TEACHER EDUCATION PEDAGOGY: THECONCEPTIONS AND PRACTICES OF TEACHER EDUCATORS IN THE SOUTHERN REGIONS OF ETHIOPIA

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This is to certify that the thesis prepared by Abayneh Ergogo, entitled *Teacher education pedagogy: the conceptions and practices of teacher educators in the southern regions of Ethiopia*, and submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Curriculum Studies, complies with the regulations of Addis Ababa University and meets the accepted standards with respect to originality and quality.

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Abstract

In order to establish a standard for successful pedagogy in teacher education, this study explores the relationship between teacher educators' conceptions of pedagogy and their likely practices. The study investigates the rationale for the pedagogical practices of the teacher-educators, with a particular emphasis on Korthagen's classification of realistic pedagogical conceptions as application of theory and realistic as well as the practice as constructivist and transmissionist approaches. Constructivist and realistic approaches promote active practice and reflection, whereas the application of theory and transmissionist approaches focus on pedagogies that concentrate on imparting mere theoretical knowledge through transmission, expecting student teachers to apply it during their teaching. The study employed a convergent, parallel mixed-methods design and a pragmatic paradigm. The study employed questionnaires to collect data from 243 teacher educators. Moreover, 5 teacher educators and 13 student teachers were interviewed, and 6 classroom observations were carried out on 4 teacher educators.The quantitative data was analyzed using percentages, Wilcoxon signed rank, and Spearman's rho correlation tests, while the qualitative data was analyzed using thematic and narrative analysis approaches.The findings indicated that teacher educators in the southern regions use a transmissionist or content-oriented approach in their pedagogy as a result of theirapplication of theory conceptions to their pedagogy. It was also discovered that contextual factors had a major impact on the teacher educators' pedagogy. Based on these, teacher educators should have the conception of realistic approaches to deliver inspiring pedagogy, which is characterized by continually evolving, reflexive, and experiential teaching, as part of adequate professional competence and value. It is also critical to design professional development activities that assist teacher educators in reevaluating their perspectives and methods of teaching on learning to teach. Furthermore, policy directives that attempt to alter teaching conceptions and practices should take individual and institutional levels of teacher preparation into account.

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CHAPTER ONE:INTRODUCTION

The context of teacher education pedagogy and classroom behaviors of teacher educationis put forth in this chapter. Moreover, the notion of teacher education and significance of teacher education pedagogywere reviewed. Moreover, issues of what research does and does not tell us about teacher education pedagogy, and why research on teacher education pedagogy is so critically important have been explained and discussed. Finally, the purpose, significance of the study, delimitation, and operational definitions of the study were conveyed.

1.1 Teacher education pedagogy

These days, teaching requires teachers to resituate themselves professionally, not as conventional teachers but as highly skilled, advanced learners. This is because students in this century are growing dissatisfied with the teachers' traditional, uninspiring methods of instruction (Punie & Cabrera, 2006; Saavedra & Opfer, 2012). Moreover, adopting twenty-first-century pedagogy requires teachers to reconsider how they should justify what they teach, how and why they teach it, and who they are as teachers. These imply that teacher educators require proper conception and practice to make the pedagogical reasoning that supports quality practice clear, explicit, and meaningful for learners so that they can prepare quality teachers. This, in turn, requires teacher educators to conceptualize teacher education pedagogy as fundamentally different from teaching in general schools, where teachers primarily teach the subject matter and help student teachers form their own professional identities (Korthagen, 2016; Loughran, 2006).

As a program of education, research, and training of people to teach from pre-primary to higher education levels, teacher education develop a teacher's skill and competency to enable and empower them to fulfill the demands of their profession and take on its problems (Smith, 2006; Hollins, 2011). Loughran and Hamilton also suggested that teacher education as a field has increasingly come under scrutiny in recent times as the expectations for the perceived "quality" of initial teacher education (Loughran & Hamilton, 2016). Others also explain that teacher education is concerned with aspects such as what (content), how (teaching strategy), who (teacher educator), and whom (student teacher) (Korthagen, 2016). To Korthagen, the subject matter, pedagogy, and pedagogical content are categorized under the "what" of teaching. Enabling the student teachers (whom) to think like a teacher, act like a teacher, and reflect like a

teacher is categorized under the "how" of teaching. Although it is important to have well-chosen courses that provide the student teachers with a solid knowledge base, it is equally important to organize the student teachers' experiences so that they can integrate and use their knowledge in skillful ways in their school classrooms. Teacher education, as that of any educational institution, is greatly dependent upon the quality of teacher educators, as Levine notes: "The quality of tomorrow will be no better than the quality of our teacher force" (Levine, 2006). The quality of pedagogical inputs in teacher education programs and their effective utilization for the purpose of preparing prospective teachers depend largely on the professional competence of teacher educators and the ways in which they are utilized for strengthening the teacher education program. Teacher education, thus, first deals with the preparation of effective teacher educators.

Darling-Hammond discussed teacher education as a program that is related to the development of teacher proficiency and competence that would enable and empower teachers to meet the requirements of the profession and face the challenges therein (Darling-Hammond, 2017). Teacher education reaches out to student teachers by providing the relevant knowledge, attitudes, and skills to function effectively in their teaching profession. It serves to equip the student teachers with the conceptual and theoretical framework within which they can understand the intricacies of the profession. It aims at creating the necessary attitude in student teachers toward the stakeholders of the profession so that they approach the challenges posed by the environment in a very positive manner (Cochran-Smith, 2005). It equips student teachers with the necessary skills (teaching and soft skills) to carry out their duties in the most efficient and effective manner. In addition, International Encyclopedia of Teaching (1987) has characterized Teacher Education as:

- Continuous process with its component phases, such as pre-service, in-service (and induction). It is also intended to be active in a range of community programs and extension initiatives, such as literacy and societal development initiatives, adult education and non-formal education programs.
- According to the belief that teachers are created, not born, and that teaching is both an art and a science, teachers must develop both their knowledge and their talents.
- Dynamic and always changing. The goal of teacher education is to equip educators to meet the demands of a changing society by keeping up with current trends and advancements.

- The curriculum, design, structure, organization, and modes of transaction of the overall teacher education process, along with the degree of its appropriateness, are all important considerations.
- As in other professional education programs, the theoretical knowledge that is available in multiple related fields is meaningfully and conceptually blended to create a knowledge basis for teacher education that is responsive to the demands of field applications.
- The differentiation of teacher education into stage-specific programs suggests that the body of knowledge is sufficiently specialized and diverse across stages. This knowledge should be leveraged to create efficient procedures for training new teachers in the roles that teachers are expected to carry out at each stage.
- A system where the inputs, processes, and outputs are interdependent.

Others (Hammerness & Darling-Hammond, 2005) also conceptualized the common features of teacher education programs as including:

- A shared, clear vision of good teaching permeates all coursework and clinical experiences.
- Clear performance and practice standards.
- The curriculum is grounded in knowledge of development, learning, and social contexts, and subject matter pedagogy taught in the context of practice.
- Extended clinical experiences (at least 30 weeks) are carefully developed to support the ideas and practices in simultaneous, closely interwoven coursework.
- Explicit strategies help students (1) confront their deep-seated beliefs about learning and themselves and (2) learn about the experiences of people different from themselves.
- Solid bonds, shared expertise, and convictions bind university and school-based faculty together.
- Case study methods, teacher research, performance assessments, and portfolio evaluation relate teachers' learning to classroom practice.

The concepts of learning have been explored predominantly throughout several works of literature. Due to the dynamic nature of knowledge, learning is now conceptualized as a process of mastering the tools of learning to learn rather than the traditional transmission of knowledge from generation to generation (Ball and Forzani, 2009; Krueger and Lindahl, 2001; UNESCO,

2005; Tilak, 2002; Mergo, 2002). Beyond its function as a means of human enlightenment and empowerment that promotes upward socioeconomic mobility, it fosters tolerance and peace in a society and among individuals (Krueger and Lindahl, 2001; Biesta, 2015). This is resulted if—and only if—it is designed to promote effective teaching and learning, termed as quality education. Likewise, in order to achieve an integrated development and fair treatment of all of its citizens, a nation must plan and offer high-quality education, which mostly rests on the skill and dedication of its teachers (Mergo, 2002). By producing well-qualified professionals that can ensure the translation of the needed skills, knowledge, and attitudes in all aspects of sects, quality education plays its lion's share in fostering societal development.

Accordingly, the quality of education greatly determines the quality of citizens/nations, and since there is a clear relationship between students' learning (quality education) and quality teaching, it is determined (not exclusively) by the quality of teachers.

Citizens, societies, and nations are largely determined by the quality of their education, as stated as:

> The quality of a nation depends upon the quality of its citizens. The quality of its citizens depends not exclusively, but in a critical measure, upon the quality of their education. More than any other factor, the quality of their education is determined by the quality of their teacher" (OECD, 2015).

This notion is supported by others, as teachers are the single most important school-based factor influencing student learning (Strong, 2011; Watson et al., 2010; Levine, 2006; Anderson, 2002; Barbre and Mourshed, 2009). In particular, its contribution becomes vital at the pre-primary and primary levels, at which the students are at the age of a key level of development and on which further learning is based. As studies confirm, life experiences at the stage of primary education have enduring effects that are difficult to overcome in later stages of development (Egne, 2015; Abraha, 2015). Consequently, teachers at this level must have the appropriate ability or competence, desire or commitment, and readiness. Therefore, since teachers have such a significant impact on students' learning, achievement, and well-being, it becomes imperative to reason that pre-service teacher education programs are essential for producing such high-quality teachers for our schools.

Moreover, teaching young people to be critical, creative, independent, and inquisitive thinkers that participate in societal expectations or norms has become the function of education these days (Biesta, 2015), which is ensured mainly by the quality teaching that is in turn founded primarily in their pre-service training and education (Korthagen et al., 2005; Zeichner, 2005). By implication, teacher educators' quality teaching influences the student teachers' achievement, teaching effectiveness, teacher attrition, and school collegiality in schools (Chong and Ho, 2009; Hattie, 2008). This also implies that teaching potential teachers to inspire rather than simply to tell needs teacher educators' conceptual and practical pedagogical skills, which in turn require proper conceptions of learning to teach and teaching about to teach.

For quality teacher education, beyond the teacher educators' quality teaching, conceptualization of teacher education in relation to its contextual variables got an issue of discussion (Mekonnen, 2023). Teacher education is commonly defined as a program of education, research, and training that teaches and develops people to meet the requirements of the profession (Loughran and Hamilton, 2016; Korthagen, 2016; Darling-Hammond, 2017; Cochran-Smith, 2005). More prominently, it is a continuous process with pre-service and in-service components. It is based on the theory that teachers are made, not born (a teacher has to acquire not only knowledge but also skills).

1.2 The research problem

Preparing learners in response to national policy and 21st Century learning skills are significant motivators for educators to reconsider curricula and approaches to them (Rudd et al., 2000; Prensky, 2010). The government of Ethiopia has a development vision of becoming a lower-middle-income country by the year 2030 (MOE, 2018), which necessitate medium and high-level expertise, capable of contributing to the vision. In the same manner, Teacher Development Program II (TDP II) of Ethiopia has made teacher quality its prime focus, which is equipped mostly during the teachers' pre-service education by the teacher educators demonstrated pedagogical approaches (MOE, 2008). Other initiatives have also made to improve teacher quality, focusing on upgrading teachers and changing the structure and curriculum of teacher education in Ethiopia through reforms including the Teacher Education System Overhaul and Post Graduate Diploma.

Despite the said government efforts, education in Ethiopia has been studied as it entangled with challenges of low-quality, indicated by the learners' learning outcomes (MOE 2008a; MoE & USAID, 2008; MOE 2005; Dawit, 2008; Teshome, 2001; Tekeste, 2006; UNESCO, 2004; Word Bank, 2005; Messay, 2006; Damtew, 2007; Lemlem, 2010). It was also evidenced by studies and reports from EGRA and ETNLA (Ambissa, 2021; Mekonnen, 2023; Gemeda & Tynjälä, 2015a; Tesfaye et al., 2015a; Kedir et al., 2007). For example, the national composite mean score of 2017 examinees were found to be 33.3% for grade 10 and 41.7% for grade 12, which is below the minimum policy target of 50% (ESDP V, 2015) and declining overtime compared to the 2013 to 2017 assessment results. It was worse for the southern regions, in which 32.24% for grade 10 and 40.59% for grade 12, which is not only below the minimum policy target but also below the national mean scores each (ETNLA, 2017). The worse was that, the quality education in Ethiopia was found to be declining paradoxically from the older to the more recent studies and there are persistent high rates of dropout and repetition of learners. It was evidenced as that for every 1,000 children who begin school, around one-half passed uninterrupted to Grade 5, and only one-fifth completed Grade 8(MOE, 2015 in ESDP V: 19; Tesfaye, 2014; Kedir, 2007). Based on these studies, the poor attainment of learners is also ascertained when learners are observed struggling to learn and acquire the basic pre-requisite skills such as literacy and numeracy.

As a result, the poor quality teaching of teachers, not inclusively but in greater measures, can be held responsible for these poor educational outcomes since the success of student teachers, the efficacy of teachers, teacher attrition, and school collegiality are all impacted by the teaching competency of teachers (Chong & Ho, 2009; Barbre & Mourshed, 2009; Danielson, 2007; Doyran, 2012; Hattie, 2008; Hargreaves & Fullan, 2012). Other studies ascertain that teachers are the single most significant component at the school that affects students' learning (Thompson, 2016; Hargreaves & Fullan, 2012; Danielson, 2007). Consequently, this poor-quality teaching of teachers can be attributed to inadequate pre-service teacher training and teacher educators' poor teaching. As suggested by many studies, teachers' effective teaching is founded primarily in their pre-service education, proven on fundamental ideas and abilities to boost educational practices (Korthagen et al., 2005; Russell & Korthagen, 1995; Zeichner, 2005; Feiman-Nemser, 2003, as cited in Dawit, 2008; Wilson, 1990, as cited in Cuenca, 2010). In line with this, studies contend that, student teachers' knowledge, attitudes, and skills earned during

their time in teacher education colleges may have a multiplier effect in fostering better learning of teaching (Korthagen et al., 2005; Russell & Korthagen, 1995; Zeichner, 2005).

Thus, preparing teachers in pre-service programs needs teacher educators to have a perspective on a holistic practice-based pedagogy for learning to teach and teaching about to teach that is at the core a mirror image of the practice of quality teaching in schools. However, the performance of written exit exams (COC) of the newly graduated teachers of the regions of the study area, is low and below the expected. In average, only 8.64% of the graduates of 2016 – 2021 scored 70% and above, the benchmark of national licensing point. Similarly, only 47.2% of the same graduates scored 50% and above. The achievement is summarized in the following chart below.

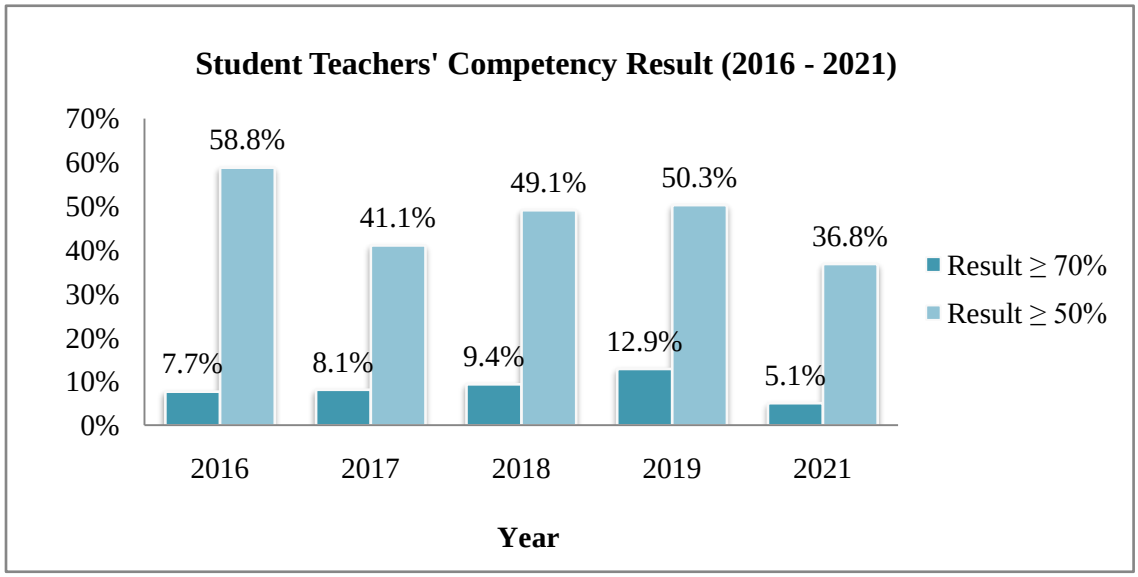

Figure 1: Southern regions' CTEs graduates' COC results of mathematics, biology, chemistry, and physics (2016 – 2021).Source: Annual reports of education sectors of the regions

This inevitable gap between the quality teachers we need vs the ones teachers we prepare needs attention, and unless this trend is dramatically reversed and if the gap persists, the quality of education and then, the national development goal may become difficult to achieve. On the other hand, studies on teacher education pedagogy in Ethiopia are scarce. Most global professional discourses and studies assume different research and reform-based alternative program designs and features. These discourses focus on how theory and practice are effectively integrated; the developmental design of practicum so that students can feed-forward their courses and experiences; designing teacher education programs so that a teacher teaches at least two subjects;

and curriculum reforms in which stakeholders are engaged on how and why changes are implemented. However, in our country, discourses about teacher education are mostly related to dualist arguments like integrated or consecutive (and cluster or linear) models; the course proportion in the subject area and pedagogy; foundations courses followed by methods courses and also followed by student teaching or vice versa; the curricular divide between foundations and methods courses as well as the practicum to theoretical proportion (Kedir, 2007). Beyond the initiatives that were made to improve teacher quality, focusing on upgrading teachers and attempts to change the structure and curriculum of teacher education in Ethiopia, examining teacher educators' practices and the causes of those practices remained under-researched. Therefore, it appears that the pedagogy of teacher education in the colleges has rarely been adjusted to address these challenges, despite the increased attention and discussions on the importance of quality primary and tertiary education indicated by the various reform initiatives and some triggered discussions among educators and researchers in Ethiopia. Particularly, there is hardly any research on the conception and the related practice as well as their perceived pedagogical challenges in Ethiopia in general and in the colleges of the Southern Regions of Ethiopia in particular. This disadvantages the practice of supporting and stimulating student teachers for effective teaching because professional training should help teachers learn to enact practical tasks of pedagogy skillfully.

Though the poor quality of teachers could be attributed to other factors of teacher education (Nega, 2009), there is doubt that the teacher educator's quality teaching, which the present study aimed to accentuate, was mainly responsible for this poor-quality achievement. The function of teacher educators is essential to the pedagogy of teacher education because they foster the cultural and mentality of student teachers' ongoing professional developments.Thus, investigating teacher educators' conceptions and their likely practices helps student teachers acquire the necessary knowledge, skills, and attitudes for teaching. It also helps to understand the underlying drivers of teacher educators' quality pedagogy conception and performance, as well as the constraints that prohibit their practice.

Although a lot of inquiries have been made about effective teaching that influences students' learning, only a very small number of studies have shown the influence of pre-service teacher education pedagogy on the quality of general education. Dealing with problems at such a fundamental level is believed to contribute significantly to scholarship in this field and also to

the sector. Since the present research evaluates pre-service teacher education pedagogy, it provides useful information to researchers and decision-makers to better identify variables and develop models of effective teacher preparation. Besides its aid to the general national goal, it will also help the ministry and bureau of education to use it as a benchmark for the intervention program on general education quality based on teacher educators' pedagogical beliefs and classroom practices.

The present research, thus, attempts to fill such gaps in teacher preparation by paying attention to teacher educators' conceptions and practices of demonstrating knowledge, skills, and attitudes that reflect the best available practices in teacher education. It is important to investigate how teacher educators handle teaching to help student teachers become capable future teachers since they are agents who educate and support student teachers in developing knowledge and competence in the teaching profession (Lunenberg, Korthagen, & Swennen, 2007). In this respect, it is of great importance to frame teacher education pedagogy in terms of conception and practice as it would contribute to the literature. Furthermore, it is believed that revealing the relationship between teacher educators' pedagogical conceptions and practice will contribute to a better understanding and implementation of professional development programs.

