, 2000). Students truly transform theory into

practice once they begin to teach (Cheng, Tang & Cheng, 2012). Students relate their conceptual understanding through practical experience, take responsibility for different positions, make choices, and discover how to combine their professional understanding, principles, and personal preferences (Shulman, 2005).

According to the National Education Policy of Pakistan (2009), the curriculum must represent the severe social issues; emphasize critical thinking, skills, and competencies for solving problems, research practices, skills of self-directed learning, and enhancing cooperative learning between students. There is also a requirement to initiate amendments and improvements in programs for teacher preparation. Student teachers are working with theoretical problems and look less determined to study as there are a difference and gap in a model of theory and practice, and for this, there might be a justification that they were mostly instructed using conventional techniques. They are rarely trained to encounter and solving practical life problems. They are seldom prepared to solve and face the real problems of practical life. Therefore, there is a need for the educational environment that uses the real problems in which prospective teachers are exposed to problems which they have to deal with when they enter their professional life as teachers in private or public setup.

It is throughout the teaching practice that student teachers perform the techniques, including the principles of education that were theoretically studied in the class. Therefore it plays the leading role in connecting the theory-practice gap. As this is frequently stated, "*theory is empty without practice, and practice is blind without theory*" (Morrison & Werf, 2012). In order to generate top-class teachers and enable them to teach generations of students/academics, the basic needs of pedagogical topics have been simply defined; pre-service teachers need to be prepared with in-depth educational understanding and preparation on how to implement the theory. So, it is necessary to identify the gaps between practice and theory in the teacher education program.

Ho5: there is no effect of theory and practice on teachers' preparedness

Preparedness

Generally, the teacher's preparedness is said to be related to a teacher's achievement in the profession and the duration a teacher can stay in the profession (Darling-Hammond, 2005). To ensure that teacher training is the most effective, in-depth research of efficient teaching and what is the best way to make teachers suitable must be done (Monk, 2015). A report summarizing the outcomes of a research carried out in the spring of 1998 by a non-profit organization in New York City, New Visions for Public Schools, and the National Commission on Teaching and the American Urban Initiative for the Future.

The research assessed teachers joining the workforce through conventional teacher preservation programs, enhanced programs of teacher-preparedness, or alternative route courses. Questionnaires were sent to teachers who had an experience of 4 years or less. Teachers were supposed to rate their preparation, their private teaching opinions, and their willingness to proceed in a profession. It was also discovered that there was not exactly a perfect connection between how teachers thought of their readiness and their real efficacy in the classroom (Darling-Hammond, Chung, & Frelow, 2002).

Developing an open classroom atmosphere can be difficult, but by regular teaching and learning decisions, teachers can develop these contexts (McCafferty-Wright & Knowles, 2016). The teaching techniques of teachers contribute significantly to the development of a thriving classroom environment (Chapin & Eastman, 1996).

When teacher candidate first starts teaching, it is the level of their preparation. There is a need for better preparation before entering the classes (Imbimbo & Silvernail, 1999). Nacino-Brown and Brown(1994) indicated that no wonder how compassionate, friendly and well-meaning a teacher might be, he or she could not achieve if he or she had not a comprehensive understanding of the topic he or she was teaching and had not a keen general awareness. Teaching does not occur deliberately and requires comprehensive preparation for it to be efficient. Teaching is a complicated task requiring the management of classrooms, the rehearsal of lessons, and the association of teaching and learning procedures, assessment, and reviews. The achievement of students in the classroom is mostly based on efficient training in the classroom and appropriate teacher training.

Research Methodology

This study utilized a cross-sectional survey design. A questionnaire was used by the researcher to collect the perceptions of elementary level teachers about their preparation for the teaching profession to examine the predominant factors of pre-service teacher education in Punjab. Pre-service Teacher Education Questionnaire was prepared. The reliability of the questionnaire was assessed (Cronbach alpha=.79) through pilot testing.

Table 1
Reliability of the Instrument

Cronbach Alpha	Items
0.79	32

Five researchers reviewed the questionnaire for the validation purpose. The researcher selected quantitative research and collected data from 400 elementary school teachers in Punjab. Data were entered into SPSS sheet. Data cleaning was performed. Data normality and outliers were measured. Confirmatory factor analysis was performed

to identify the factors. Descriptive analysis was performed to measure mean and standard deviation. The inter-variable correlation was measured. Inferential statistics were applied to the data. Path analysis was performed to measure the effect of independent variables on dependent variables. The mediation of the factors was also assessed.