1.3 The research questions

The research attempts to investigate the following research questions:

1. How do teacher educators conceptualize their pedagogy?
2. What pedagogical strategies do teacher educators practice to facilitate learning to teach?
3. Is there a statistically significant relationship between teacher educators' pedagogical conceptions and their pedagogical practices?
4. What are the major challenges for teacher educators to implement their effective pedagogy?

Thus, it is hoped that by addressing these questions, this research will support teacher education pedagogy by helping student teachers become more self-aware, self-managing, and reflective would-be teachers. By doing so, it also prepares them to deal with greater capacity in their future professional diligence, perseverance, and attainment.

1.4 Objectives of the study

1.4.1 General objective

This study aims to examine the pedagogical conceptions, practices, and challenges of teacher educators with the goal of gaining insight into beliefs that are held or developed. The goal is to rethink pedagogy for effective teaching, and in particular, to shed light on teacher education pedagogy. It also goes to having a comprehensive understanding of the type of learning that actually occurs and the teacher education challenges that obstruct teacher educators from executing effective pedagogy. The study also aimed to determine the existing relationship between practices and conception as well as depict the perceived constraints influencing their practices.

1.4.2 Specific objectives

More specifically, this research is intended to:

- investigate teacher educators' conceptions of how student teachers learn to teach.
- examine teacher educators' conceptions of teaching the student teachers.
- investigating teacher educators perceived pedagogical practices and strategies they employ to train schoolteachers
- examining the relationship between teacher educators' conceptions and practices of their pedagogy.
- identify major constraints that influence teacher educators' pedagogy.

1.5 Significances of the study

Administrators, college officials, and teacher educators can plan intervention programs to change attitudes toward effective teacher preparation. Moreover, nongovernmental organizations and international donors can identify future areas of intervention for teacher education at the level under investigation. It also provides opportunities for beginning teachers to engage with effective pedagogy as part of their professional learning, which results in a better understanding and growth in effective teaching. It is also a significant study for student teachers to see the present implementation of teacher education pedagogy in relation to student achievement. It has been accepted that prospective teachers mostly model their teacher educators' (and, moreover,

schoolteachers') practices, methods, and approaches. Thus, the present study is regarded as vital for student teachers to acquire knowledge, skills, and attitudes toward quality teaching practice.

To be precise, teacher educators can also use the results of the study to improve their current teaching practice and to support their own ongoing professional development studies. It is also hoped that the findings from the study can provide valuable information to colleges of teacher education about the need to train and educate future teachers with adequate and appropriate knowledge on how to incorporate effective teacher education pedagogy into their classroom practices. It also provides information about the need to offer sufficient in-service training (as a professional development need) to teacher educators who are already in the profession so as to familiarize them with effective and new teaching methods. It may also encourage teacher educators and teacher education institutions to seriously consider their role and the important contributions they can make to produce better teachers.

Finally, the results of the study can be a significant resource, representing a shared understanding of the pedagogy of teacher education and for anyone who would like to use it as a reference for further research or another piece of study related to the teaching methodology.

1.6 Scope of the study

This research work is carried out in the colleges of the southern regions of Ethiopia, with the main focus on teacher educators' conceptions and practices of the pedagogy of teacher preparation. From the total five colleges (Hawassa, Dila, Arba Minch, Bonga, and Hossana) found in the regions, the study was limited to the three colleges: Hawassa, Bonga, and Hossana. Dila CTE was an area of pilot study. The competence of a sampled population, including stream/department heads and teacher educators, was assessed. The sample size was determined so that it satisfies the regulations regarding the depth as well as the coverage of the study. In fact, the researcher believed that an authentic investigation of teacher educators' pedagogical conceptions and practices would be made based on a specific study that focuses on a limited number of research participants using qualitative methods and that follows collecting data from relatively many participants using quantitative methods. However, the study is focused on only teacher educators (including deans, stream/department heads, and teacher educators) of the colleges, while there could be interaction with student teachers of the colleges, teacher educators

at regional and ministry levels, or in colleges of universities and other administrative levels of the education sector, as the nature of pedagogy demands.

Conceptually, the study was mainly concerned with only understanding what pedagogical conceptionsteacher educators hold, how these conceptions affect their classroom practices, and what constraints they faced on their pedagogy.As a result, despite portraying the pedagogical conceptions and practices of teacher educators in different ways, this research focused only on Korthagon's (2017) articulations of teachers' teaching conceptions as realistic and the application of theory, as well as their practices as constructivist and transmissionist approaches.Using a mixed-methods research design, it is primarily concerned with understanding what pedagogical conceptions the teacher educators hold and how these conceptions affect (are related to) their practices. This is based on an argument that the researcher has that teacher educators ought to demonstrate exemplary pedagogical behaviors in addition to being technical experts in teacher education pedagogy. Furthermore, it was proposed not to include issues related to the effectiveness of teacher educators or institutions, policy, and curriculum.

1.7 Limitation of the study

The ultimate objective of teacher education colleges is to produce competent teachers for general education. Such a fundamental purpose of quality education could be achieved basically in the area of teacher educators' quality pedagogy, which requires teacher educators' proper conceptions of quality pedagogy. With this general aim of the research, the following can be mentioned as limitations of this research work:

First, the research was limited to colleges of teacher education. If resources hadn't limited the scope of this study, the lessons from colleges of universities that train teachers for secondary schools would have been of paramount relevance.Thus, the lessons may not be inclusive of the whole situation of teacher educators' pedagogy in the study area. Second, even though a relatively large number of participants were included in the study with the fear of the risk of non-responsiveness, some participants may alter their behavior or hide their actual emotions and thoughts from the researcher. Moreover, some teacher educators might not be willing to discuss about their work or might not be able to articulate their ideas and professional experiences. In reality, much care and sensitivity were used to address these issues of misunderstanding and

accessibility by trying to make the data collection process as comfortable as possible for participating teacher educators.

1.8 Operational definitions of key terms

Concurring to Neuman (2006), operationalization of key terms means moving from a construct's conceptual definition to specific activities or measures that allow a researcher to observe it empirically. Hence, in this study:

College refers to a higher learning institution that provides courses for pre-service teachers of pre-primary and primary teacher education (Loughran, 2016: 437).

Conceptions represent what people understand, value, believe, or feel about something at any given time (Mirian & Zulnaidi, 2020). Studies show that teachers see the world through the lenses of their conceptions.

Pedagogy: The practice (or the art, the science or the craft) of teaching, including the provision of learning environments. More comprehensively it describes how students and teachers interact in the context of learning, which includes the physical learning environment as well as the family and community.

Practice refers tothe usual way of doing or perusing a professional activity where the focus, among others, is on teacher educators actually performs or professionally engaged in.

Pre-service teacher preparation refers to the initial preparation of teachers in teacher development, which should reflect both the expectations that the community holds about the role of the teacher and the skills and abilities of the individuals who enter the profession.

Southern regions of Ethiopia: -refers to the regions located in the Southern part of Ethiopia.

Student-teachers refer to the learners hosted in colleges for teaching in future. It is used synonymously to prospective teachers to refer to a learner and also trainer subject to learn to teach.

Teacher education: A program in which future preprimary, primary and secondary school teachers are educated in colleges and public universities of Ethiopia.

Teacher education pedagogies: Are the pedagogical structures and routines that teacher educators regularly use during coursework and in the field to help student teachers learn the work of teaching in practice-based ways.

Teacher educator: Following the European Commissions' report, "Teacher Educators are all those who actively facilitate the (formal) learning of student teachers and teachers" (European Commission, 2013). The present research is targeting institutions with Teacher Education, and thus Teacher Educators in this context are teachers at Preprimary and Primary Teacher Education Institutions who teach (student) teachers.

1.9 Organization of the study

The structure of this thesis is as follows: The concept of teacher education pedagogy is introduced and placed within the framework in the first chapter. In addition to the context of teacher educators' pedagogy and classroom behaviors, the statement of the problem, goals, and limitations of the study were put forth in this chapter. The review of relevant literature regarding ideas and practices in teacher education pedagogy is the main topic of Chapter 2. In this chapter, we examined the conceptions of teacher educators' pedagogy and their practices and the theoretical framework for the study, both conceptually and empirically. The research design and methodology are covered in length in Chapter 3, along with a discussion of the study's conceptual framework. It addressed the specific data collection system that was incorporated during the study to collect valid data essential to the research questions.It included research design and methods, sampling, tools of data collection, methods of data analysis, managing the quality of the research, and ethical considerations of the study. The study's findingswere covered in Chapter 4, which also comprises a summary of the pilot study and the data's presentation, analysis, and interpretation. This chapter presented a detailed analysis and discussion of the data collected through questionnaires, interviews, and classroom observations. The questionnaire was based on both open-ended and closed-ended questions. In chapter 5, the research findings were discussed, and it was devoted to determining the attainment of the findings in line with the objectives of the study. Finally, the research's conclusion and implications were provided in Chapter 6. These were based on teacher educators' pedagogical conceptions, their pedagogical practice, and the challenges they faced.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Introduction

This study aimed to investigate the conceptions and perceived as well as teacher educators'lived practices of quality teacher education pedagogy in their preparation of student teachers. It is plainly known that conception and the likely practices of the job at hand are some of the main elements of quality teacher education pedagogy in college settings. In teacher education, it becomes imperative to look at the extent of the quality of our being. Essentially, the quality of education was planned into educational settings with the hope of increasing teachers' ability to ensure learning through their teaching. Lovat (2007a) reinforced this by stating, "Quality teaching is inextricably linked to holistic education, which is characterized by assisting student teachers to develop knowledge, affective, and moral skills." Based on this, in this chapter, we examined the conceptions of teacher education pedagogy, practices of teacher education pedagogy, relationship between conception and practice, and the theoretical framework for the study, both conceptually and empirically, from the literature. Finally, sections of the review included the specific pedagogical activities of teacher education together with factors that both inhibit and encourage teacher educators' practices.

2.1 Learning to teach

Debates and tensions about program content, theoretical academic knowledge, and practical utility have been a visible worldwide teacher education feature since the time of the first formal teacher preparation surfaced in many countries in the form of normal schools. Teacher education is related to its curriculum, design, structure, organization, and transactional modes. However, it is a system that includes interdependent inputs, processes, and outputs (Smith, 2006; Hollinse, 2011; Korthagrn, 2016).

Feiman-Nemser & Remillard (1996) portrayed that teachers need to know and be able to do certain things in order to teach. These are knowledge base for teaching (domains of professional knowledge that beginning teachers need to know about in order to do their work), core teaching tasks (planning, reporting, establishing the academic task, assessing, etc.), and professional standards (commitment, equipping the knowledge base, joining the learning community, etc.). Moreover, he articulated the content of learning to teach (what do teachers need to know and be

able to do in order to teach) as knowledge base for teaching (domains of professional), core teaching tasks (planning, reporting, establishing the academic task, assess, etc), and professional standards (commitment, competence of the knowledge base, and developing professional identity or being member of learning community, etc). In line with this notion, Panti and Wubbels (2012) identified four domains of teacher competencies: values and child-rearing, understanding of the education system, subject knowledge and knowledge about the pedagogy and the curriculum, self-evaluation, and professional development. A knowledge base for teaching is characterized by dynamic, constantly evolving knowledge (what a teacher needs to know to teach), which is sensitive to the teacher's education field. Other studies also explained the knowledge base of teachers (a teacher needs to know to teach), as; subject matter knowledge, which includes syntactic structures, content, and substantive structures; general pedagogical knowledge, which includes knowledge of learners and that of earning; knowledge of classroom management and curriculum & instruction; and pedagogical content knowledge, which includes knowledge of students' understanding, curricular knowledge, and knowledge of instructional strategies and context (Verloop, Driel, & Meijer, 2001). In other words, pedagogical knowledge relates to the "how" of teaching and is specifically related to those general principles and strategies of classroom management and subject matter organization, whereas content knowledge refers to the "what" of teaching or the knowledge of the subject matter of a particular field. Comparably, pedagogical content knowledge is applied knowledge that embodies the integration of pedagogy and content into an awareness of how specific subjects are structured and modified to suit the various interests and learning styles of students. Knowledge of general pedagogy, subject matter, students and potential misconceptions, curriculum information, and knowledge of environmental circumstances, such as technological knowledge, are all considered to be components of pedagogical content knowledge (PCK). These studies challenge Shulman's segmented theory of PCK.

According to researchers, preparing candidates for quality teaching consists of two basic parts (Hollins, 2011). The first part deals with the essential knowledge, skills, and habits of mind such as knowledge of learners, knowledge of learning, knowledge of the subject matter, knowledge of pedagogy, knowledge of accountability and assessment, and the ability to participate in a professional community with an emphasis on learning theory and teaching philosophy for classroom teaching. The second part includes the epistemic practices (focused inquiry, directed

observation, and guided practice) and program qualities (collaboration, coherence, continuity, consistency, integrity, and trustworthiness) that support learning to teach. Other researchers of teacher education pedagogy asserted also that explicit, coherent, and integrated strategies; an extensive and well-supervised clinical experience that links theory and practice; and new relationships and shared beliefs with schools are also parts of the pedagogical cornerstones of teacher education that help student teachers confront their own deep-seated beliefs and assumptions about teaching and learning (Mekonnen, 2023; Darling Hammond, 2006).

To Hollins, "epistemic practice", taken in interpreting and translating the experiences in authentic situations within and outside of classrooms, is a way to construct an understanding of the substantive relationship between learners, learning, pedagogy, and learning outcomes (Hollins, 2015). She extended her emphasis on interrelated and reciprocal practices such as focused inquiry, directed observation, and guided practice to also be considered as methods as well as subjects of teacher education pedagogy. In her discussion on practice-based program qualities, specific elements within the teacher preparation program that include collaboration among teacher educators and candidates, coherence, continuity, consistency, and integrity of the program are parts of the context and support for learning to teach.

Essential knowledge for teachers is also defined by Cochran-Smith, Van De Ven, and P.E. Johnson (2006) as knowledge for practice, knowledge in practice, and knowledge in research. Knowledge for practice was concerned with knowledge about content or subject matter, which includes learning theories, human development, pedagogy, assessment, educational foundations, social and cultural contexts of schools and schooling, as well as knowledge of the teaching profession and teacher education. Similarly, knowledge in practice as well as in research was also about knowledge embedded in their practices and invested in by reflection. Therefore, a learning platform, which is considered a framework of tools that work seamlessly together to deliver a student-centric learning experience by unifying educational theory and practice, technology, and content (Ball, Thames, & Phelps, 2008), must be part and parcel of teacher education. Others also express teacher education pedagogy as a practice-based instructional structure that teacher educators can routinely use to support and scaffold student teachers in their understanding of the anatomy of pedagogical practices in learning about teaching (collaborative, reflective, inquiry-based, and integrative approaches) (Hollins, 2015; Loughran, 2008). And it

involves developing knowledge of teaching about teaching and learning about teaching and how the two influence one another. Loughran, in his extended notion, presented a teacher education pedagogy as it is based on three main interrelated and complementary aspects of knowledge and practice: teacher educators' teaching and learning about teaching; student teachers' learning about learning; and student teachers' learning about teaching (Loughran, 2006).

2.2 Approaches of learning to teach, and its implication about teaching to teach

Teachers' abilities may be restricted by their knowledge and skills, but possessing them does not ensure that they will be used wisely (Feiman-Nemser, 2014). Put another way, teachers need to be knowledgeable about both the subjects they teach and how to present them in a way that students can understand. Recently, research of teacher education pedagogy promoted an understanding that the pedagogy employed in teacher education should be grounded in research, in addition to the program's content.To answer the question, "How do prospective teachers learn to teach?" It is necessary to discuss experiences that give candidates the ability to contextualize their teaching methods in order to assist learning for various student groups in various classroom and school environments. In line with this, the concept that portrayed by Darling-Hammond (2006) as “what students learn depends on how they are taught” introduces a remarkable educational thought or idea that students learn essential knowledge about a subject's nature as whether it is interesting or boring, clear or fuzzy, relevant or irrelevant, difficulty or routine, from the way it is taught.She extends her argument by saying that pedagogy is no longer defined as a set of techniques that enable teachers to maintain order but instead as integral to the substantive goals of teaching. Here the argument shows that learning of students is affected positively or negatively by the approaches that classroom teachers use in the process.

The discussion of pedagogy in teacher education poses the question of what the tasks of teacher educators are – as content for the teacher education pedagogy. For a long time, the tasks of teacher educators were equated with simply teaching and the realization that differentiates teacher education pedagogy from traditional lecturing and teaching in schools is a recent phenomenon Korthagen (2016). Researchers contend that teaching prospective teachers requires a different pedagogical approach than teaching in general schools, in which teachers teach the subject matter only (Murray & Male, 2005; Korthagen, 2016; Berry, 2009; Harrison & McKeon, 2008; Ritter, 2007; Kari & Lilach, 2005).

Some other scholars also classified teaching in schools as the first level and teaching prospective teachers as the second level based on the stated differences in tasks (Loughran, 2014; Swennen, Jones, & Volman, 2010). In addition to their deliberate teaching, teacher educators are models for their student teachers, in that prospective teachers model their teacher educators and get experiences of the methods that will be used in their future classrooms. As concluded as student teachers take the practices of their educators as model for their later practices (Darling-Hammond, 2006; Feiman-Nemser, 2003, as cited in Dawit, 2008; Wilson, 1990, as cited in Cuenca, 2010). Lam and Kember (2006) described a six-category of descriptors for conceptions of learning. In hierarchical order, they defined learning as: the quantitative increase in knowledge; memorizing; acquisition of facts, procedures, etc, which can be retained and/or utilized in practice; the abstraction of meaning; an interpretative process aimed at the understanding of reality and changing as a person.

Korthagen framed two broad theoretical frameworks that could be used to apply to teachers' learning (Korthagen, 2010). These viewpoints are situative and cognitive. Whereas cognitive model provides important guidance for developing cognitive representations of both theory and practice within isolated courses-known as application of theory, situational teacher learning model is ideally suited to the emphasis on practical experience in educational settings as the basis for teacher learning (Korthagen, 2017)-known as realistic approach. Situative learning also refers to experiences that are rooted in contexts. Moreover, a realistic approach tries to explain the role of embodied social learning, while application of theory aims at describing the characteristics of knowledge and knowledge development per se.

Similar to a position defended by studies, it is possible to integrate these two perspectives using a three-level model: gestalt level, schema level, and theory level, which contributes to a better understanding of the relationship between theory and practice (Hoekstra, Beijaard, Brekelmans, & Korthagen, 2007). This model explains why much of the theory presented to teachers in teacher education programs is seldom used in practice, even after all kinds of sophisticated pedagogical measures have been taken. The explanation is that teaching is to a large degree a gestalt driven activity, i.e., learning is dependent upon an interaction between the learner, the context and what is learnt (Jarvis & Parker, 2005).

Consequently, the mere presentation of theory is not sufficient in trying to influence the more perception-driven gestalts. The application of theory perspective has been critiqued for not adequately describing the complexity of experiential learning and the social interactions determining what is being learned from experience (Cobb & Bowers, 1999; Greeno, 1997). As a result, traditional didactic ways of applying theory, including lecturing, are frequently viewed as pedagogically incorrect. However, many people believe that experiential and participatory modes of instruction—also known as the realistic approach—are essential to education, especially in schools and in teacher preparation programs. As studies (Wong et al., 2006; Zanting et al., 2001; Cheng, Chan, Tang, & Cheng, 2009) portray that student teachers enter pre-service teacher education programs with their own ideas and conceptions about what constitutes a successful teacher, based on their life experiences and their socialization processes in schools, it restraints the teacher education pedagogy. Consequently, many student-teachers as well as teacher educators consider knowledge as unquestionable; their responsibility is to impart knowledge directly to their students, and the teacher's function is to convey the "right" knowledge (Gill et al., 2004). Because they have beliefs about learning to teach that are typically more in line with their past experiences than the viewpoints we are asking them to explore, the majority of pre-service teachers have the traditional behaviorist conceptions (Gill, Ashton, & Algina, 2004; Yung et al., 2007), in which students and teachers first learn theory and then apply it (Korthagen, 2010a; Korthagen, Loughran, Russell, 2006). Nonetheless, teachers of undergraduate professional programs have moved from a primary focus on transferring knowledge towards an understanding that knowledge is co-constructed with students (Webster-Wright, 2009). This significant shift from teaching to learning in higher education has led to the introduction of innovative pedagogical practices, such as problem-based learning, action learning, and practice-focused service learning, as well as the use of collaborative, flexible, and interdisciplinary teaching strategies (Darling-Hammond, 2006).

Unlike the traditional application of theory view of teacher education that present theories to student teachers within isolated courses, realistic or situative conceptions of learning to teach led to the introduction of innovative pedagogical practices, such as problem-based learning, action learning and practice-focused service learning and the use of collaborative, flexible, and interdisciplinary teaching strategies, and to an increased focus on field experiences. It has gradually made the traditional view of teacher learning feel outdated, in that learning emerges

from and is intertwined with our actions and those of others. It is an ongoing process of participation in social practice. Consistently, other studies propagate that student teachers learn through relationships, temporally, and contextually (Knight et al., 2015; Putnam & Borko, 2000). The experiences that occur in social contexts are what define relational student-teacher learning, temporal teacher learning is characterized by experiences that are framed by prior experiences and influence new experiences. Aligned with this, Korthagen (2017) added "educational researchers currently support the notion that teacher learning is active, situated, social and constructed.

Dewey's (1933) conception of learning had a profound influence on the understanding of learning. It was holistic and maintaining it as untenable to separate thought from experience. He also maintained that the learner was integral to the experience of learning, rather than a "spectator" looking on to experience (Garrison, 2006). Researchers have evolved understandings of the centrality of experience, reflection and context in learning from Dewey's conceptions of "creative action" and "theory of inquiry" (Boyles, 2006; Webster-Wright, 2009; Lieberman & Miller, 2001). Other studies support the notion that teacher learning is active, situated, social and constructed (Putnam & Borko, 2000). Based on these notions, it has evolved that teachers learn through cognitive, situative, and reflective action.

Learning through experience is crucial since understanding professional learning has been influenced by how learners interpret their experiences. Researchers have emphasized approaches for fostering experiential learning, such as scaffolded or staged participation incorporating mentorship or modeling (Billett, 2001a; Brockbank & McGill, 2006; Gold, 2002; Hampton, Rhodes, & Stokes, 2004). According to Kolb (1984), learning through experience is a cyclical process that involves active experience, observation and reflection, the creation of concepts, and their application and testing in the real world. These methods are frequently referred to as action learning or action research (Ariizumi, 2005; Dilworth & Willis, 2003; Smith & O'Neil, 2003a, 2003b), and they are based on an iterative and cyclical process that includes some combination of planning, acting, evaluating, and reflecting (Carr & Kemmis, 1986; Reason & Bradbury, 2001; Sankaran, Dick, Passfield, & Swepson, 2001). The relevance of context, discussion or dialogue, and collaboration is taken into account while structuring active interaction with reflection on experience. These are suggested as useful methods for fostering real-world

professional learning, particularly when a motivation for societal change or progress is present (Macintyre, 2000; McGill, 2006).

David Boud and colleagues (Boud, Keogh, & Walker, 1985, p.7) argue that active engagement with experience is not sufficient and that it is reflection that transforms experience into learning. A limitation of experiential or active learning cycles described above is the separation of reflection and action in learning. As a response to this, Jack Mezirow (1990) proposed a reflective action. The possibility of challenging assumptions through reflective action in professional learning is mediated by context. Learning always occurs in a context. Context implies more than the obvious physical locations and structures, and even more than social interactions with communities of practice. It includes implicit workplace expectations hidden as discourse. It is accepted that critical reflection has the potential to powerfully shape learning.

Many teacher educators seem to forget that educational knowledge cannot be simply 'transmitted' to teachers, and thus improve their actions. Particularly, learning for student teachers is not limited to imparting useful educational theories to them or having them acquire concepts sequentially on a scale of increasing complexity (Korthagen, 2010; Arnseth & Sa¨ljo¨, 2007; Derry, 2008). However, studies contend that student teachers learning at their pre-service are part of the process of participation in social practice, especially the social practice in the schools. As Lave and Wenger argued, learning emerges from our own actions in relation to those of others. Thus, the learning outcomes are socially constructed (Lave & Wenger, 1991) and we could say: ''I experience; therefore, I learn.''

Moreover, numerous research have shown that constructive or realistic teacher education affects student teachers' preexisting ideas and behaviors and cause to evolve and develop new idea (Loughran, 1996, 2010; Richardson, 2010; Andrew, 2007; Darling-Hammond, 2006; Hogg & Yates, 2013). The studies portray further that constructivist learning is crucial in looking knowledge as situated and strongly interwoven with experience and emotion. It concerns establishing a teaching profession where teachers can pursue lifelong learning, as this is more lik ely to motivate kids to achieve more, especially for those who will be newly engaged in the teaching profession and want to teach effectively.

According to Korthagen and others, learning to teach must be viewed as a subject to be developed rather than as a subject that has already been formed in order to be taught(Korthagen, Loughran, Russell, 2006). In the case of viewing knowledge as a created subject, it leads to the doctrine of viewing telling as teaching and listening as learning, which post-modern and re-conceptualist pedagogists challenged it. Student teachers should be given opportunities to learn on the basis of their own experiences and the concerns they develop through these experiences. Teachers benefit from seeing knowledge as a subject to be created by learners rather than as a subject created by others because they foster as environment in which learners can create knowledge and provide guidance for such activities. This view requires a change of focus from curriculum to learner by shifting from teaching the curriculum to "doing" the curriculum (Moerkerke, 2017), in which theory is developed by students' own reflections from their practice and is more linked to their own situations and concerns (Russel, 2001). Lambert argued in this line that initial teacher preparation needs to emphasize practice rather than tools for practice (Lambert, 2010; Segal, 2011). Thus, the message in the curriculum will have real meaning only if it is embedded with experience, and therefore, teacher educators have to create an environment so that the student-teachers can practice theory and theorize their practice. Student teachers, in this manner, develop their own knowledge through structured reflection on their experiences and discussions with peers on a one-to-one basis rather than being taught by their teacher educators. Using these experiences as a foundation and scaffolding student teachers to develop their own teaching theory will assist teacher educators in teaching effectively. Therefore, the student-teacher is likely to struggle while implementing constructivist education unless their views are formed in accordance with constructivism. To create or reconstruct their vision of teaching, student instructors should therefore be introduced to constructivist teaching.

Another approach helpful for student teachers to learn to teach is students’ research. Student teachers can and should be trusted to research their own practice. If the students are given the chance to have their own conception of their practice and share it with their peers (Korthagen, 2016, Leitch & Day, 2000), they confront the perceived distinctions between theory, practice, the transmission of knowledge, and socialization in teaching. By doing so, they better recognize, define, and enhance their professional roles. Student teachers also learn how to teach by working closely with their peers, which was also another point that the researchers made. This principle corresponds with the view of McIntyre and Hagger (1992), who explained the critical role of

collegiality in helping individual teachers develop their classroom practice. This experience of reflection and sharing ideas with peers develops a sense of helping each other, an enthusiasm to tell a story to a friend, and a desire to seek support from a friend. The prospective teachers' experience of sharing their experience and reflection on teaching not only improves their performance in practicum but also extends to schools after their graduation so that they can work collaboratively with their peers to continuously improve their profession. This principle advocates helping student teachers form a strong community of learners in which they work and learn closely together.

Student teachers also learn through the school-college relationship. To provide firsthand experience for student teachers, it is important to maintain close connections with schools and the teaching profession through modeling. Darling-Hammond contends that the most determinant opportunity is student teachers' learning to teach by modeling (Darling-Hammond, 2006). She expands on her suggestion by stating that in their classrooms, teacher educators should lead by example and exhibit the creative methods they support. Teacher educators must properly model what is good; they cannot advise student teachers to do the opposite of what they observed. According to the same study, it's critical that prospective teachers can easily comprehend the pedagogical logic when it comes to modeling teaching in teacher education.Furthermore, she posited that student teachers need to see into their teacher educators' thinking about teaching. This enabled the student teachers to see the ideas and feelings associated with taking risks and learning about teaching in a meaningful way.

Feiman-Nemser described the views of learning to teach as situated cognition, cognitive apprenticeship, and assisted performance, which are discussed as follows: On the assumption of situated cognition, knowledge and skills exist independently of the contexts in which they are acquired. It is the other side of teacher education pedagogy and the counterpart of the applied science perspective of teaching. According to this viewpoint, academic content knowledge and general intelligence ("knowledge-for-practice") of teacher education are all that are required to begin teaching, and the rest that teachers need to learn can be learned on the job (Zeichner, 2006). Similarly, the view that teachers can first learn concepts and skills and then apply them in real-world teaching situations reflects this assumption. Student teachers take theoretical courses

that teach them foundational knowledge pertaining to education in the classrooms of the college using lecture methods and practice it in schools during the practicum course.

Cognitive apprenticeship is applied to classroom-based instructional models that incorporate key features of an apprenticeship: authentic activity, social interaction, collaborative learning, and a teacher or coach who makes his or her knowledge and thinking visible to the learner(s). An obvious application of cognitive apprenticeship to learning to teach is that the novice would learn how to think and acts like a teacher by observing and engaging in the activities of teaching alongside a more experienced practitioner. The mentor would model ways of thinking and acting, coach the novice in her attempts to carry out tasks, and gradually withdraw support as the novice learned to perform on her own. This calls for classroom teachers to take on the role of school-based teacher educators, a role that requires special preparation and coaching. One important theory that accounts for how learning occurs through social interaction with a more capable other is Vygotsky's (1978) theory of assisted performance in the zone of proximal development (ZPD). According to this theory, knowledge and skills that emerge during the interaction between novices and their more capable counterparts are eventually internalized by the learner.

Pratt adopted the five perspectives of teachers. These are transmission, developmental, apprenticeship, nurturing, and social reform perspectives. As a result, teachers with a transmission perspective are committed to content mastery and provide clear objectives, well-organized lectures, and objective-based assessment of learning. Developmental teachers develop in their student teachers progressively more advanced and intricate methods of reasoning and problem-solving within a field. Instead of just making students acquire more facts, they are more concerned in understanding the requirements of their students and creating connections between their current situation and their desired future state. They are keen to develop students who are critical thinkers. Teachers with an apprenticeship perspective consider that learning happens when students complete real-world tasks in genuine environments, under the coaching and modeling role of a teacher. It not only builds skills but also transforms learners’ identities to acculturate them into a profession. To these teachers, teaching entails developing students who possess both discipline competence and social identity through "scaffolding," or breaking complex tasks into smaller developmental steps within a relevant community of practice.

Teachers with nurturing perspectives think that when students no longer fear failure and make sustained, long-term efforts from their hearts rather than their heads, they will be more motivated and successful.These teachers provide a climate of trust and a balance of caring and challenge. Their approaches involve paying close attention to the emotional and cognitive requirements of each learner, offering a lot of support and encouragement, and establishing realistic but explicit expectations for each. Teachers that practice social reform operate under the premise that social change is the ultimate purpose of education and that their ideas are essential for a better society. They put a lot of effort into advancing their students' dignity and try to integrate them into a variety of practice groups.

Similarly, literature discusses different models of teacher education. As the point of departure, as articulated by Cakcak, teachers are intended to be prepared as technicist, reflective and critical teacher education. In technicist teacher education, teachers are prepared as passive technicians and in reflective teacher education, teachers are prepared as reflective practitioners. Similarly, in critical teacher education, teachers are prepared as transformative intellectuals (Cakcak, 2016).

Robinson and Jancic Mogliacci (2019), based on the work of Pratt (1992), also articulated six approaches to the conception of teacher education pedagogy as follows: social justice approach, master-apprentice approach, applied science approach, teacher identity approach, competence approach, and reflective approach. In the case of the social justice approach, teacher education aims to develop teachers who can act as agents of change, with the focus being on ethical and transformative agency toward addressing social inequalities and building a more just and humane society.Some of these concepts include social reconstruction, critical reflection, emancipatory pedagogy, and critical pedagogy, cultural responsiveness, and a socio-critical approach (Viruru, 2005; Christie & McKinney, 2017). Among the various tensions, McDonald (2005, cited in Whitcomb, 2010) found that it was more effective in helping candidates develop conceptual understanding than practical tools for teaching.

The foundation of a master-apprentice model of teacher preparation is the idea that a student-teacher, or "apprentice," picks up teaching skills by seeing a more experienced teacher, or "master." The idea is that since teaching is a situated activity, teacher preparation must take place in the classroom, where the teacher will be practicing (Dillon, 2017; Gravett, 2012; Livingston

&Flores, 2017). This preparation will take place through observation of a master or expert teacher and guidance from seasoned practitioners. The professional knowledge generated by this method is not disciplinary or theoretical in nature, but rather is ingrained in practice and experience.

The fundamental tenet of the applied science approach, as opposed to the master-apprentice system, is that academic knowledge takes precedence over practical application in the classroom, with theory being studied first and then put into practice. To start teaching, one only needs general intelligence and academic content knowledge, or "knowledge-for-practice." Teachers can acquire the remaining skills through on-the-job training (Zeichner, 2006).Korthagen has also considered the part of the professionalization process that includes educating teachers using prevailing theoretical understanding, followed by feedback on how well they are using the skills and microteaching(Korthagen, 2016). This strategy is sometimes referred to as a clinical-professional or a techno-rational strategy. However, Tuinamuana (2007) contends that this concept of teacher education reduces teachers to mere "technicians" or implementers of learned theories, whereas Whitcomb (2010) sees this approach as an effort to professional teachers' jobs. This approach has been a dominant approach in the professionalization process, among the other views that are common in the discourse surrounding contemporary teacher education. This approach entails preparing teachers based on dominant theoretical knowledge, followed by microteaching with feedback on their use of the skills (Korthagen, 2016). This method was superseded by the competency-based or performance-based education (CBTE) model, which views educators as technicians. CBTE was also known as the "technical-rationality model," according to which novices might be trained using specific, observable behavioral criteria (Burke & Segall, 2015).

The competency approach to teaching is commonly defined as being predicated on a set of competences that each teacher must obtain in order to be considered competent (Panti & Wubbels, 2010). The competence of teachers is based on their professional knowledge base and on their professional performance. Or it is related to one's cognitive resources, as demonstrated by academic and professional test scores, teaching credentials, and knowledge, skills, and dispositions. Novices could be trained using specific, measurable behavioral standards as a foundation (Burke, 2005). It is also related to the body of knowledge, skills, and attitudes needed to function successfully in a teaching profession that include teacher educators' subject matter

knowledge, general pedagogical knowledge, content knowledge, and pedagogical content knowledge (Cochran-Smith & Villagas, 2015). Critics contended that rigidity made the definition of a good teacher inadequate and that a good teacher cannot be defined just in terms of individual competencies (Struyven & De Meyst, 2010). Humanistic-based teacher education, or teacher identity, is a style of teacher education that places a strong emphasis on the dignity and personal development of each individual teacher (Rodgers & Scott, 2008). Intellectual depth, communicative ability, compassionate character, introspective power, self-management, and self-knowledge are examples of traits that effective education may highlight (Lovat & Toomey, 2007). As a result, the aforementioned "conventional" pre-service teacher preparation programs have come under fire for lacking a common set of organizing themes, common standards, and distinct objectives, as well as for frequently being marked by weak and fragmented pedagogy and a lack of coherence within and between courses and field experiences (Feiman-Nemser, 2001; Zeichner, 2006).

Therefore, a realistic model—which emphasizes reflective teaching—was proposed in response to these shortcomings and the need to clearly define the process of learning to teach as well as a standard for effective teaching (Calderhead, 1989; Cochran-Smith and Zeichner, 2005; Darling-Hammond, 2006; Villegas and Lucas, 2002; Weiner, 2006).This approach to teacher education, which constantly moves between theory and practice (Korthagen et al., 2006), is based on a number of principles, including the following: teachers must develop a self-understanding regarding their motivations and personal theories of teaching (Tuinamuana, 2007); teacher education must prepare teachers to actively participate in formulating the purposes, means, and ends of their work (Zeichner, 2009); and it is crucial to identify, frame, and reframe issues and concerns regarding teaching (Loughran, 2002, 2006).

Associated terms within this approach include "practical wisdom," "practitioner inquiry," and "reflective practitioner." Through conscious self-reflection and action, student-teachers can improve their tendency to teach as they were taught and develop the capacity to improve their own practice (Reeves & Robinson, 2014). This model views teacher development as a continuous process of creating one's own teaching insights through the combination of theoretical ideas and personal reflection under the direction of a specialist (Darling-Hammond and Bransford, 2005; Feiman-Nemser, 2001).In a nutshell, the realistic approach follows theory

through practice.In fact, in cognitive-psychological terms, the intended learning processes start with "situated knowledge", developed in the interaction of the learners with the problem situations, and the concrete situations remain the reference points during this learning process (Brown, Collins, & Duguid, 1996).

Therefore, teacher educators' pedagogy in this study is conceptualized as application of theory or transmissionist approach and the reformed pedagogical approach with active engagement in practice and reflective action, known as the realistic or constructivist approach.

2.3 Professionalism in teaching and teacher education

It is common to ask, "Is teaching or teacher education a profession?" Meanwhile, literature exerts two narratives, "classical and new professionalism," in which classical professionalism, teaching, and teacher education have never been regarded as a profession (Snoek, Swennen, & Klink, 2010). On the other hand, because of labor flexibility and school deregulation (Robertson, 1996), a shift away from traditional professional authority and autonomy toward new forms of relationships and collaboration with colleagues, students, and their parents; accountability; a focus on innovation and development perceived as a dynamic and creative profession; the nature of the knowledge base; and the increased attention and the implementation of standards describing the competencies and qualifications of both novice and expert members of professions, the term "new professionalism" has come to refer to a variety of occupations that cannot be considered professions in the traditional sense, such as teachers (Evans, 2008; Van der Klink, 2010). Hargreaves (2000) also conceptualized the progression of teacher professionalism can be divided into four historical stages, such as pre-professional age, autonomous professionalism, collegial professionalism, and post-professional age. As a result, the pre-professional age is distinguished by an individualistic, intuitive, and incremental approach to professional development. Similarly, the autonomous professional age is distinguished by a challenge to the singularity of teaching and coping with dramatic changes; the collegial professional age is distinguished by more school-based staff development; and the post-professional or postmodern age is distinguished by a struggle between forces and groups intent on de-professionalization.

Here, it is inevitable to see the two terms "training" and "education" in teacher education. The viewpoint of teacher education includes professional skills, good pedagogical theory, and teaching abilities.It is not appropriate to use the phrase "teacher training" when we actually mean "teacher education," although it is very difficult to identify which activities are to be called "teacher training" and which are to be called "teacher education." Schofield (1972) correctly states that "training" is a subset of "education," and "teacher training" is a subset of "teacher education." Hence, it does not seem logical to use these two phrases interchangeably because there are conceptual and contextual differences between the two. Although our teacher training colleges are called "Colleges of Education," the phrase "teacher education" is not used in its true sense. Teacher education refers to the knowledge component, whereas teacher training refers to the development of pedagogical abilities. The term "trainee teacher" is out of date, according to Rao (2004), because we need to introduce "intelligent" and "cultured" youth in this day and age. Without any originality or creativity and without knowing the underlying theories of classroom practices, mechanically educated teachers will continue to use the same antiquated techniques and drills. In a conceptual sense, we "educate" teachers by helping them advance their cognitive and intellectual capacities.We are giving them a broader view of the teaching world. We are grooming all aspects of their personality. We are preparing them to face uncertain and unexpected situations in and outside the classroom. We are opening new horizons of knowledge for them. They will not be limited only to knowledge of methods of teaching. The linkage between educational theory and practice is essential.

The National Association for the Education of Young Children (NAEYC, 2018) listed the following key components of teacher education programs: ensure that teacher education candidates demonstrate verbal and written abilities to communicate; provide teacher education candidates with opportunities for reflection; ensure that progress is assessed regularly; faculty must inform teacher education candidates in writing regarding this assessment, assess teacher education candidates' mastery of the program's exit criteria, and ensure that teacher education candidates abide by professional ethics. The knowledge base, therefore, for how to teach that content to teacher education candidates is grounded in the developmental needs of the college students who are preparing to become teachers.