Data Analysis

Data analysis was performed for descriptive analysis, inferential analysis, and path analysis.

Descriptive analysis

A descriptive analysis was used for survey data. Each item in the scale was assigned with a value from 1 (Strongly disagree) to 5 (Strongly Agree). Results have shown poor agreement of the teachers that PTE, in general, curriculum, the relevance of T & P, and preparedness is not according to the standards. The means and standard deviations of all variables in the scale for PTE are given in Table 2.

Table 2

Descriptive Statistics

Variables	M	SD	N
PTE in general	3.32	.89	400
Curriculum	2.28	.35	400
Teaching Practice	3.88	.41	400
Proficiency	4.11	.49	400
Relevance T&P	3.21	.57	400
preparedness	3.04	.81	400

Inferential Analysis

The findings indicate that the significant negative correlation is found between PTE in general and curriculum ($r=-.332$; $p<.000$). Correlation is also weak and significant between teaching practice and curriculum ($r=.158$; $p<.002$). However, factors teaching practice and PTE in general, are not significantly correlated ($r=-.037$; $p<.465$). Teacher proficiency is significantly and negatively correlated with PTE in general ($r=-.353$; $p<.000$), as well as positive correlation, is also found between curriculum and teacher proficiency ($r=.249$; $p<.000$).

Correlation is also significant between teacher proficiency and teaching practice ($r=.180$; $p<.000$). There is no significant correlation found between the Relevance of theory with practice and PTE in general ($r=-.041$; $p<.410$). The correlation is significant between the Relevance of theory with practice and curriculum ($r=-.139$; $p<.005$). The correlation is significant between the Relevance of theory with practice and teaching practice ($r=.229$; $p<.000$), and teacher proficiency is also significantly correlated with Relevance of theory with practice ($r=-.196$; $p<.000$).

Teacher preparedness is correlated significantly with PTE in general ($r=-.325$; $p<.000$) and curriculum is also significantly correlated with teacher preparedness ($r=.132$; $p<.008$), as well as correlation of teaching practice and teacher's preparedness, is statistically significant ($r=.380$; $p<.000$) and correlation of teacher proficiency and teachers preparedness is statistically significant ($r=.342$; $p<.000$). However, the highest positive correlation is found between teacher preparedness and the relevance of theory with practice ($r=.630$; $p<.000$).

Table 3
Correlations

	1	2	3	4	5	6
PTE in general	1					
Curriculum	-.332**	1				
Teaching Practice	-0.037	.158**	1			
Proficiency	-.353**	.249**	.180**	1		
Relevance of T&P	-0.041	-.139**	.229**	.196**	1	
Preparedness	-.325**	.132**	.380**	.342**	.630**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Path analysis

AMOS 20.0 was used for the testing of the Pre-service teacher education model through Structural Equation Model (SEM) path analysis.

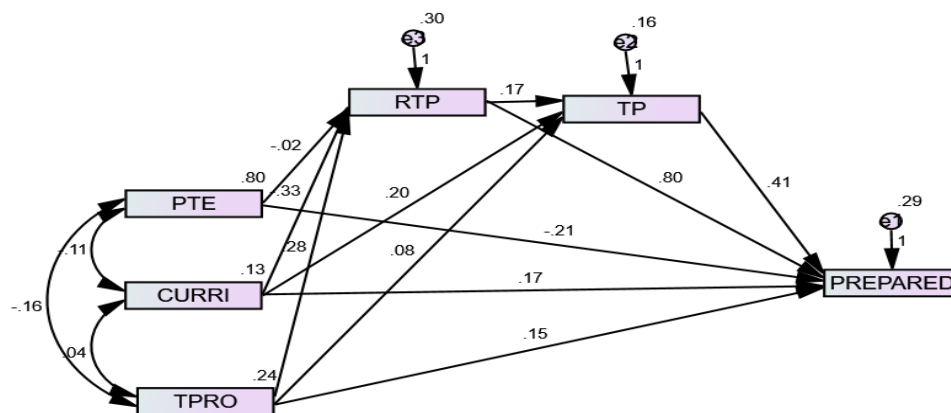


Figure 4. Empirical Results from a Complex Multivariate Model Representing Standardized Regression Coefficients