Depending on the nature and contexts of the "why" of the colleges, teacher preparation modalities can be classified as concurrent or consecutive programs, specialists or generalists, or clustered or linear subject matter specialization (Musset, 2010). In the case of a concurrent program, the general professional components of the program are offered at the same time throughout the program, while in a consecutive one, students move on to professional training that focuses mostly on pedagogy and practicum after having undertaken tertiary education in a particular field (Eurydice, 2009). Concurrent modalities are characterized by the fact that both pedagogical and subject-matter knowledge training take place at the same time in an integrated learning experience, and a consecutive program allows teachers to have strong subject expertise in a particular subject. Similarly, the specialist/generalist or cluster/linear approaches were designed with the understanding that not all teachers approach all subjects with the same level of competence (Hanuscins, 2008). In the cluster or generalist modality, student teachers prepare for a specific level of teaching (e.g., lower primary level) by working in groups or a composite of related subjects to ensure broad knowledge and a longer training period, whereas the linear or specialist program prepares teachers in a major and/or minor subject for teaching (MOE, 2013). Individual talents and preferences in academic circles influence the strength of the teacher education program, both internally and externally.

2.4 Pedagogical approaches of teacher educators

Pedagogical approaches place the ultimate responsibility for learning on the learner and are aligned with the expectation that individuals must attain "learning-to-learn" and self-directive competencies in order to succeed in the knowledge society. They are based on the premise that an individual learns continuously through interaction with his or her environment and throughout his or her lifespan, often in the face of ambiguity and need. According to Hollins, there are three approaches to pedagogy in general, including behaviorism, constructivism, and liberationism (Hollins, 2011). Behaviorist pedagogy is based on research by Thorndike (1911), Pavlov (1927), and Skinner (1957), which advocate that the teacher should be the sole authority figure and lead the lesson with a combination of lecturing, modeling and demonstration, rote learning, and choral repetition. Constructivist pedagogy, also known as a progressive teaching style, is based on the theory of learning or meaning-making those individuals (learners) create their own new understandings through experiences and reflection on the basis of an interaction between what

they already know and believe and ideas and knowledge with which they come into contact (Richardson, 2003). It is based on both Piaget's (1972) pedagogical research on "schemas," the idea that learners come ready to learn and that the teacher must build activities to facilitate their learning, and Lev Vygotsky's (1978) notion that learning could only occur in its social context and was a collaborative process between student and teacher. The approach places the learner at the center (called student-centered) of learning and includes project work, inquiry-based learning, and the Montessori or Steiner methods.

Collins and O'Brien (2003) defined student-centered instruction as an instructional approach in which students have an impact on the course material, activities, speed, and substance.This learning model placed the student (learner) in the center of the learning process, with a focus on learning—their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs (McCombs and Whisler, 1997). A constructivist-based student-centered approach encouraged students to be actively engaged with learning materials, promoting student discourse, allowing students to construct new knowledge based on prior knowledge, and rebuilding schemas as they related to them (Polly et al., 2014; Common Core Initiative, 2010; Webb et al., 2014). By exchanging ideas with others, students are forced to monitor their own thinking (Webb et al., 2013), adequately explain, and recognize their own misconceptions or the incompleteness of their ideas (Webb et al., 2013).

The learner-centered approach balances the concern with learning and achievement and the concern with diverse learner needs. The instructors offering pupils the chance to study both on their own and from one another, as well as coaching in the competencies required to perform effectively. McCombs and Whisler (1997) considered some premises that have to be taken into account if all learners are to be provided with the necessary challenges and opportunities for learning and self-development. These include first, the emotional states of mind, learning rates and styles, developmental stages, abilities, talents, emotions of efficacy, and other academic and nonacademic demands and traits make each learner special and distinctive.Second, learners are naturally curious and basically interested in learning about and mastering their world. Third, learning is a fundamental, natural, and constructive process that needs learners to be actively engaged. Fourth, positive interpersonal interactions and connections that foster comfort and

order as well as a sense of validation, respect, and appreciation for one another are the ideal conditions for learning.

According to Weimer (2012), learner-centered education consists of five elements: First, learner-centered teaching engages students in the hard, messy work of learning. With the opportunity to practice, students develop sophisticated learning skills. Second, learner-centered teaching includes explicit skill instruction. Learner-centered teachers teach pupils in critical thinking, problem-solving, assessing evidence, analyzing arguments, and producinghypotheses—all of the skills required to master discipline material. Third, student reflection on what they are learning and how they are learning it is encouraged by learner-centered teaching. The intention is to help pupils recognize their own identity as learners and build a desire to acquire new abilities. Fourth, learner-centered teaching motivates students by allowing them to have some control over the learning process. Learner-centered teachers search out ethically responsible ways to share power with students. Fifth, learner-centered instruction promotes teamwork.It recognizes that students can learn from and alongside each other in a community of learners, whether in an online or traditional classroom.Teachers can learn from students as well, of course, but they also have a duty to impart their knowledge.Learner-centered teachers work to develop structures that promote shared commitments to learning. They see learning, individually and collectively, as the most important goal of any educational experience.

Louise Starkey (2017) also synthesized a learner-centered curriculum into three overlapping dimensions: cognitive, agentic, and humanist. The cognitive dimension considers each student’s learning progress, which is underpinned by the constructivist idea that during the process of learning, meaning or understanding is derived by the individual student (Schuh, 2003). Its emphasis is on the teachers’ analyzing process of their students' knowledge and skills (cognitive development) to inform learning experiences that progress their learning. According to the agentic dimension, students who experience limited agency within an educational institution may become disconnected from school and behave in ways that are detrimental to their learning, such as truanting, non-compliance, or misconduct that could include violence against other students, staff, or property (Smyth, 2006). The similarly constructivist notion of agency focuses on students' active participation, including agency, in the learning process through intention, forethought, self-regulation, and self-reflection. This can be realized in practice using goal

setting, the explicit teaching of meta-cognitive strategies (learning how to learn), and the provision of formative feedback during the learning process. As a result, student-centered education can empower students to act as agents in their own learning progressions (Bandura 1986; Hannafin et al., 1997; Canon and Newble, 2000; Tangney, 2014; Leadbetter, 2003; Weimer, 2002). Humanist education considers the social, emotional, and personal development needs of the learner to develop intrinsic motivation and positive self-efficacy through topics that are of interest to the students and the learner's right to self-determination. A further aspect of the humanist dimension of student-centered education takes account of cultural perspectives and ways of knowing that may differ between students, teachers, and the curriculum or assessment regimes (Bishop et al., 2009; Gay, 2010; Averill et al., 2009). A humanist perspective on a student-centered curriculum can include designing learning experiences aligned with individual students' cognitive, aspirational, or interest preferences. Thus, the humanist dimension of student-centered education focuses on understanding students as unique human beings who bring to their learning their aspirations, interests, ways of knowing, and experiences.

On the other hand, based on a thorough review of the literature revealed the learner-centered approach is not free of limitations. A study conducted by Morgan and others discussed that this instructional approach may not be the most effective for students with learning (or language) difficulties. Results from their study seem to support past theoretical and empirical work that suggests that young children with math difficulty might benefit more from explicit, teacher-directed approaches to teaching mathematics (Morgan et al., 2015). Another possible limitation of the learner-centered method of teaching is the need for the teacher to attend to social skills in addition to instruction. This strategy can be difficult because little explicit direction is provided on how to do this in most mathematics curricula, and the teacher's job becomes two-fold (Ottmar et al., 2013). Teachers have expressed that children are often very active when using this approach, which sometimes results in a lack of classroom management (Polly et al., 2014). Teachers were also concerned about the amount of instructional time that this teaching approach takes up because instructional time is already very limited. Another possible limitation of the learner-centered method for teaching mathematics is the need for the teacher to attend to social skills in addition to instruction. Students must also be able to develop the necessary social and self-regulatory skills to facilitate learning (Ottmar et al., 2013). According to this study, teacher's job becomes twofold. The teacher must teach the mathematics content and the necessary social

skills needed to promote the kind of discourse and interaction that are characteristic of the reform method classroom. This step can be difficult because little explicit direction is provided on how to do it in most mathematics curricula.

It is apparent that theories of teaching are based on the theories of learning. An excellent educator will get to know each student as an individual and help them in that way. They will also build close relationships with the students, understand the social and cultural contexts in which they operate, and set an example of good behavior, critical thinking, and self-awareness.Consequently, teacher educators' conceptions of teaching have also been articulated into two: transmissionist as well as transformationalist views, which correspond to more traditional and constructivist pedagogical paradigms, respectively (Schunk, 2008; Donche & Van Petegem, 2011; Samuelowicz & Bain, 2001; OECD, 2017; 2018) as articulated above. Similarly, according to the traditional educational paradigm, the duty of the teacher is to impart knowledge, while the role of the student is mostly passive and receptive. The constructivist educational paradigm views teachers as facilitators and guides who support students' active processes of knowledge construction in learning contexts. Teachers with constructivist teaching-learning conception are more likely to create engaging exercises and support learners who struggle during the teaching-learning process.These educators frequently encourage both the teaching-learning processes and a variety of challenging tasks.On the other hand, teachers with traditional teaching-learning ideas tend to avoid activities they believe will force them and their students (Bas and Senturk, 2017).

A Brazilian educator, Paulo Freire (1970), who wrote a book called "Pedagogy of the Oppressed," developed a critical pedagogy known as Liberationist pedagogy where value is placed on having the teacher as a learner and the class discovering subjects together. He criticized the conventional approach to education, claiming that it has devolved into an act of depositing in which the teacher is the depositor, and the students are depositories, patiently receiving, memorizing, and repeating the deposited data transferred by the teacher. Accordingly, it trivializes knowledge as a mere concretization of "abstract" concepts, is analogous to the banking approach to education, and results in the domestication and dehumanization of students and stimulants. Accordingly, the co-production of knowledge founded in the context of students' lives or backgrounds is liberating or humanizing. Human life holds meaning through

communication and dialogical relations, which are at the heart of any educational experience (Animaw, 2012). McLoughlin and Lee (2008) also proposed pedagogy as it stands for teaching of children, andragogy for teaching adults, ergonogy for teaching people to work, and heutagogy for self-directed learning, where learners have greater levels of agency, social connectedness, and autonomy (Ashton & Newman, 2006; Hase & Kenyon, 2000; Aston & Newman, 2006).

Teachers' views towards knowledge dictate the pedagogical approaches that they use. Korthagen, Loughran, and Russell (2006) argued that learning teaching necessitates viewing knowledge as an object of creation rather than as a finished product.The idea that listening is learning and telling is teaching stems from the idea that knowledge is a constructed subject.Having a viewing of knowledge as a subject to be created by oneself rather than as a subject created by others is beneficial for teacher educators because it allows them to create an environment for knowledge creation and guide students in such activities (Freudenthal, 1978, as cited in Korthagen, Loughran, & Russell, 2006). Rather than learning it in advance of practice, a large portion of what potential teachers would need to know would need to be learning through experience.What is critical is not that pre-service teachers have practice (i.e., comprehensive student teaching experience), but that they learn "in and from practice." Based on these notions, models of teacher education pedagogy are viewed as follows:

Productive pedagogy model

Productive pedagogy, with its four dimensions of "intellectual quality," "relevance," "social support," and "recognition of difference," developed by the Queensland School Reform Longitudinal Study (QSRLS) research team, built upon a very large body of extant research into the production of both intellectually and socially equitable student learning outcomes (QSRLS, 1999, as cited in the State of Queensland Department of Education, 2002). Gore, Griffiths, and G. Ludwig (2001) also noted that the more comprehensive and multi-dimensional construct of "productive pedagogy" provides an analytical framework for more descriptive models of teaching practice that can be developed theoretically and applied in the professional development of pre-service (and in-service) teachers.

Constructivist pedagogy model

According to Richardson (2003), constructivist pedagogy entails, among other things, the following essential characteristics:

- Attention to the individual and respect for the student-teacher background, as well as gaining knowledge of and convictions of domain components could alternatively be referred to as student-centered
- Facilitation of group dialogue that explores an element of the domain with the purpose of leading to the creation and shared understanding of a topic.
- Planned and frequently spontaneous introduction of formal subject expertiseinto the conversation through direct instruction, reference to the text, exploration of a web, or some other means.
- Provision of opportunities for student-teachers to determine, challenge, change, or enhance preexisting ideas and comprehension by participating in activities designed to achieve this goal.
- The development of student-teachers meta-awareness of their own understandings and learning processes.

These elements, according to Richardson, play out quite differently depending on the content domain; the student-teachers age level, the student-teachers experiences as learners prior to coming into the specific classroom, the college context, the teaching style, etc.

Blömeke and Delaney (2012) proposed a model that identifies two dimensions. The first dimension is cognitive abilities, which include the concepts of professional knowledge, general pedagogical knowledge (principles and strategies for classroom and curriculum management and organization), content knowledge (knowing about a topic), and pedagogical content knowledge (knowledge that integrates content knowledge of a specific subject and pedagogical knowledge for teaching that specific subject). The second dimension, affective-motivational characteristics, consists of three main components of teachers' professional competence: motivation, self-regulation, and professional beliefs about teaching and learning and the subject content. Thus, quality teaching for quality teacher preparation is inextricably linked to "affective motivational characteristics" as it is to "intellectual quality," "relevance," "social support," and "recognition of difference."

The “onion model”

Based on Korthagen’s (2003) teacher preparation frame, quality teacher preparation considers two simple questions to ask but not so simple to answer in the course of teacher education, such as "What are the essential qualities of a good teacher?" and "How can we help people become good teachers?" The answers to these questions may be different depending on the context, and it is pedagogically undesirable to formulate a definitive description of "the good teacher." However, one can intend to offer a framework for any serious discussion of such a norm.
The "onion model," which Korthagen introduced, was derived from Bateson's model (Dilts, 1990). It illustrates the different levels at which professional reflection and learning can occur. Every level reflects a distinct viewpoint on teacher learning and provides a different response to the query of what the main objective and focus of teacher education pedagogy should be.He points out the reasons why such a framework may be important, especially at the present time. The foremost one has to do with the fact that there is considerable emphasis on promoting reflection in teachers, but at the same time, it is not always clear exactly what teacher educators (and also student teachers) are supposed to reflect on when wishing to become better teachers.

Korthagen (2017) established two extensive theoretical frameworksthat could be used to apply to teachers' learning approaches. These are the traditional application-of-theory and realistic approaches. According to a conventional application-of-theory perspective, student instructors first acquire the theory before putting it into practice in the classroom. The realistic perspective, on the other hand, views teacher development as a continuous process of creating one's own teaching insights via the interplay of theoretical ideas and introspection under the direction of a specialist. Accordingly, the idea that teacher learning is active, contextual, social, and produced is currently supported by educational scholars (Korthagen, 2017).The conventional theory-application method consists of a series of discrete courses where theory is taught with little to no reference to real-world applications. However, the realistic method uses a paradigm of three layers of gestalt, schema, and theory to combine theory and practice (Korthagen and Kessel, 1999).As a result of this, the concept of a gestalt is understood as a dynamic and constantly

changing entity that encompasses not only the teacher's overall perspective of the settings but also the pictures, thoughts, feelings, wants, values, and behavioral inclinations that are sparked by the situation. When an actor, in reflection on a situation and the actions that were taken in it, builds a conscious network of concepts, qualities, principles, and other things that are helpful for explaining practice, that is when schema is developed. The formation of a logical ordering based on prior knowledge or a cohesive framework of knowledge constitutes the formation of the theoretical level (Korthagen, 2010).

The conventional method of training teachers is predicated on the prevailing body of theoretical knowledge, which is then reinforced by feedback on the students' application of the skills through microteaching. It is referred to as teacher training and views educators as technicians (Grossman, 2005; Korthagen, 2013), and became a root for the performance-based, or competency-based (CBTE) model. The CBTE model emerged as a narrative that demonstrates that teachers cannot always use the skills learned during micro-teaching (Burke, 2005). The CBTE model, also called the "technical-rationality model," as discussed by many studies, started to gain ground in order that concrete, observable behavioral criteria could serve as a basis for the training of novices (Barone et al., 1996). However, there are many differences between the different groups involved in the process, such as teacher educators, teachers, or policymakers, about what constitutes a "good" teacher, who should define the set of competencies, and how to measure them (Biesta, 2015; Korthagen, 2004). According to Biesta, a competence-based approach to teacher preparation was found to be problematic in that teaching was defined as an uncritical set of basic skills without taking into account the "moral and evaluative" dimension of teaching (Biesta, 2015).

It was insufficient because it was a collection of disjointed courses offered with little relation to practice and because a competent teacher cannot be defined solely in terms of discrete competencies (Lowyck, 1978). In contrast to the competency method, Panti and Wubbels (2012) contend that motivation, commitment, and moral purpose are neglected when learning strategies and abilities related to classroom management, subject matter, and test scores are prioritized. The competency-based model is criticized by some as being inflexible and pedagogically inappropriate (Hunt et al.,2010).

Moreover, the method of teacher education emphasizes what student teachers learn to become teachers rather than how they should become instructors. Consequently, initiatives to standardize curriculum and educational outcomes may result from this limited understanding, which could also lead to the standardization of teacher education. As a result, Joyce said, this viewpoint did not receive widespread acceptance until the establishment of defined teaching abilities. Nonetheless, many teacher educators and researchers highlight the more individualized qualities of teachers, such as excitement, adaptability, or love of children, while some legislators typically stress the significance of teacher education outcomes in terms of competencies (Struyven & De Meyst, 2010).Because competencies are based on established educational practices, they cannot serve as the sole foundation for excellent teaching, even though good teaching takes place in a specific location and at a specific time.

The teacher identity approach emerged under the umbrella term *humanistic-based teacher education (HBTE)*, which focused more on the teacher, as a person (Rodgers and Scott, 2008). In this view, a central role is reserved for personal growth and "the dignity of the individual" (Joyce, 1975). The premise of a teacher identity approach is that teachers' beliefs and practices are linked to their lived experiences and personal biographies. Thus, teacher education emphasizes opportunities for student teachers to investigate connections between their own backgrounds and situations and their teaching motivations, feelings, and ideals. The term "identity agency," coined by Ruohotie-Lyhty and Moate (2016), refers to the idea that people actively shape their professional identities. "An understanding of the self and a notion of that self within an outside context, such as a classroom or a school, necessitating an examination of the self in relation to others" is another study that added identity development to the list (Beauchamp & Thomas, 2009). Korthagen and Kessel (1999) assert that a unique role for teacher educators is necessary in order to support the realistic approach. This role includes developing appropriate learning opportunities for student teachers, encouraging further awareness and reflection on the experiences of student teachers, providing theoretical concepts derived from empirical experiences, and preparing the student teachers to act in a constructive manner. According to studies, teaching student teachers important educational ideas alone is not enough to ensure that they learn concepts sequentially on a scale of increasing complexity (Arnseth & Saljo, 2007). We learn from our own behavior in connection to other people's behavior.

Dewey (1998) argued that the learner was not only a "spectator" observing the process, but rather an essential part of it. Researchers have developed the importance of experience, reflection, and context in learning to teach from his theories of learning (Webster-Wright, 2009), which is consistent with the national perspective on learning to teach. The explanation of how teacher learning is active, located, social, and constructed was its extension. According to this viewpoint, experience and emotion are deeply entwined with knowledge, making it placed. It has to do with establishing an educational environment where instructors may always learn new things. This is the most likely method to motivate students to achieve more, especially those who plan to enter the teaching profession for the first time and want to do it well. Learning to teach, in the opinion of Korthagen and others, necessitates viewing knowledge as an object of creation rather than as an already existing subject (Korthagen, Loughran, & Russell, 2006). Regarding knowledge as an artificial subject, this leads to the theory that regards telling as instruction and listening as acquisition. It is important to provide student teachers with opportunity to learn from their own experiences and the concerns that arise from them.

However, pedagogy in higher education should be holistic, flexible, experiential learning, self-directed, and a kind of learning in which students influence the content, activities, materials, and pace of learning (Collins &O'Bren, 2011). Furthermore, pedagogical logic supporting high-quality practice needs to be made plain, precise, and meaningful for instructors in teaching about teaching (Korthagen, 2017). It also serves as an example of how crucial it is to go beyond technicalist conceptions of teaching practice and give the implicit aspects of practice knowledge clarity and significance when learning about teaching. In light of this, teacher education pedagogy mandates that teacher educators specifically "unpack" for student-teachers the pedagogical knowledge that permits practice examination to go beyond the technical while still attending to the requirement that students acquire and demonstrate the proper attitudes, knowledge, and abilities for teaching.

Teacher educators should demonstrate exemplary pedagogical behavior to their student teachers (Korthagen, 2016). Struyven, Dochy, and Janssens (2010) contended that the notion of 'teach as you preach' obliges teacher educators to do practically what they expect their students to do in their teaching. Thus, teaching about teaching is thoughtfully engaging with practice beyond the technical and comprises a serious focus on conceptualizing pedagogy, making the tacit nature of

practice explicit and meaningful, developing a shared language of teaching and learning, and the ability to articulate principles of practice (Hollins, 2015). As indicated in a common saying, "the medium is the message", "teach as you preach", and "walk to your talk" (Korthagen, 2016; Struyven, Dochy, & Janssens, 2010), it obligates teacher educators to do practically what they expect their student-teachers to do in their learning to teach. Unlike many other professions, teacher educators in teacher education play a role in modeling in addition to teaching. In these senses, the opportunities for learning about teaching, as illustrated in a reformed practice-based approach, are positioned within a constructivist-sociocultural perspective with an emphasis on interrelated and reciprocal practices of focused inquiry, directed observation, and guided practices. A pedagogy of teacher education, then, consists essentially of the processes and practices involved in teaching and learning about teaching, and it is expressed through an articulation of the knowledge (and practice) involved in these two activities.

Every strategy has significant effects on how teacher education pedagogy is designed. Because of this, the majority of teacher education programs include a variety of hybrid approaches as separate curriculum components. It is more crucial to raise assumptions and goals for teacher education in order to create a well-informed dialogue than it is to select one strategy over another. Diverse methods can be used in a single teaching and learning exercise.For instance, having students express why they would apply for a job at that school (teacher identity), dispelling school myths (social justice), demonstrating how instructors serve as role models for best practices in the classroom (master-apprentice), and offering useful teaching techniques (competence). Donche and Van Petegem (2011) noted that ideas or thoughts do not always translate into deeds.

Therefore, in the present study, teacher educators' pedagogical practices have been framed as the traditional application of theory (transmissionist) approach and the reformed pedagogical approach with active engagement in practice and reflective action, known as the realistic or constructivist approach. Students learn best when they are truly engaged in what they are learning and have the opportunity to explore, debate, discuss, examine, defend, and experiment with the concepts and skills they are ready to learn (known as the constructivist approach). They also learn best when instruction is appropriately challenging, based on real-world problems and situations, purposeful, meaningful, and interesting.

Therefore, the effectiveness of the design of instructional strategies depends on both teachers' teaching skills and learners' learning styles (The Royal Institute, 2012), which implies that innovative instructional strategies could turn learners into innovators. Moreover, to prepare quality teachers, teacher educators must move beyond "technical" understandings and implementation of teacher education pedagogy and toward constantly evolving, reflexive, experiential teaching, research, and scholarship. A pedagogy of teacher education, then, consists essentially of the processes and practices involved in teaching and learning about teaching, and it is expressed through an articulation of the knowledge (and practice) involved in these activities (Loughran, 2006). Consequently, the pedagogy of teacher education requires that teacher educators specifically "unpack" for student-teachers the pedagogical expertise that permits practice examination to transcend the merely technical while still addressing the requirement to cultivate and exhibit suitable attitudes, knowledge, and teaching skills.In line with this, studies suggest that professional knowledge emerges through the interaction of research, scholarship, and experiential learning, and its ways of knowing are mostly reflexivity about teaching and learning processes—not just to deliver the declarative knowledge of teaching (Rowan, Brownlee, &Ryan, 2019).

Others more openly propose that teacher education is not merely engaging in the act of instructing; rather, it is a purposeful commitment to professional life, a deep understanding of what it means to teach about teaching, engaging in teacher education research that examines and informs the pedagogy of teacher education (as distinct from the pedagogy of teaching), as well as being an active member of the larger scholarly community committed to the development and advancement of policies, practices, and programs focused on educating teachers (Taveras et., 2014). Accordingly, the pedagogy of teacher educators encompasses their ideas, beliefs, attitudes, knowledge, and understanding about the curriculum, the teaching and learning process, and their students, which impact their "teaching practices," that is, what they actually think, do, and say in the classroom. Moreover, teacher educators' beliefs are contextual, and include social, cultural, as well as political contexts.

2.5 Specific pedagogical strategies of teacher education

The strategy of instruction could be referred to as a systematic process that the teacher provides to the student to aid in their contextual understanding while learning information. This is

connected with planning, programming, elaborating, and determining the attainment of learning matters (Thiagi, 2008; Mohammed *et al.*, 2016). Research suggests that the term "instructional strategy" refers to a concept, guideline, approach, or main line for conducting, measuring, and evaluating instruction. It must consider a variety of factors, including learners, learning objectives, contents, learning context, overall context, conditions, and lecturers' abilities to choose instructional strategies and methods that will help students meet their goals (Seechaliao, 2017). Therefore, instructional strategies are methods those teachers employ to assist pupils in developing into self-sufficient, astute learners.

When instructional techniques are chosen and applied effectively to complete tasks or achieve objectives, they transform into learning strategies. When students are given the chance to investigate, argue, discuss, analyze, defend, and practice the ideas and abilities they are prepared to acquire, they learn most effectively. They also learn best when instruction is appropriately challenging, based on real-world problems and situations, purposeful, meaningful, and interesting. Therefore, the effectiveness of the instructional practices depends on both teachers' teaching skills and learners' learning styles (The Royal Institute, 2012), which implies that innovative instructional strategies could turn learners into innovators. Research has identified several methods that support student learning, even if no single approach will ensure improved student results (Hattie, 2009; Marzano et al., 2001; Wayne and Young, 2003).Some of these strategies, common in teacher education, include cooperative learning, case studies, videoconferencing (VC), approximation of practice, guided practice, modeling, integrating technology, reflection, seminars, microteaching, and teacher identity (Darling-Hammond & Snyder, 2000; Padkasem et al., 2013), as discussed as follows:

Cooperative learning

Cooperative learning is a form of active learning in small groups so that students work together to maximize their own and each other's learning (Johnson, D.W., 2009)—give and take. It is learning in a student-centered environment where students work together to perform specific tasks. According to Johnson & Johnson, five essential elements must be carefully structured into the situation to make groups cooperative and to reach the full potential of the group: positive interdependence, individual and group accountability, promotive interaction, appropriate use of social skills, and group processing. It advocates mixed-ability groups working together and

taking responsibility for one another's learning. It is also an interactive team process that promotes positive interdependence, individual accountability, face-to-face interaction, group processing, and small-group social skills. It emphasizes group work and a strong sense of community, which verbalizes and discusses activities, clarifies new concepts thereof, and reinforces learning. Accordingly, by creating a community that is cooperative and inclusive, children's acceptance and success in the general education environment will be greatly enhanced. As it characterizes active engagement, students' attention is focused on their work and on their interactions with the other students in their group. In addition, cooperation promotes more frequent use of higher-level reasoning strategies than competitive or individualistic efforts.
Moreover, Roger and Johnson summarize the role of cooperative learning as follows:

> Without the cooperation of its members, society cannot survive, and the society of men has survived because the cooperativeness of its members made survival possible. It was the group that accomplished so, not an advantageous individual here or there. In human civilizations, those who are most supported by their community have the highest chance of surviving (Johnson & Johnson, 2009).

Due to its familiarity and its benefit of ensuring positive and mutual interdependence, each group member's efforts are required and indispensable for group success, and each group member has a unique contribution to make to the joint effort. What is important here is that specific attention is paid to the knowledge and beliefs students bring to the class from their experiences and previous instruction. The learning environment offers all members of the group an equal opportunity to interact with one another regarding the learning tasks and encourages them to communicate their ideas in various ways, for example, verbally. Each group member is accountable for the group's learning outcomes and has an obligation to contribute to group projects (Sutton 1992).In this "exchange of knowledge setting," the teacher's role is to help students solve problems when they request help. Teachers act as facilitators and roam the room while the students are working, checking the students' progress and asking guiding questions. Others also add that this approach to teaching is highly characterized by teacher modeling, scaffolding, guided practice, independent practice, and corrective feedback (Munter, Stein, & Smith, 2015). The teacher's ability to assess learning progress can influence the success of the learning process. Although the type of assessment depends on the type of learning objectives and setting, the teacher assesses

individual students' learning progress. The group does not have a goal of its own. In teacher education, in addition to its academic importance, cooperative learning serves a greater purpose. No teacher education program can prepare teachers for all the situations they will encounter in their future teaching, since problems in education have no fixed answers. Teachers themselves will make the final decisions (whether they are good or bad) from among many alternatives. This can be achieved through collaborative and reflective practices in teacher education. Through cooperative learning in teacher education, we can instill in future teachers the value of social interactions through reflection, which improves a teacher's ability to empower his professional development and become an empowered decision-maker.

Case study

The case method is an instructional strategy that engages students in active discussion about issues and problems inherent in practical application (Chin, 2013). It gives students the chance to apply what they learn in the classroom to practical situations.and can highlight fundamental dilemmas or critical issues in ambiguous or controversial scenarios. It is an effective way of both disseminating and integrating knowledge. The case study approach works well in cooperative learning or role-playing environments to stimulate critical thinking and awareness of multiple perspectives and practical situations for trainees through the use of case reflection on well-chosen cases (Darling-Hammond & Hammerness, 2002; Shulman, 1992, as cited in Korthagen, 2016; Grossman, 2005; Darling-Hammond & Snyder, 2000). A case study is an account of something particular, noteworthy, or fascinating. It might be about people, groups, procedures, initiatives, communities, establishments,or even events (Neale, 2006). Case studies are appropriate when there is a unique or interesting story to be told and are often used to provide context to other data, offering a more complete picture of what happened and why.

In teacher education, it is possible to frame conversations between mentors and novices, to enhance the teacher's understanding of the principles or dilemmas of teaching embedded in it through reflection, and to explore principles, theories, and perennial issues (Darling-Hammond & Hammerness, 2002). Darling-Hammond (2006) argued that cases support both systematic learning from particular contexts and more generalized theories about teaching and learning. The very advantages of case studies for professional learning, as Shulman (1996, cited in Darling-Hammond, 2006) proclaimed, it challenges the student-teachers to move up and down as well as

back and forth between the memorable particularities of cases and generalizations of principles and theories.

Video conferencing (VC)

VC systems are two-way communication systems that offer both audio and video from local and remote sites and provide for synchronous interaction between the instructor and remote students at multiple locations. It allows the instructor to observe the students at the far end (a remote location), allowing the student to demonstrate a learning event. Systems can be terrestrial, satellite, or microwave-based Instructional TV Fixed Services (ITFS).

VC is being used to bring learners together over distance so that they can communicate in a common language and share cultural experiences. Virtual worlds afford learners the possibility of "living within a 3D space, collaboratively developing content, and interacting with peers through virtual experiences such as debates, role plays, exhibitions, performances, and the like." It continues to be a highly efficient way of inviting visitors into classrooms and enabling learners to collaborate with each other at a distance. In certain situations, this can be one of the few methods available for exposing learners to cultural exchanges. VC can also bring in specialist teachers for direct instruction as well as modeling good practices for mainstream teachers. Teachers themselves can also use the technology to link up for more in-depth teacher training sessions.

Video Recording in teacher education has the potential to stimulate, support, and structure dialogue between educational theory and classroom practice (Marsh & Mitchel, 2014). Immersion in practice materials, such as videos, is effective and motivating for student teachers' teaching (Darling-Hammond, 2006; Kleinknecht & Schneider, 2013). Video captures the richness and complexity of classrooms for later analysis, and it allows one to enter the world of the classroom without having to be in the position of teaching now (Borko, Jacobs, Eiteljorg, Pittman, 2008), which could be used for further reflection. Videos expose student teachers to a wide variety of professional practices and stimulate their professional reflection. Through video, student teachers can observe the teaching practices that are labeled as "good" or "bad" so that they can reflect on them (Abell & Cennamo, 2004). Thus, it enables teacher educators to bring

best practices into the classroom for students so that they learn how to do things. In addition, video allows teacher educators to observe their own teaching.

Video recordings can be replayed several times, allowing for deeper analysis with repeated viewing (Marsh & Mitchell, 2014). It elicits discussion among student teachers as they reflect on what they observed on video and what they learned in theory. According to Roth (2007), as cited in Marsh and Mitchell (2014), when viewing recorded practice, the teacher (particularly the beginning teacher) is able to retrospectively study and reflect on teacher development in that practice away from the emotional involvement that occurs during and immediately following a lesson.

Approximation of practice

Approximation of practice is an approach in which teacher educators create environments in their classrooms in which prospective teachers can practice (Segall, 2011). Such an environment allows student teachers to practice theory and theorize in a way that is close to teaching practices known as practicum (Lampert, 2010; Grossman, Hammerness, & McDonald, 2013). To teach prospective teachers how to teach, the work of teaching must be deconstructed (Grossman, Hammerness, & McDonald, 2013; Ball & Forzani, 2009) so that student teachers learn the teaching rather than learn to teach (Lampert, 2010).

Guided practice

In order for student teachers to construct their own meaning about teaching, they must be allowed to independently discover the concept of knowledge and the practice of teaching and then make this understanding their own. Guided practice, an approach to instruction well suited for teachers learning to teach, will help student teachers personalize the concepts under study, creating an understanding that cannot be matched using any other method of instruction. The teacher educator must lead the student teachers on their journey of discovery. This can be accomplished by providing all the necessary background knowledge to lead the student to practice, providing appropriate materials, creating a conducive environment, and allocating time for students to discover. The method(s) to be used to make the practice must be understood by the student teachers. It is related to communities of practice or learning communities because the members of the learning community discuss and reflect on their common experiences in practice

(Shulman & Shulman, 2004; Wenger, 2006). Student teachers' engagement in co-learning from their practices and reflecting on it makes their learning more concrete (Korthagen, 2016).

The assumption of learning communities or guided practice is that teachers' daily experiences provide the basis of knowledge, which is best understood through critical reflection with other educators who have had similar experiences (Buysse, Sparkman, & Wesley, 2003, as cited in Vescio, Ross, & Alyson, 2008). The active engagement of teachers in learning communities increases the professional knowledge of teachers, and, as a result, student learning will be improved. It is acquiring knowledge-in-practice, which is the knowledge embedded in practices, reflections, and/or narratives and inquiries about practice. Situated learning is defined as real learning that is unintentional rather than deliberate and thus occurs not from abstract instruction but only from the presentation of knowledge in "authentic" contexts (Lave & Wenger, 1990).

In translating these for teacher education, one can argue that knowledge "for practice" is that which participants (student teachers and/or teacher educators) might have acquired during their in-service or pre-service programs and formal study; knowledge "in practice" would include understandings that our participants might have acquired through experience starting from their practicum to their on-the-job practices, whether through their own experimentation and practice or by observing and emulating peers, colleagues, or mentors; and finally, knowledge "of practice" would be teacher research in which our participants might engage during their professional development.

Modeling

Students learning about teaching might be enhanced by teacher educators' focusing on their personal experiences to gain a better understanding of how to teaching about teaching. It has been discussed in the present study that in teacher education, "the medium is the message". It is not feasible to teach someone how to teach well by suggesting they visualize something they have never seen or by asking them to imagine"do the opposite of what they have observed in the classroom" (Darling-Hammond, 2006, as cited in Kortahgen, 2016). Modeling is an approach in which teacher educators deliberately show specific teaching approaches to student teachers (Darling-Hammond, 2006; Loughran, 2006, as cited in Korthagen, 2016; Blume, 1971, as cited

in Korthagen, 2016), as presented in an old adage, "teachers teach as they are taught, not as they are taught to teach."

This emphasizes the importance of the teacher educator's exemplary role, which is frequently expressed with phrases like "teach as you preach" (Struyven, Dochy, and Janssens, 2010), "walk the talk" (Guilfoyle, 1995; Graziano, 2008), and "practice what I preach" (Schiller & Streitmatter, 1994; Loughran, 1996). Similarly, Loughran and Berry (2005) stated the need for teachers' explicit modeling of the thoughts and actions of their pedagogical approach. These metaphors demand that teacher educators become reflective practitioners who work in ways that are consistent with the types of teaching envisioned by reforms and demonstrate their teaching practically. Loughran and Berry (2005) discussed two levels of modeling. The first level is modeling, in which teachers model their exemplary behaviors and practices, and the second level is teachers' explicit explanation of the rationale for their behaviors and the feelings, thoughts, and actions accompanying their pedagogical choices. The combination of the levels gives explicit modeling (Lunenberg, Korthagen, & Swennen, 2007), which uses some strategies, such as thinking aloud as a teacher educator, writing journals that are made public to the students, and having discussions during and after class with student teachers. It is well versed that student teachers emulate not only their teacher educators as their role models but also the classroom teachers at their practicum schools, during their teaching practice (Darling-Hammond, 2006). According to the Association of Teacher Educators (ATA, 2006),in order for teacher educators to impact the profession, they must successfully model appropriate behaviors in order for those behaviors to be observed, adjusted, replicated, internalized, and applied appropriately to learners of all levels and styles. In order for those behaviors to be appropriately applied, teacher educators must use research-based, proven best practices.

Integrating technology

Today, educators realize that technology or computer literacy is an important part of a student's education. Integrating technology into a course curriculum, when appropriate, is valuable for enhancing and extending the learning experience for faculty and students. Many facultieshave discovered that email is a helpful tool for promotingstudent-student, faculty-student, or even faculty-parent communication between class meetings, while others utilize online notes to go further into important topics and explore critical issues with students and colleagues or

discipline-specific software to increase student understanding of difficult concepts (Arnó-Macià, 2012). In integrating technology into learning, a mix of face-to-face and online learning and synchronous (e.g., Skype, video conferencing rooms) and asynchronous (e.g., discussion groups, blogs, learning management systems) forms of communication tools are used to effect blended learning on students (Garrison and Kanuka 2004). It provides individuals with the opportunity to enjoy the best of both worlds.For instance, a student might attend in-person classes and then complete online multimedia coursework to augment the curriculum. As a result, the student would just need to show up for class once a week and could leave whenever it was convenient for them (and not have to worry about scheduling concerns).

Because it combines traditional classroom learning with online courses to supplement each learner's individual learning journey, this approach retains the numerous benefits of a real-world learning institution, which is often regarded as a critical component of any community, while better serving the needs and goals of each individual learner. Tools and platforms that complement blended learning include LMSs (Learning Management Systems) and mobile devices such as tablets, smartphones, etc. (Krajka, 2003). Teachers can also offer self-access materials online or supplement the course book with extra authentic materials that are more relevant to their students, thus being more responsive to their needs (Garrett, 2009). The concept of responsiveness can also relate to the course design, the tools, methodologies, and activities used, and what kind of blend is chosen (Tudor, 1996, in White, 2007: 322).

Reflection

Because information is becoming more readily available and changing at a faster rate, users of modern society continuously have to reconsider their options, change course, and adapt their approaches to addressing problems.The ability to reflect while exploring the problem is necessary to maintain the essence of effective problem–based learning. According to this viewpoint, "reflection" and "reflective practice" are seen as terms with diverse meanings (thinking about something and or a well-defined and crafted practice that carries a very specific meaning and associated action) (Grimmett & Erickson, 1988; Richardson, 1992), and they are considered pedagogical practices and professional development in the form of a conscious response to a situation or event and the experiences within that situation.

In the case of teacher education, this includes, but is not limited to, a learning and teaching situation or event in which teacher educators and student teachers present and discuss what they think, feel, do, and conclude both during and/or after the experience, and can include a variety of formal and informal occasions that are frequently quite complex (for example, lectures, field trips, laboratories, practicum placement, tutorials, participation in an assessment task). Researchers agree that the function of reflection is to enable both teacher educators and prospective teachers to re-capture, re-live, make sense of, think about, contextualize, and evaluate an experience in order to make decisions and choices about what they have experienced, how they have experienced it, and what they will or won't do next. Reflection can help boost student teachers' critical thinking skills, encourage them to think about their own thinking (meta-cognition) and help them prepare for their careers (Homik, M. & Melis, E., 2007). Others also assert that reflection is a process of learning from experience, an act of cognition that is linked to learning "how" rather than "what" (Leitch & Day, 2000). Reflection involves both 'problem finding" and "problem solving" (Arlin, 1990; Csikszentmihalyi & Sawyers, 1995, as cited in Leitch & Day, 2000). Rudd indicates at this point that the greater its benefit because reflective thinking prompts learners to develop higher-order thinking skills;

- relate new knowledge to prior understanding,
- think in both abstract and conceptual terms
- apply specific strategies to novel tasks, and
- understand their own thinking and learning strategies (Rudd, 2007).