The model was a good fit with AGFI, GFI and CFI values $>.05$ and RMSEA, as well as RMR, was $<.06$ at significant level $P>.001$ as shown in table 4:

Table 4
Model Fit Summary

RMR	GFI	AGFI	CFI	CMIN	DF	P	CMIN/DF	RMSEA
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RMR	GFI	AGFI	CFI	CMIN	DF	P	CMIN/DF	RMSEA
.006	.998	.964	.998	2.037	1	.153	2.037	.051

PTE's direct effects on Teacher preparedness were negatively significant. Teacher Proficiency has a positively significant direct effect on relevance teaching practice and teacher preparedness. Relevance teaching practice has a positive and significant direct impact on teacher preparedness. The curriculum has a negatively significant impact on the relevance of teaching practice and a significant positive impact on teaching practice as well as the teacher's preparedness. Teaching practice has a positive and significant impact on teacher preparedness, as shown in table 5.

Table 5
Direct Effects of the Variables

	PTE		TPR		CURRI		RTP		TP	
	B	SE	B	SE	B	SE	B	SE	B	SE
RTP	-.016	.038	.278**	.063	-.331**	.089	.000	.000	.000	.000
TP	.000	.000	.079	.056	.196**	.065	.171**	.039	.000	.000
PREPARED	-.215**	.033	.150**	.060	.171	.082	.800**	.049	.414**	.081

Teaching proficiency has a positive and significant indirect impact on teaching practice and teacher's preparedness. The curriculum has a negative and significant direct impact on teaching practice and teacher preparedness. The relevance of teaching practice has a positive and significant indirect effect on teacher preparedness, as shown in table 6.

Table 6
Indirect Effects of the Variables

	PTE		TPRO		CURRI		RTP	
	B	SE	B	SE	B	SE	B	SE
RTP	.000	.000	.000	.000	.000	.000	.000	.000
TP	-.003	.006	.048**	.017	-.057***	.020	.000	.000
PREPARED	-.014	.033	.275**	.059	-.207**	.084	.071**	.021

An independent sample t-test was conducted to compare the mean scores of female and male student teachers about their pre-service teacher education. There is a statistically significant difference for PTE factor in the general gender. There was no statistically significant difference in curriculum, teaching practice, proficiency, the relevance of theory with practice, and teacher preparedness.

Table: 7
Independent Sample t-test for Gender on the Factors

Variables	Category	N	Mean Score	SD	t-value	Sig.
PTE in General	Male	128	3.49	.91	2.72	.007

	Female	269	3.23	.87		
Curriculum	Male	128	2.29	.34	.67	.503
	Female	269	2.27	.36		
Teaching Practice	Male	128	3.93	.43	1.69	.091
	Female	269	3.85	.40		
Proficiency	Male	128	4.09	.43	-.62	.530
	Female	269	4.12	.51		
Relevance T&P	Male	128	3.18	.62	-.57	.566
	Female	269	3.21	.54		
Preparedness	Male	128	2.95	.93	-1.60	.109
	Female	269	3.09	.74		

Discussion and Conclusions

Results have shown poor agreement of the teachers that PTE, in general, curriculum, the relevance of T& P, and preparedness was according to the standards. There was a negative correlation observed between PTE in general other factors. Notably, the curriculum has shown a negative effect on the preparedness of the teachers. Previous studies by Zeki (2020) in Turkey have shown a moderate correlation among the variables of teacher preparedness. It needs a lot of improvement and restructuring of pre-service teachers' education programs in Pakistan.

The PTE, in general, depends on instructional requirements, it is treated on a need-to-know basis, academic and school practices should be linked together in pre-service training, with the overall context being an ICT-saturated atmosphere, pedagogical techniques, and disciplinary material, also all interlinked. In turn, these help and prevent the development of creative pedagogical methods utilizing technology. Pre-service teacher education should "*prepare teachers who are adaptable to change and empowered to change their environments, who are creative and innovative, and who can apply knowledge and solve problems with confidence*" (Lim, Graeme Lock, & Brook, 2009).