It is also an important—though all too often ignored—aspect of learning about teaching, as evidenced by the adoption of it as a foundation for many teacher education programs (Richert, 1990; Russell, 1997; Tom, 1985; Valli, 1993; Zeichner, 1983). Through reflection, students develop the necessary sense of self-efficacy to create personal solutions to problems (Larrivee, 2000). Larrivee argued that in order to deal with the inevitable dilemmas and tradeoffs involved in everyday decisions that affect students' lives, teachers must learn to reflect on practice. It is highly significant for student teachers to promote learning through practice (Korthagen, 2016). Teachers who develop into reflective practitioners go beyond a discrete skill knowledge base to a point where they integrate and adapt skills for certain settings. Eventually, they reach an internalized stage where they can create new techniques. Korthagen symbolized reflection with

the mortar that holds the bricks in place; reflection enables students to see the evaluation of their actions and helps them see the theoretical basis for their actions.

Micro teaching

Microteaching is a technique that is used in teacher education where a teacher candidate teaches a small portion of a lesson to a small group of his classmates, which aims to modify teachers' behavior according to specified objectives under the increased control of the practice. Microteaching is a method that can be used for a range of functions, from teacher education to teacher employment and in-service courses (Brown, 2001; Baytekin, 2004). After teaching a small group, beginning to teach a whole class is one of the techniques that improve teacher education because it is logical to proceed from teaching small groups to a whole class. Also, teaching a whole lesson can be a useful option in teacher education (Gover, Phillips, Walters, 1995; Capel, Leaks, Turner, 1998; Akaln, 2003).

In micro-teaching, teacher candidates get an opportunity to enhance their abilities in capturing students' attention, asking insightful questions, using and managing time wisely, and wrapping up lessons.They acquire the skills to choose appropriate learner activities, use teaching goals, and overcome difficulties encountered during the process. During learner learning, on the other hand, teacher candidates improve their skills in giving feedback, measuring, and evaluating. Furthermore, by observing the presence of their friends, they find a chance to observe and evaluate different teaching strategies (Higgins & Nicholl, 2003). The abilities to create lesson plans, select learning objectives, speak in front of a group, pose questions, and employ assessment strategies are all assisted by microteaching.

Teachers' self-confidence grows in a comfortable environment. It provides an opportunity to learn multiple skills that are important for teaching in a short time. It is a useful experience to learn how to realize teaching goals through planning a model lesson. It demonstrates how crucial planning, structuring, and presenting are to students' learning.Choosing activities, putting them in a logical order, and maintaining improvement make it possible to become whole with the content. Receiving immediate feedback is a means to determine productivity and use teaching strategies. By asking appropriate questions, a strong learning environment can be established. Also, it allows for asking questions at various difficulty levels. Also, it makes it possible to

create an environment that involves thinking differently and interactively (Gee, 1992). Studies explain that the stages of microteaching consist of pre-observation, taking, analysis and strategy, viewing the tapes, and self-evaluation by teacher candidates (Lang, Sood, Anderson & Kettenmann, 2005; Cousin, Carver, Dodgson & Petrie, 2003).

Microteaching has several benefits in terms of assisting teachers in acquiring new roles and making changes based on recent developments (Baytekin, 2004). It is effective in developing and sharing certain teaching skills and getting rid of mistakes. It makes possible to comprehend crucial actions in the teaching classes. It boosts the confidence of the teacher candidates.For both pre-service and experienced teachers, it provides an extensive application domain (Ananthakrishnan, 1993).

Seminar

A seminar can have different meanings in different countries, but generally, it is an academic instruction that usually occurs at an academic institution to bring together groups of people to conduct debates, discuss various readings, etc. on a particular subject in the form of Socratic dialogue. A seminar paper, on the other hand, is a work of one's original research on a specific thesis. It is to present what is known about a specific topic and to synthesize all the unconnected threads of individual studies into an integrated "state of the science." Seminars consist of small groups of students who meet with a professor to research or discuss a specific topic in history, literature, or some other academic field. Participants in a seminar usually prepare scholarly research papers and critique one another's work.

Teacher Identity

Teacher identity as an instructional strategy is critical for high-quality teacher preparation because "how teachers define themselves to themselves and to others" (Lasky 2005:901) plays a larger role in their effectiveness. "What we do is influenced by what we think we are" (Watson, 2006, Olsen, 2008). The literature emphasizes that teacher identity is a complex notion made up of several interconnected parts—a teacher's knowledge, beliefs, emotions, or professional development—each affecting in various ways the overall understanding of teacher identity (Bukor, 20155). This implies that a teacher's professional identity, defined as "how teachers

define their professional roles" (Watson, 2000; T. Beauchamps, 2011), is primarily a process of professional identity construction rather than knowledge acquisition.

According to Bullough (1997, as cited in Beijaard, Meijer, and Verloop (2004), teacher education must begin with an examination of teachers' teaching selves because it reveals their beliefs about teaching and learning. It signifies that the conception of self helps teachers or teacher educators better understand and conceptualize the support of student teachers' needs.

2.6 Relationship between conception and practice

While it is important to know how teachers implement their pedagogy in the classroom, it is equally important to understand the conceptions that teachers hold behind them. Because teachers' conceptions can influence how they teach and evaluate their students (Nenty, Adedoyin, Odili, & Major, 2007).

We interpret and behave in accordance with our notions of the world, effectively viewing it through those lenses. According to several studies, there can be some issues with the connections between certain teachers' beliefs or ways of thinking and their behavior (Borko and Putnam, 1996; Calderhead, 1996). Some personal (gender and teaching experiences) and contextual (disciplinary and course contexts) aspects have been found to be useful as explanatory variables in other research examining the influence of factors on teaching concepts and/or practices (Lindblom-Ylänne et al., 2006). However, teachers' approaches to teaching in higher education are dictated by their core convictions or beliefs.Due to internal assessment, self-accreditation of courses, academic freedom, and comparatively unobtrusive quality assurance procedures, teachers in higher education appear to have limited external influences on what and how they teach (Kember and Kwan, 2000). As a result, studies reveal that teachers adopted teaching strategies that were consistent with their beliefs about teaching.

Conceptions of teacher educators' pedagogy can be seen, therefore, as the beliefs about teaching student teachers that guide a teacher educator's perception of a situation and will shape practices. Moreover, as stated by Korthagen, effective teacher education pedagogy has to be conceived as enabling student teachers to "think like a teacher," "act like a teacher," and "reflect like a teacher" (Korthagen, 2017). Second, the nature of teaching and pedagogical action is positioned

to guide students toward academic and personal growth (Cuenca, 2010). These notions, particularly in teacher education, also necessitate having a conception of quality pedagogy as a value-based pedagogy. Value-based pedagogy is a component of effective teacher education pedagogy and includes teacher educators' values of beliefs and attitudes, dispositions, positive human relationships, explicit transactions of pedagogical strategies, inspiring virtues of sincerity and open-mindedness, and expectations of the student teachers' learning (Curtis, 2012).

2.7 Policy and practice of teacher education in Ethiopia

Effective policies and practices, characterized by attracting high-quality candidates, providing rigorous preparation grounded in theory and practice, offering high-quality mentoring, and granting teachers respect and autonomy (Darling-Hammond, 2006; Barrett et al., 2007; Tatto et al., 2008; World Bank, 2012; Mpokosa et al., 2008), are the nucleus issues of quality education, guaranteeing to produce and retain high-quality teachers. Subsequently, education and training institutions need to be governed by a clear policy framework that serves both accountability and improvement purposes and combines internal and external evaluation without imposing an excessive administrative burden. Due to their stronger and more equitable investments in the teaching profession, nations like Singapore, Korea, Japan, Finland, and Canada, in which students score relatively well in international examinations, recruit teachers after a full, rigorous, and extensive pre-service preparation that will be further developed in community-focused teaching (in-service education and training). Furthermore, such countries see teacher education as a symbiotic relationship between stakeholders at various macro and micro levels, resulting in student-teachers with a high level of professional development rather than the exclusionary roles of a single one (Zeichner, 2006; Ali, 2007).

In Ethiopia, for long periods of time, there were plans and strategies prepared by the Ministry of Education that outlined several priority directions and provided support for the implementation of changes in relation to initial and in-service teacher education, which was the main goal of state policy in the sphere of education. The activities that take place in the history of the development and reformation of teacher education in Ethiopia could be articulated into three major eras. The first was during the Haile Selassie I regime (1934–74), which was characterized by the eligibility of 6+1, 7+1, 8+1, and 8+4, 9+3, to TTI and 10+2 to TTC. At the time (in the early 1950s), the Imperial regime's government sensed a general dissatisfaction with the

country's education system and initiated reforms. In 1971, a study called the Education Sector Review (ESR) was conducted, which suggested that the rural population be made the target of educational policy (Panigrahi, 2013). During this time (the 1960s), according to Panigrahi (2013), the best-performing students from grade 10 were recruited and trained for 2 years to earn a diploma, while those from grade 12 were recruited and trained for a period of 5 years to earn a degree (one year to complete their secondary school and four years of university-level education) at the then Haileselase-I University and now Addis Ababa University.

The second was during Dergue's regime (1974–1991), which was characterized by the completion of grade 12 as the sole requirement to join the profession without taking any pedagogical training due to the deficiency of qualified teachers due to the large expansion of the schools (Alemayehu, 2012). The Dergue launched a reform study called "Evaluative Research of the General Education System in Ethiopia" (ERGESE) in 1983 after arguing that the education policy of the Imperial regime was elitist. The study influenced the establishment of the Ten-Year National Perspective Plan (1984–1994), which helped set policy statements for education. After the passage of years, 12+1 became eligible to join the teaching professions, and the teacher educators during this regime (1974–1991) were increasingly Ethiopians rather than foreigners. According to many local scholars (Tesfaye, 2014; Alemayehu, 2012; and Siyoum, 1996), this was the time of a landmark when the status of the teaching profession started to vanish and the road to becoming a primary school teacher opened to those who were unable to join higher education. Here, it implies that the professionalism of any profession is in the hands of the politics of the time, as in a profound saying that roughly translates as "the life of the bird is in your hand."

The third reform activated during the Ethiopian People's Revolutionary Democratic Front (EPRDF) post-1991 (Tesfaye, 2014; Tessema, 2007) also recognized the inadequacy of the education system to prepare the learner for useful participation in the community. As a result, the government developed education and training policy (ETP), from which a series of reforms aimed at promoting access, equity, quality, efficiency, and justice in education emerged (TGE, 1994; MOE, 2002). Accordingly, the EPRDF government formulated a new education and training policy (ETP), from which a series of reforms and long-term plans emerged aiming to promote access, equity, and quality of education (TGE, 1994; MOE, 2002). Since the ETP

demanded teachers be certified before being assigned to teach at any level of education, the government launched the first five-year Education Sector Development Program (ESDP-I) in 1997 as part of a twenty-year education sector indicative plan (ESDP-I-IV). Updating as well as upgrading teachers of all levels with new outlooks, approaches, and policy directions; upgrading the pre-existing teacher training institutions (TEIs) to diploma-offering colleges (TTCs); and establishing several new teacher training centers were measures taken to increase teachers in both quality and quantity.

Particularly in ESDP V (2015), points that emphasize the improvement of quality education are narrated as follows: *Teaching will be developed as a profession of choice. Education policies and practices that will improve teachers' and facilitators' skills through a national program of teacher professional development will be adopted. Pedagogical skills, core foundation literacy, numeracy and mother tongue skills, and English language instruction will be prioritized in the revised professional development program. The development of a licensing system will ensure that all teachers are competent* (P. 35).

Similarly, within the framework of the ESDP III, a nationwide package called GEQIP, one of which was the Teacher Development Program (TDP), was also launched by the Ministry of Education in 2008 with the objective of improving the quality of general education throughout the country mainly by increasing teacher effectiveness (MOE, 2008; Shoab, 2013). In 1999, in response to the serious problems identified by a study entitled "The quality and effectiveness of teacher education in Ethiopia," the Ministry of Education introduced a wide-ranging reform that touched every aspect of the teacher education system known as the Teacher Education System Overhaul (TESO), dispersed in 2003 (Kedir, 2007; MoE 2003, as cited in Amare 2006; Serbessa 2009; UNICEF 2010). The reform was characterized by the transition from a traditional teacher training program, which was based on the conventional structure of pre-service general education courses followed by method courses and then teaching practices (Solomon, 2006), to relatively complete teacher education.

According to studies, it was intended to address core issues such as teachers' insufficient professional competence, insufficient content knowledge, low professional standards and expectations of teachers, insufficient emphasis on and implementation of practicums, theoretical courses, and teacher-centered methods of teaching, and a lack of professionalism and ethical

values in the teacher education system. However, although it has well promoted the culture of school and teacher education institutions' partnerships as well as the essence of active learning and continuous assessment, the problems that characterize the teacher education programs after TESO were very similar to those before. In addition, the lack of a clear philosophical orientation, the lack of pedagogical and social feasibility (imposed by teachers' top-down approaches), the lack of coherence among program elements, and the introduction of simultaneous reforms that did not fit with the direction set in TESO were the subject of waves of criticism from scholars, like most externally initiated reforms (Dalelo et al., 2008; Dawit, 2008). As a result, the MOE replaced TESO with a new secondary teacher training program, PGDT (Post Graduate Diploma in Teaching) (MOE, 2009; Koye & Yonas, 2013).

In the meantime, a pre-service program for pre-primary and primary teachers made revisions and expansions in 2008 with increased subject matter content, professional courses, and practicum by including priority areas such as reading, science, and mathematics to validate their increased importance in the primary curriculum and align the content of the curriculum with lower primary classes (MOE 2013). Within this context, a guiding set of principles for the primary pre-service teacher education program, called the Curriculum Framework for Primary Pre-service Teacher Education, was developed to unify the program across regions and colleges.

The policy framework depicted the emphasis for teacher educators as follows:

> Teacher educators will be prepared to take a leadership role in generating critical research that will inform the quality of education initiatives at the primary level, based on deep knowledge of the professional area of primary education and the practical reality of schools. To this end, primary teacher education will be developed as an acknowledged and respected professional area. Opportunities will be developed for earning advanced degrees in the professional area of primary education; opportunities and funds will be available for research and publishing in primary education; and local, regional, and national workshops and meetings will be held in which research can be discussed and information disseminated" (MOE, 2013: 10).

This was a remarkable initiation that resulted in its outcome. Currently, Ethiopian teacher education has two main classifications as regards its administration. Pre-primary and primary

education take place in 36 colleges (CTEs), which graduate with 10/12 + 3 diplomas and degrees administered under regional education bureaus (or boards), and secondary education is administered centrally by the Ethiopian Ministry of Education, with 12+4 degrees taking place in universities (MOE, 1994). The new pre-service program, intended to prepare teachers for lower and upper primary teaching, comprised three programs. The first is generalist, like mathematics and environmental science, to prepare teachers for teaching in lower primary grades (1-4), whereas the second is a specialist program that admits student teachers in subjects like mother tongue or local language (Amharic, English, art, music, etc.) as well as health and physical education. Similarly, the third one, the linear program, prepares teachers in major and minor subjects like mathematics, physics, chemistry, biology, civics and ethical education, social science, integrated science, adult and social development, and special needs education for teaching in upper primary grades (5-8). In addition, the CTEs also admit preschool and laboratory technician student teachers. Out of 36 CTEs in the country, five CTEs, including Hawassa, Dila, Arbaminch, Hossana, and Bonga CTEs, were located in the study area in the southern regions of Ethiopia.

Subsequently, the ministry of education of Ethiopia, considering the current 21st-century visions and the development perspectives of becoming a lower middle-income country, developed a landmark reform that was believed to accentuate a paradigm shift in the education sector, named the Education Development Roadmap for 2018–2030 (MOE, 2018). According to the document, despite the fact that the 1994 ETP was successful in introducing a number of new initiatives and creating some room for teacher preparation and development, it is still necessary to develop new strategies, which were a key component of the Roadmap, and add some provisions to the policy that ensure the proper implementation of the existing provisions.

The problems: recruiting low achievers and less committed teachers; poor quality of the teaching force (poor in subject matter as well as know-how knowledge); problems in the qualification, deployment, and performance of teachers; low teachers' motivation; and high teachers' turnover were found to be the most serious challenges in the teaching profession. Consequently, the document, which exposed the core issue of the reform, the issue of education quality, revolved around the development of teachers, since graduates (of primary and also pre-primary education) lack competence in the integration of knowledge, skills, and the necessary values, and children

fail to master the basic skills of learning at the completion of the level (MOE, 2018). As a result, giving priority to making teaching a profession of choice, preparing and developing teacher educators, competitively selecting teachers, making teacher preparation relevant and aligned to the school curriculum, putting in place incentive mechanisms for retaining teachers, initiating a specialized teacher training program for teaching vocational education within the primary teacher education system, and ensuring prospective teachers are qualified are all priorities.

Thus, this analysis implies that the situation remains challenging no matter how many reforms and policy promises are made to effect a significant change in the quality of education in Ethiopia. The unidirectional expansion of schools and then of students for the past three decades characterizes the teacher education scenario of today. With increasing school enrollments and the launch of universal primary education, there was a natural increase in the demand for teachers. In addition, the system's backlog of untrained teachers and the mandatory requirement of pre-service teacher certification for appointment as a teacher put additional strain on existing institutional capacity.

Although the policy has touched upon important issues related to teacher professional development and instructional issues, such as ICT and innovation in teaching, shifting towards student-centered instruction, and continuous assessment of learning, it seems there is a need for further revision that focuses on quality learning and teaching, enforcing every aspect of training to be based on reflection and introspection since the rapidly changing world of professional practice emphasizes learning to be, learning to do, learning to be, and learning to think (Akyeampong, 2003; Jamwal, 2013). There are also implications for achieving better convergence between teacher professional development and preparation for the profession.

Particularly, the pool of teacher educators, the teacher education sector itself, and the teacher educator’s pedagogy of preprimary and primary education are self-proof, and no quality-assuring agency or structure owns the issue, showing that teacher education pedagogy needs an archetypal shift and holistic turn.

2.8 Theoretical framework for the study

The theoretical framework can be referred to as a basic overview of current theories that acts as a guideto justify and contextualize the research work. Learning theories that influence most instructional designs these days are conceptualized into three basic principal categories: behaviorist, cognitive, and constructivist learning theories (Cooper, 2006; Bigge and Shermis, 2004; Kay and Kibble, 2016). And at the most basic level, these are the major theories that structure research.

To examine teacher educators' conceptions and their practices on how to learn to teach and how to teach about teaching, this study is based on two theories of social constructivism and its extension, transformational learning theories. Constructivists, which postulate a social constructive theory of learning and teaching, emphasize the idea that learning entails actively creating knowledge rather than just acquiring it passively (Ganzer & Zauderer, 2013; Melrose, Park, & Perry, 2013). As Melrose, Park, and Perry (2013) defined it, constructivist thinking in its general sense is a theory of learning or meaning making in which individuals create their own new understandings on the basis of an interaction between what they already know and believe and ideas and knowledge with which they come into contact. To Kim (2001), meaning is better understood when people work together rather than alone, and constructivism is predicated on particular ideas that form the basis of knowledge, reality, and learning.As a result, reality cannot be discovered but must be created through human activity. Individuals create meaning (knowledge) through their interactions with each other and with the environment they live in, which are socially and culturally constructed. So, participating in social activities facilitates learning. It is not limited to an individual's experience, nor is it the passive evolution of actions influenced by outside factors.

Although there are writers who advocate for different kinds of constructivism based on different perspectives, Philips (2000) grouped it into two forms with a focus on the social aspects of the classroom. The first is cognitive constructivism, an idea in which meaning is a process created within the individual mind. It was mainly based on the works of the cognitive psychologist Jean Piaget (1970). Piaget believed that the mental structures of learners would be gradually developed as learning was constructed through the organization and integration of new information and experiences. His discovery suggested that learners would examine what they

observed while manipulating objects and content information, analyze what they observed, and develop judgments based on the facts. The second counterpart, social constructivism, founded on the works of Soviet psychologist Lev Vygotsky (1978), is a theory that centers on the ways in which social factors affect the manner in which groups of people form understandings and formal knowledge about their world (Phillips, 2000). Vygotsky believed that knowledge is a construct created by humans and that learning is a collaborative process between students and teachers (Richardson, 2003).

Social constructivism is also viewed as a theory of learning or meaning making in which individuals create their own new understandings through experiences and reflection on the basis of an interaction between what they already know and believe and ideas and knowledge with which they come into contact. Moreover, according to Kim (2001), learning is a cooperative activity between students and teachers, while knowledge is a construct that was produced by humans. Consequently, learning is the process by which individuals are integrated into a knowledge society rather than just assimilating and accommodating new information. It is not limited to an individual's experience, nor is it the passive evolution of actions influenced by outside factors.People engage in socially and culturally constructed interactions with their surroundings and with one another to generate meaning, or knowledge. Consequently, learning is a social activity that happens when people interact with one another. Therefore, rather than passively absorbing knowledge from texts chosen by the teacher, successful learning happens when students are able to solve contextual, real-world problems through collaboratively exploring, evaluating, manipulating, and integrating available information from a variety of sources (Kaya and Akdemir, 2016).

As the study covers a level of post-secondary education and the students are considered young adult learners, transformational learning is added as the grounding theory of the study. Transformational learning is a theory of learning originated by Jack Mezirow (1991) that focuses on the idea that learners can adjust their thinking based on new information (Ganzer & Zauderer, 2013). It emphasizes how people make sense of their life experiences. Evidence from the studies suggests that transformative learning theory explains how adult learners interpret their experiences, how social and other structures shape how they do so, and how the dynamics of changing meanings change when learners perceive them to be dysfunctional (Christie et al.,

2015). This theory of learning pushes learners' thinking through the use of disorienting dilemmas to challenge students' thinking (an "a-ha" moment). When it comes to determining if their fundamental presumptions and views about the world are true, students are then encouraged to utilize critical thinking, questioning, and critical reflection (Arnd-Michael Nohl, 2015).

Studies argued that transformative theory was the highest-level learning outcome of the process of informative, formative, and transformative learning (Ariunaa and Anne, 2017). Accordingly, the intention to produce experts by acquiring information and skills evolved into formative learning that centered on problem-solving instructional methods through the socialization of value to produce professionals. This was needed to transition to transformative learning, where change agents can be prepared by adapting "core professional competences" to "particular contexts" (Frenk et al., 2010). It is employed and exercised by impactful teachers and has the potential to trigger new insights. Critical reflection helps bridge the theory-to-practice gap and can promote reflective practice (Garrity, 2013). Critical thinkers look for pertinent information and base their conclusions, interpretations, and judgments on context and supporting data (Brookfield, 2012; Burrell, 2014; Rowles, 2012; Turner, 2005; Zygmont & Moore, 2006). Critical reflection fosters personal and professional growth, empowerment, and the development of knowledge, skills, and attitudes. In this concept, learners value self- and experiential learning as well as collaboration. In self-direction, learners are able to select, control, and check most of the activities needed for mastery. Experiential learning means doing and then reflecting analytically on the experience and imagining how the learner may want to observe beyond a specific setting. Collaboration entails sharing the duty and responsibility for gaining knowledge among groups of students and decreasing hierarchical relationships between teachers and students.

A number of principles underpin these theories (social constructivism and transformative learning theories) in teacher education as they continuously commute between practice and theory (Korthagen, Loughran, & Russell, 2006; Orlich et al., 2010; Zeichner, 2009; Reeves & Robinson, 2014). Teaching is seen in postmodern culture as a situated, reflective, and collaborative activity that calls for teachers' judgment in interpreting practice experiences in an environment that is easy to use and supports them (Amare A., 2005). These characteristics are characteristics of social constructivist learning theories. This idea of teaching is not at all

technical, but educating teachers how to follow a set plan.It requires teachers to find out about and identify the personal theories that their students have, examine and look for alternative explanations of them, compare them to those of peers and the public, try to reformulate the theory, and test it against more practice. In light of this, the practice serves as a framework for encouraging self-directed, in-depth learning via inquiry, bolstering critical thinking, and enhancing existing knowledge (Cochran-Smith & Villegas, 2015; Wiener, 2020). Teachers who develop into reflective practitioners go beyond a discrete skill knowledge base to a point where they integrate and adapt skills for certain settings. Eventually, they reach an internalized stage where they can create new techniques.

Another implication of these theories of teaching is that, since teacher education could be considered problem-oriented adult learning, participants incorporate the experience and self-directed learning relevant to their profession. It usually emphasizes application and task-oriented procedures as a result.By distinguishing between developmental levels, social constructivism identifies and redirects students' misconceptions. The first is the level of actual development (the developmental level at which a learner has already arrived and is capable of solving problems on his or her own). The second is the level of potential development (the "zone of proximal development"), which is the level that the learner is capable of reaching under the guidance of teachers (known as "instructional scaffolding") and gradually withdrawing as learners construct their own ways of understanding the material and become increasingly able to achieve learning outcomes independently (Morgan & Brooks, 2012). Feiman-Nemser and colleagues envisioned teacher development as a continuous procedure of cultivating one's own teaching insights via the interplay of individual contemplation and theoretical concepts under the supervision of a specialist (Feiman-Nemser, Tamir & Hammerness, 2014). Therefore, rather than passively absorbing knowledge from texts chosen by the teacher, successful learning happens when students are able to solve contextual, real-world problems through collaboratively exploring, evaluating, manipulating, and integrating available information from a variety of sources (McLoughlin and Lee, 2008; Wing-Mui, 2002; Brown, 2006; Manila, 2012; Kaya and Akdemir, 2016).Similar to this, teaching is seen in postmodern society as a situated, reflective, and cooperative activity that calls for teachers' judgment in interpreting practice events in an environment that is easy to use and supports them (Tubbs, 2005; Schumck, 1997)—qualities of

constructivist learning theories. This idea of teaching is very different from a technicalist one that just teaches instructors how to follow a set curriculum.

Hence, the analysis of this study is influenced by these theories because the ideas of context, the notion of cognitive dialogue, the zone of proximal development, social interaction, the nature of continuous assessment, and a focus on activities and practices make this theory preferable over the other theories. It is possible for student teachers to transition from teacher-controlled, prescriptive, and didactic modes to ones that are constructive, collaborative, contextual, conversational, and reflective from various conceptual viewpoints to learner-driven, social, collaborative, and participatory approaches that aid fundamental skills and understanding for their future professional development as effective or quality teachers (Weegar and Pacis, 2012). On the other hand, teacher educators have a role in fostering students' creativity by giving them opportunities to learn about theories and viewpoints that help them comprehend their subject matter more deeply. Furthermore, the constructivist and transformative theories of social reality—which hold that people's ideas, beliefs, values, and perceptions of reality are more important in guiding human social activity—align with the subject of study because conception, views, and attitudes are subjective rather than objective (Curtis, 2012).As a result, teacher educators can incorporate this kind of learning into their classes by giving student teachers the chance to encounter diverse viewpoints, supporting them in recognizing and confronting their own assumptions, and encouraging critical dialogue.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

Introduction

This part of the research presents the conceptual framework, research design and methods, sampling, tools of data collection, methods of data analysis, managing the quality of the research, and ethical considerations of the study. The underlying rationale for each are also included to provide a basis for the methods and techniques.

3.1 The conceptual framework for the study

As portrayed by studies, a conceptual framework is a model for the presentation of the relationships among the concepts under consideration (Orodho, 2004). It is also defined as an integrated way to approach the issue or as gathering several connected concepts in order to provide a deeper understanding of the phenomenon or a research problem (Imenda, 2014).Based on this notion, the model that indicates teacher-educator conceptions of their pedagogy for this study was framed diagrammatically as indicated below. This model represents their conceptions of learning to teach as well as their conceptions of teachingabout to teach in relation to their practices and vice versa.

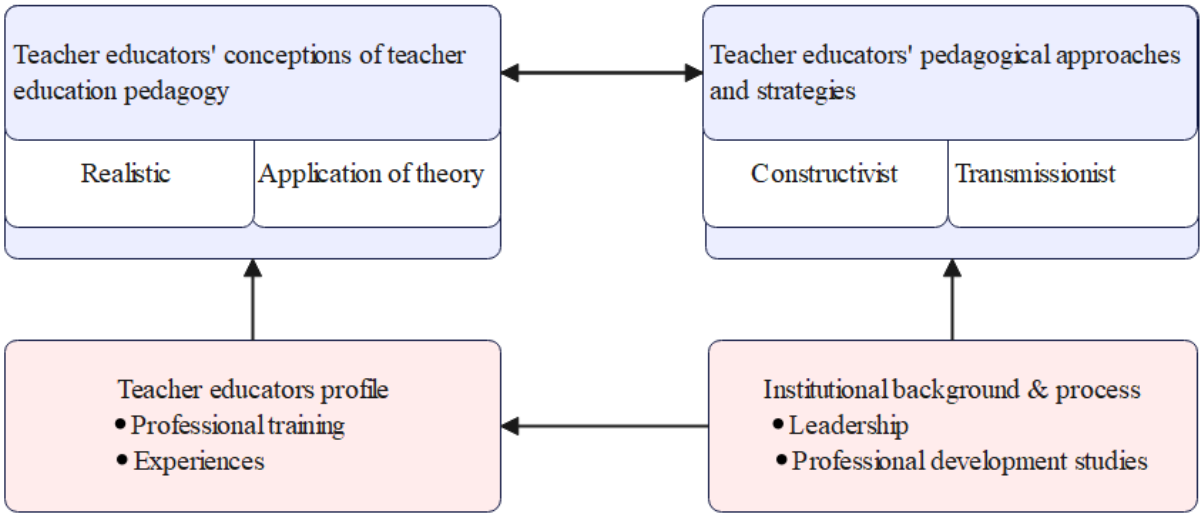

Figure 2: Relationship of teacher educators' pedagogical conceptions and practices

Figure 3 provides a model of an overview of the relationship between the subject variables in the present study. In the framework, while their conceptions of both learning to teach as well as teaching about to teach are considered either application of theory or realistic views, their conceptions about teaching approach are considered transmissionist or constructivist views. The conceptions of learning to teach as well as teaching about to teach are considered the two sides of pedagogy since theories of teaching are based on theories of learning. On the other hand, the variables that may have a direct or indirect impact on teacher educators' pedagogical conceptions are reflected in teacher educators' profiles, such as professional competence, experiences, etc. Similarly, the institutional background and processes that may have a determinant effect are the leadership process, professional development studies, and other contextual factors.The institutional background and process also contribute to the teacher educators' background variables, which in turn contribute to the teacher educators' pedagogical conceptions and practices. In their role of developing and changing teacher educators' professional practice effectively, these instructional and context-related issues are believed to play an influential role in teacher educators' pedagogical practices.

The model is based on both the assumption of Thomas R. Guskey's and its converse. According to Guskey, a significant change or improvement in teachers' practice generally results after a significant change in teachers' attitudes and beliefs (Guskey, 2000). Changes in attitudes and beliefs are typically used to gain commitment and enthusiasm prior to the implementation of new

practices or strategies for equipping professionals to carry out their duties. Here, it implies that the teacher's appropriate conceptions cause improvements in their practice. In contrast to this linear model, there are studies that assume change in teachers' practices as it is the prerequisite of a change in teachers' beliefs or "personal constructs" that determine how they approach their teaching (Richards et al., 2001). It is because our teaching approaches, strategies, and styles reflect our personal values and beliefs. We will be able to review and revise our own presumptions and assumptions about teaching and learning as a result of doing this. Others contend that our teaching philosophies and the ensuing assessment of students' learning significantly influence the way we instruct (Pratt, 2002; Wang et al., 2011). Accordingly, a change in teachers' conception of pedagogy causes a change in students learning (Clarke and Hollingsworth, 2002). It is therefore argued in this study that a combination of these perspectives can guide teachers in developing and implementing effective teaching strategies that result in holistic 21st-century skills that emphasize critical thinking and problem-solving; collaboration and sharing of minds and talents toward common goals; effective communication; creativity; and innovation.

According to Harden and Crosby (2000), the conception of application of theory focuses on the transmission of knowledge from the expert teacher to the novice learners. In this learning, the teacher has the majority of the control, owing to the low level of student choice and passive listening. Students learn by responding to environmental cues such as reinforcements and punishments. However, power transfers from the teacher to the student have been fostered by the paradigm shift away from teaching and toward learning (Barr and Tagg, 1995). Accordingly, the teacher-focused transmission of information, such as lecturing, has started to receive more and more criticism, opening the door for the alternative strategy known as "student-centered learning" to grow widely.The changing demographics of the student population and the more consumer- or client-centered culture today have created a climate where student-centered learning is thriving (Lea et al., 2003).

On the other hand, realistic conception, sometimes described as a progressive teaching style tailored to meet the needs of the learners as a group as well as individuals, with students actively participating in their learning processes. The approach is predicated on the idea that students are prepared to learn and that teachers should design lessons to support their learning.It calls for

greater student engagement and opens opportunities for students to more fully participate in shaping their learning experiences and constructing their own knowledge structures. It views teachers as facilitators and guides who support students' active processes of knowledge construction in learning contexts. Teachers who adopt this notion are more likely to provide engaging lessons and support students who are struggling with the teaching-learning process. These teachers frequently encourage both the teaching-learning processes and a variety of challenging tasks. Etta Hollins (2015) expanded on this by describing liberationist pedagogy as a transformative approach that values the instructor acting as a student and the class exploring topics together. In order to help students achieve meaningful, long-lasting changes, it employs collaborative critical inquiry to help them examine, interpret, and comprehend the social realities of both their own and their communities' lives (Egne, 2021).

In teacher education, student-teachers engage in more than just theoretical learning; they also relate theory to practice, learn from field experiences, and collaborate with and learn from others who are engaged in the learning to teach process, such as mentors, colleague teachers, and teacher educators (Schulz and Mandzuk, 2005). Accordingly, while, some teachers see knowledge as situational and closely entwined with experience and emotion, others understand teacher education pedagogy as a classic theory-into-practice approach in which student-teachers study the theory first and then apply it. As stated earlier, teachers' conceptions of teaching also classified into two broad perspectives known as constructivist and transmissionist (Donche & Van Petegem, 2011; OECD, 2018). The transmissionist conception is related with the teacher-centered or content-oriented view of learning strategies that focuses on the transmission of knowledge from the expert teacher to the novice learners. In this learning, power is primarily with the teacher, owing to the low level of student choice and passive listening. Students learn by responding to environmental cues such as reinforcements and punishments. However, the teacher-focused transmission of information, such as lecturing, has begun to be increasingly criticized, paving the way for the widespread growth of constructivist conception as an alternative approach. Teachers with this conception tend to avoid activities they believe will force them and their students (Pritchard and John Woollard, 2010). To other studies, behaviorist pedagogy results in the domestication and dehumanization of students and stimulates oppressive attitudes in society (Dewey in Animaw (2012); Kedir, 2017; Hollins, 2015). The changing

demographics of the student population and the more consumer- or client-centered culture in today's society have also created a climate where student-centered learning is thriving.

In general, though there is no single strategy that can guarantee better student outcomes, research has highlighted the use of a blend of these (more student-centered) practices to direct teachers in designing and implementing appropriate teaching strategies that enable learning among students (Hattie, 2009; Marzano et al., 2001; Wayne and Young, 2003). Furthermore, there is research-based and evidence-based support for student-centered learning, with students in learner-centered schools achieving higher levels of achievement because of active knowledge construction, collaborative learning, metacognition, teacher-student partnership in learning, and meaningful assessment in real-world contexts (Iowa, 2013). Student-centered learning can lead to 21st-century skills with an emphasis on critical thinking and problem-solving; collaboration and sharing of minds and talents towards achieving common goals; effective communication; creativity, and innovation. However, this does not mean that a teacher-centered approach becomes useless in a learner-centered setting. In fact, the role of expert teachers is most useful in transmitting knowledge, coaching, and guiding students to successfully learn.

3.2 The research paradigm

A research paradigm describes the ontological, epistemological, and methodological premises that form the interpretive framework that ties the strands of the research together (Denzin & Lincoln, 2005). At the most basic level there are four major paradigms that structure research: positivism/post positivism; constructivist-interpretative; critical (Marxist); and feminist/post-structural (Bloomberg & Volpe, 2008; Denzin & Lincoln, 2005). Studies portray that the positivist paradigm assumes singular and attainable reality ontology, an objective epistemology, and verifiable and experimental methodological procedures. On the other hand, the interpretative paradigm makes the assumptions of a naturalistic set of methodological practices, relativist ontology, and a subjectivist epistemology (Denzin & Lincoln, 2005). Their extended justification indicates that whilepost-positivists claim that the world exists apart from our understanding of it, constructivist-interpretativists assert that the world is created by our conceptions of it.

For the reason to disrupt the reliance on these metaphysical versions of the philosophy of knowledge as well as a lens for examining social research (Morgan, 2014), pragmatic paradigm,

that assumes a singular and multiple reality ontology, an inquiry and experimental epistemology, and any appropriate methods of procedure (Makmun, 2020), was proposed. Other writers also propagate that the first two sets of purists view their paradigms as the ideal for research and they implicitly advocate the incompatibility thesis (Howe, 1988). Moreover, one distinct consequence of advocating pragmatism as a paradigm is the separation between post-positivist and constructive/interpretative paradigms has been a central feature in applying the pragmatist paradigms to researches in social science (Denzin & Lincoln, 2005). As drawn from John Dewey's foundation, Pragmatisms emphasize the significance of integrating beliefs and actions in an investigative process that forms the basis of all knowledge-seeking endeavors, including specialized pursuits (Dewey, 1925a/2008). Consequently, pragmatisminsists on acknowledging research as a human endeavorthat is based on the beliefs and actions of actual researchers. However, while, pragmatism is seen as a paradigm by some researchers (Greene, 2007; Johnson & Onwuegbuzie, 2004; Onwuegbuzie & Leech, 2004a), while others see it more as an "approach" (Morgan, 2007).

As it reflects my beliefs and direct and informs my approach to research, my research paradigm is therefore essential to this research program. Moreover, due to its epistemological, ontological, and methodological nature, it gives the researcher full account. While, epistemologically, it focus on practical, fallible, and context-dependent knowledge, ontologically it emphasize on pluralism, process/dynamism, holism, and the social construction of knowledge.It also uses any appropriate methods & procedure (both deductive and inductive methods).It makes the claim to close the gap between the positivists/scientific paradigmas well as the constructive/interpretative paradigm.A pragmatic would emphasize post-positivism and constructivism's distinctive methods of investigation rather than categorizing them as belonging to distinct ontological and epistemological camps, emphasizing on human experience as the continual interaction of beliefs and action. Its goal also goes not to replace either of these approaches but ratherto draw from the strengths and minimize the weaknesses of both in single research studies and across studies. It also functionson research designs that integrate operational choices depending on what will be most effective in addressing the research objectives. Restricting the researcher to no more than one paradigm or worldview, pragmatism permits the objective and subjective study of human behavior.As discussed above, in this new worldview, reality can at times considered objective and other time subjective and knowledge can either be gained from observation or constructed.

Thus, for most of the researchers operating within the field of mixed methods research,where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study (Johnson and Onwuegbuzie, 2004), the practicality of pragmatism was more appealing than its more expansive psychological foundation.

3.3 The research design

The study aimed to analyze prescriptive accounts in order to understand the conception and lived experience of teacher education pedagogy. As a result, convergent parallel mixed-methods design of pragmatic paradigm was used. The design improves both research scope and breadth by reducing the limitations of a single method and offsetting the weaknesses of either approach alone. It also improves the validity and reliability of research outcomes (synergy) (Ary et al., 2010; Creswell, 2007; Driscoll et al., 2007; Johnson et al., 2007; Johnson & Onwuegbuzie, 2004; Silverman, 2010). Collecting simultaneously both quantitative and qualitative data and merging it during discussion, it helped to refine or elaborate results about the conception and practice of teacher educators' pedagogy. Gaining understanding of beliefs held, actions taking place, consequences that are evident or emerging trends was the goal, as did figuring out the connections between certain occurrences (Cohen, 2005; Creswell, 2013; Meriam, 2009).