According to the National Educational Policy (2009), the curriculum of teacher education shall be adapted to the requirements of the curriculum and study system of the school. The curriculum must include student-centered learning training, cross-curricular skills, and a component on-site. The teacher education curriculum should associate with the National Teacher Professional Standards (National educational Policy, 2017).

Ronfeldt and Reininger (2012) believe teaching practice as a "global teacher training centerpiece." Teaching practice aims to invite future teachers to teach and their practices to build abilities, behaviors, and knowledge and skills in the field under the supervision of competent educators. The main objective of the practice is to promote

associations between theory and practice of education, enhance the capacity of new teachers and acquire the skill to identify and then use suitable tools for teaching (Mannathoko, 1993). It is explained that practice teaching is a learning opportunity that enables student teachers to recognize their strengths and weaknesses to achieve the most significant benefit of his profession.

It is much more essential to apply theory and principles in the classroom than to get grades or marks. Successful teaching methods are closely related to skills development. Since education is an activity of thinking and observation, it is essential to master the necessary teaching skills. To create a teacher with experience and essential teaching skills, It needs to change the way teachers prepare for preparatory services. Training and seminars are the best way for students to teach the necessary educational skills. These abilities are essential for the career they need to make. Therefore, if it is impractical to apply, it is more important to master these skills than to deal with theories that are not related to this area.

Theoretical knowledge enables them to raise understanding and knowledge of different classroom aspects and enhance their teaching techniques (Lunenberg & Korthagen, 2009). Therefore, essential to enable learners to implement suitable theoretical knowledge values in order to maximize their practical knowledge rather than focusing solely on theoretical understanding (Randi & Corno, 2007).

Professional development of the teachers is connected with the sense of preparedness that how and what they practice. Their learning is linked to how they experience teaching methods in the classroom. Teachers must gain proper preparation for their professional development to assist them and to make them fully prepared to teach, as well as enhancing the knowledge of teachers to enable them to use diverse teaching methods.

The proficiency of prospective teachers is relevant and essential for the proper preparation of teachers (Zeki, 2020). The findings of the present study indicate a weak correlation between proficiency and other factors. An effective curriculum combined with practical teaching experience for pre-service teacher education is necessary for student teachers to develop their abilities (Zeki, Iqbal, Asgahr, 2019). This research has shown an adverse effect of curriculum on the preparedness of teachers, which shows the inefficiency of the teacher education curriculum. Student teachers benefited from their teaching practice as they learned how to deal with students effectively, and they get to know what is expected as a teacher from them. The findings of the study support the previous research studies (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Perry, 2004; Queensland Teachers ' College, 2007; Lai, 2005; Imbimbo & Silvernail, 1999). In the current study, it is found out that In order to enhance the quality of teacher preparedness, significant factors need to be considered. The effectiveness of pre-service teacher education can only be enhanced by supporting them in linking theory and practice. The

results of this study bear significant similarities with the various research findings (Atay, 2007; Kansanen, 2014; Cheng, Tang & Cheng, 2010) that stress upon the improvement of the teacher education programs.

Teachers influence students' academic and social learning. Qualified and quality teachers are always in demand worldwide. While the concepts of school, teaching methodologies and curricula constantly change, teachers' roles and responsibilities too are redefined. There are various reasons and factors behind the lack of a long-term or sustainable pre-service teacher education with quality. Predominant factors, i.e., pre-service teacher education in general, curriculum, teaching practice, the relevance between theory and practice, and proficiency needs to be considered examined to address the needs and expectations.

Recommendations

Pakistan has attempted to pave stronger and effective foundations of pre-service teacher education last decades. A practical and quality pre-service teacher education in Punjab is possible if student teachers are adequately taught in knowledge and practice by a proper pre-service education in synch with the stakeholder's expectations. Findings of the present study verified that pre-service teacher education programs in Punjab should be revised for improving the effectiveness of the teaching and learning through modification of the pre-service teacher education right from the teaching practice stage and aligned with curriculum, teaching practice and theory and practice. Future studies may be conducted to develop a strategic plan for the improvement of pre-service teacher education in Pakistan.

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