Therefore, the design was selected because it provide broader perspectives and a more complete account by offset the weaknesses of either approach alone. Moreover, it offers more comprehensive information and a wider view of the current status of teacher educators' use of pedagogy in teacher development in the regional colleges. The design's appeal stems from its significance in broadly applying the study's findings within its confines.

3.4 Sources of data

In this study, data were secured mainly from primary sources. Teacher educators, college leaders, and student teachers of the selected colleges of primary teacher education in the study area were the main sources of the study. A total of 252 participants, with243 teacher educators (234 for questionnaires, and 5 for interviews, and 4 for classroom observations) as well as9 student teachers for their interviews were used as data sources. The selected teacher educators for the interviews were deans, stream or department heads, and subject methodologycourse

teachers. The selected teacher educators for the classroom observations were those who were teaching content areas, subject methodology, and general pedagogy courses. They were those who directly deal with professional or pedagogy courses, as well as college leaders, who were used in the study. Regardless of the sample for the questionnaires, the assumption of these people in the study was that, relatively speaking, these people had better information about the conditions of educating student teachers for the primary education colleges in the regions of Ethiopia. It was thus believed that gathering data about the conceptions of those individuals who are responsible for quality education offers new insights for understanding the existing context.

Nine student teachers, three from each college, who were graduating classes,were also involved in the study's interviews, aiming to collect all-inclusive data about teacher educators' pedagogy. They were selected by the consultancies of their respective streams based on their belief in providing meaningful data and their ability to reflect on their experiences of teacher education pedagogy. They were, truly speaking, competent enough to provide appropriate and relevant data on the issues of the interview.

3.5 The population, samples and sampling techniques

There are five teacher education colleges in the study area, the Southern Regions of Ethiopia.Colleges of teacher education were sampled at the first level in accordance with the design of a two-stage cluster sampling, in which Hossana, Hawassa, and Bonga colleges were selected by both purposive and simple random sampling techniques. Purposive sampling was used to select Hawwasa College because of its seniority (established in 1997) relative to the other colleges in the regions. Likewise, a simple random sampling technique was used to select the other two CTEs (Hossana and Bonga) among the similar age-group CTEs, including Arba Minch and Dilla, which were established in 2002. Dilla CTE that found in the study area was selected as a pilot site. Its purpose was to determine a more appropriate and efficient stratification plan.

For data collection by the, stratified random sampling wasemployed to select participantteacher educators for the questionnaires from each department (strata), intact groups (Kothari, 2004; Morgan's, 1970) (See Appendix F).For the interviews, five teacher educators, which were deans, vice deans, and stream or department heads, from the three selected CTEswere selected

purposivelybecause of the researcher's belief about their deep knowledge and experiences they acquire in the topic of the study.Relatively speaking, these people had better information and provided more in-depth data about the conceptions and practices of teacher education pedagogy (Sarantakos, 2005; Neuman, 2006).As well, thirteenstudent teachers, from graduating class, four from two of the selected colleges and five from the third,were selected purposively. Graduating groups of student teachers were preferred to student teachers in other year of entry because the researcher believed that they have theoretical (from courses they have taken) and practical awareness (from their practicum session in primary schools) on analyzing the opportunities, practices as well as challenges of media – based instructional innovations in the college. Besides, due to their stay in the college for about six semesters, they were expected to have reliable information regarding the topic of study.Moreover, six classroom observations of four teacher educators were conducted. General pedagogy, subject methodology, and content area educators were being taught by the teacher educators. These teachers were believed relatively to employ the teaching approaches of teacher education.

3.6 Tools of data collection

The development of instruments of the study was based on factors such as the nature of the data, the conditions of the data sources, and the research design. Accordingly, questionnaire of open-ended and closed-ended items, semi-structured interviews as well as observations were used. The rationale behind using such multiple methods of data collection was to produce a more accurate, comprehensive, and objective representation of the data. It was based on notion depicted by studies as that when various research techniques, epistemologies, and approaches used, the resulting combination has complementary strengths and non-overlapping weaknesses (triangulation) (Ary et al., 2010; Johnson & Turner, 2003; Silverman, 2006). The open-ended items, semi-structured interviews,and classroom observations were used to collect qualitative data, whereas the closed-ended items were used to gather quantitative data.

The details of each of the tools are discussed below.

3.6.1 Questionnaires

The questionnaires of two general parts of general information and items of teacher educators' pedagogical conceptions, their pedagogical practices as well as challenges they faced were

developed by the researcher. The first part consisted of eight items asking about the participants' demographic and professional information. The second part of the questionnaire was sub divided into four dimensions, each of which contains items of Likert-scale and one open-ended item. This part was asking the teacher educators about their conceptions of learning to teach, their conceptions about teaching to teach, their pedagogical practices and challenges that constrain them from practicing effective teacher education pedagogy. Each of the dimensions of closed-ended questions consisted of a Likert-scale items of five points that is divided into sub-scales. The first dimension of conceptions of learning to teach consisted of 9 items ranging from strongly disagrees to strongly agree. Likewise, the second dimension of teacher educators' conception of their teaching about to teach contained 9 items ranging from very low to very high. Similarly, while the third dimension of teacher educators' practice was ranging from never to very often with 9 items, the fourth dimension of challenges of teacher education pedagogy was ranging from strongly disagree to agree of 10 items. Each of the dimensions sub-divided into two sub-scales as application of theory (3 items) and realistic (6 items), essentialists (4 items) and progressivist (5 items), transmissionist (4 items) and constructivist (5 items) as well as teacher educators related (3 items) and context related concepts (7 items) for dimension one, two, three and four respectively.

Similarly, the open-ended items were used to gather qualitative data from respondents' full freedom to express their opinions. The items where about how pre-service teachers learn to teach; about the main characteristics of teacher educators' pedagogy; to list the most often used teacher education pedagogical strategies and techniques; and to discuss challenges that teacher educators are facing in employing their pedagogy (for detail, see Appendix A).

3.6.2 Semi-structured interviews

The assumption in using the semi-structured interviews in this study is that the participants' perspectives are meaningful, knowable, and able to be made explicit, which affects the success of the research. Though it was in the participants' own ways, it permitted focusing on the core issues of the interview and also helped gathering detailed data concerning the conception and practice of teacher education pedagogy. While keeping us on track, it allowed for the inclusion of relevant issues that may have arisen during the interviews (Adamu, 2013; Bryman, 2012, 2016; Brown, 2001).

For these reasons, the researcher framed a series of questions in the form of a general interview guide but that vary the sequence of the questions. It had the advantage of making the interviews fairly conversational, situational, and created a thick data collection system. The researcher was very conscious that the issues discussed were sensitive ones and that handling the interview scenario required skill in order to allow respondents to speak openly, honestly, and freely about their experiences.The interview instruments weredesigned for both teacher educators and student teachers separately (for detail, see Appendices B & C).

The goal of the student teacher interview was to learn about their observation on the teacher educators' pedagogical experiences. In addition to mentioning the main pedagogical strategies that teacher educators employed, they were asked to describe the personal and pedagogical traits and practices of effective teacher educators. They were also asked to describe the impact of teacher educators' pedagogy on their experiences of learning to teach.The data, based on major points raised during the interview with the student teachers pertaining to the guiding interview questions was analyzed.

3.6.3 Classroom Observation

Data were also gathered for this study through classroom observations, which allowed the researchers to address how the teacher educators' actual classroom practices compared to their pedagogical conceptions.Since observation allows the researcher to determine whether what is said actually matches actions, the observer or researcher had classroom observations and records of teacher educators' and student teachers' actions. Its purpose also goes to triangulate the data from the survey.The researcher prepared a rubric for classroom observation with taking notes that depended on the activities performed by teacher educators and student teachers. It was designed to collect data on the pedagogical practices of teacher educators assigned to teachcourses of subject methodology, content area, and general pedagogy.

Totally, six classroom observationsof four teacher educators were conducted at the Colleges of Education, requiring extended hours and participants' consent (Ary et al., 2010). During the classroom observations, the researcher tried to capture major instructional events going on in the teacher educators' classrooms. The researcher primarily concentrated on specific components of instructions, such as participant grouping arrangements or classroom structure (individual, pair,

or group works), lesson activities or tasks, and interaction style. Throughout 50-minute lesson observations on subject approach, content area, and general pedagogy courses, each participant was observed. The use of observations was made because, in order to fully comprehend the instructional tactics and approaches that the participants were implementing in their classrooms, it was imperative that one actually see them teach. Every observation was documented in writing.A field notes guide (see Appendix D) was used to discreetly record field notes about the teacher educators' interactions, activities, and use of methods with the student teachers. The researcher developed his field notes into a vivid narrative as soon as time allowed. After the researcher had extended the field notes, they had been entered into a password-protected word processing document of the researcher'scomputer and the hard copies were kept in a safe place.

Hence, it enabled the researcherto investigate the extent to which teacher educators and student teachers understand and use effective teacher education pedagogy in the college classrooms. Thus, the researcher obtained more accurate data by actually observing classrooms beyond asking them about their use of quality teacher education pedagogy.

3.7 Validity and reliability of the instruments

Validity addresses the question, "how close is the measured value to the true value?" and is a measure of how well a test measures what it is supposed to measure (Kombo and Tromp, 2006). Along this line, due emphasis has been given to validity issues of the instruments. Construct validity as well as content validities were established by seeking judgments from a panel of judges competent in the area of the study. This included my advisors as well as a pedagogical expert from one of the colleges in the study area. The draft instruments were prepared by the researcher with the consultancy of the pedagogical expert. My advisors read and evaluated them in line with whether the questions effectively captured the topic under investigation. They provided feedback and their recommendations were incorporated in the final questionnaire. Particularly, the supervisors read the draft instruments and made their recommendations on how the content and construct validities were to be ensured. Based on the suggestions of the supervisors, the researcher made the final instruments which were used in the final data collection. The questionnaires were addressed to teacher educators through the researcher himself giving explanation about how to respond to the questions in the questionnaire. The deans of the colleges also made a follow-up to request returns.Based on their suggestions and

recommendations, some errors like double-barreled, confusing, and leading questions were corrected, and the researcher made the final instruments that were used in the final data collection.

Issues of validity/credibility were also addressed throughout the present research process, focusing the research design on teacher educators' conception and practice of quality pedagogy. In the development of instruments of data collection, it was made sure that the instruments made to have sound content validity, meaning that they made to represent the attribute being measured and cover all relevant aspects of the research topic under consideration. The instruments were also made consistent to measure the attribute over time or from situation to situation to ensure *reliability*. These were supervised by the advisors of the researcher. Furthermore, the use of mixed methods (Creswell, 2014; Creswell & Plano Clark, 2011) allowed the researcher to triangulate data, data sources, methods of data collection and analysis, sampling, contexts, situations and perspectives (Tashakkori & Teddlie, 2009). It was also enhanced through sampling and logical connection of all methods to the research questions and the objectives of the study, establishing truthfulness in the findings based on the whole research design, data processing, and context.

Triangulation, controlling researcher bias and focusing the whole work on the subject of the researchwerealso techniques that used to increase validity of the study. It was also addressed by extended fieldwork, continuous observation, and triangulation of methods, sources, and theories. To control researcher bias, avoiding using leading questions during the interview process, I asked the questions and allowed the participants to respond. Follow-up questions were asked with the sole intention of gaining clarity or further elaboration relative to the participants' responses. Drawing conclusions carefully and describing in detail all information was also done to increase generalizability or transferability of the study. Reliability or dependability was maintained by the careful triangulation, purposive sampling, and logical connection of all methods. Reflection based on preserving data was done to increase objectivity or conform-ability. The use of the three data sources was very instrumental in ensuring that the data obtained was accurate and reliable.

Pilot test was used to validate the content employed in the questionnaire (Orodho, 2005). The survey was piloted on a subset of the intended population, Dila CTE. Based on the pilot study,

the researcher pointed out which questions were weak or irrelevant. In this line, internal consistency of items, i.e., how closely related the set of items are as a group in the dimension of the questionnaire, was computed (see the details in the next chapter and in the appendix).

3.8 Data collection procedures

As previously noted, the objective of this study is to examine teacher educators' conceptions and the likely practices of pedagogy of teacher preparation in the colleges. For this purpose, both quantitative and qualitative data were collected and analyzed, as framed in the following figure.

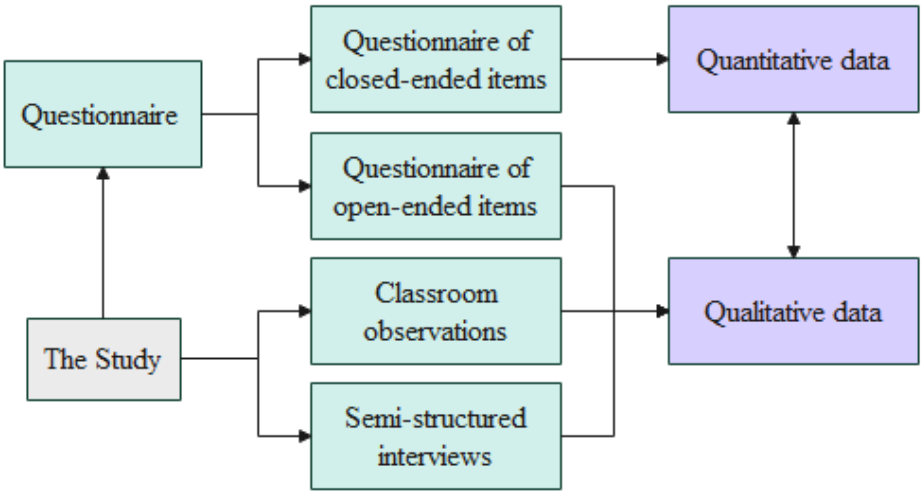

Figure 3: A framework of data collection and analysis for the study

Employing mixed methods is believed to combine the strengths of both approaches while compensating for the weaknesses of each, providing a holistic picture of the study. For this purpose, during data collection, information was recorded through research protocols, and administering data collection tools was carried out effectively, anticipating potential problems in data collection and bringing sensitivity to ethical issues that may affect the quality of the data.
Before the data collection, a visit was made to each of the sample colleges of teacher education and scheduled for the date of the data collection.

Data was collected through questionnaires of both close-ended and open-ended items, through interviews from five teacher educators and nine student teachers, and by six classroom observations. The lists of teacher educators of each of the colleges were secured. The researcher himself distributed the questionnaires to teacher educators, explaining how to answer each

question as the college officials closely monitored the process. The procedure of questionnaire administration was emphasized in that participants should not fatigue, nervous, and misinterpret questions, or guess on questionnaire. Then, the questionnaire was administered to all of these participants in each of the selected colleges with the intention of getting as many opinions as possible from the majority of them. As a result, almost all participant teacher educators correctly completed and returned the questionnaire which amounts to a 98.7% response rate. Following these steps, the last round of data of the questionnaire was gathered; the responses were entered into SPSS and cleaned.

In-depth interviews were conducted with five CTE teacher educators and college leaders as well as ninestudent teachers (for details, see Appendices B & C). It focused on meaning-making through the lens of the participants (Josselson, 2013) and used specially designed protocols and had the questions ready to be asked, since it serves the purpose of reminding on the questions, and it provides a means for recording notes. All interviews were conducted in Amharic and transcribed into a written text of English (Kvale & Brinkmann, 2009). A concerted effort was made to keep an open mind, in order to ascertain what the transcript was saying, and not placing my preconceptions upon these. As one of the desirable qualities of a qualified interviewer, to become a good listener, emphasis was made to maintain this quality throughout the field research. The interviews were audio-recorded and transcribed mainly as it allowed a more detailed examination of what would have been said and how it would have been said (Bryman, 2016; Layder, 2013), since recording data is an essential process in research (Loflfl and & Loflfl and, 1995). On the occasions while the interview took place, notes were taken and then interpreted and analyzed directly after the interview. Since qualitative researcher's goal is a complete description of behavior to understand the complex interactions in a natural setting rather than a numeric summary of occurrence or duration of observed behaviors, the interviews were made and recorded relaying on narratives or words to describe the setting, the behaviors, and the interactions. The focus was also on how teachers conceive and practice their efforts in their scrutiny of quality teacher education pedagogy.

Next, the researcher had to carry out classroom observations by using prepared rubric that depends on the activities performed by teacher educators and student teachers. As a mixed researcher, to the aim of complete description of behavior and to understand the complex

interactions in natural settings, the observations were made and recorded relaying on narratives or quantities to describe the setting, the behaviors, and the interactions. Observations of teacher educators were conducted during classroom teaching periods in an effort to observe and understand how the teacher educators practiced and understood pedagogy of teacher education in the class curriculum. Observing teacher educators in their own environment established context and meaning to the specific lesson and the participant's relationship to the pedagogy (Larkin, Eatough, & Osborn, 2011). After the data was collected, they tabulated and interpreted by using the review of related literature.

3.9 Data analysis techniques

As a convergent mixed-methods study, the analysis was carried out immediately after the collection of data completion. The design enabled the researcher to simultaneously collect both quantitative and qualitative data, refine and elaborate results about the conception and practice of teacher educators' pedagogy. As noted by Johnson and Christenson (2017), the analysis and report in mixed research design appears to be different from conventional mono method types, in that these two sets of data merged at discussion stage.

Consequently, the data collected through questionnaire of close-ended items were edited, coded and encoded into SPSS version 20. It was then summarized and presented by using descriptive statistics such as frequencies, graphs, and percentages. This analysis included the background profiles of the participants and the results of conceptions and practices of teacher education pedagogy by the teacher educators. The analysis was using the techniques of descriptive analysis and inferential analysis techniques.As the variables were checked as non-parametric, the Wilcoxon signed-rank test was also used to investigate the difference between the groups.A Spearman rho correlation coefficient test was employed to investigate whether a significant correlation exists between the conceptions and practices of teacher educators' pedagogy.

On the other hand, the data gathered by interviews (of both teacher educators and student teachers),open-ended item questions of the questionnaires, and observations were analyzed and interpreted independently using narrative as well as thematic analysis methods. Narrative analysis was used because it helped to focus on the stories the teacher educators told and the interpretation they used in to make sense of them. It was also preferred because it enabled us to

get a deep understanding of the participants' perspectives and to summarize the result of the topic under the study. However, thematic analysis is appropriate for examining information related to observable patterns found in participants' perspectives, ideas, and intentions as they are conveyed in both written and spoken forms of data (Braun & Clarke, 2006; Marshall& Crossman, 2006). The researchers extended as that the thematic analysis passed through phases of immersion into the data, coding, identifying broader patterns of meaning (searching for theme), reviewing themes, defining and naming themes and writing up. It is the process of identifying patterns and meanings in qualitative data by delving through a data set, systematically coding, deriving themes, and creating a narrative. It involves familiarizing oneself with data, creating initial codes, revising and organizing the codes into categories, and then developing themes, which are essential topics and patterns that demonstrate how the data answers the research questions. The analysis began with the transcription of the data verbatim, so the exact words of the participants were recorded. It was a concerted effort to keep an open mind in order to interpret what the transcript was saying without preconceived notions. The transcribed data were organized and coded for each participant, which made the information easily retrievable and manageable. In this context, coding refers to assigning data labels that summarize what is said in that data in order to reduce the amount of information and break it down into more digestible chunks.

Next,the process of identifying the recurring ideas and patterns was carried out. Thisstep of generating categories and then the themeshelped the data to become more readily accessible and understandable (Bloomberg & Volpe, 2008). In this phase, patterns were noted, and categories were formed according to the process of both a mixture of inductive and deductive analysis through which the findings emerged out of the data as well as according to the existing framework (Patton, 2002). In the phase of offering interpretation, the data were evaluated for their usefulness in order to support the emerging interpretations and provide context. The participant quotes that were deemed most suitable were used. At this point, the plausibility of the understandings and interpretations was investigated by challenging the search for other plausible explanations implied by the data. In another word, the multiple perspectives of participants, as supported by the different quotations, were carefully examined. In this part of the process the purpose is to identify noticeable themes, recurring ideas and/or language and patterns of belief (Marshall & Rossman, 2006). The researcher also emphasized the critical importance of

respondents' own interpretations of the issues of the research and accepts that their different vantage points will yield different types of understanding (Snape & Spencer, p. 20, 2003).

Following the analysis of the responses of the questionnaires of the closed-ended items, the researcher moved on to the analysis of the written responses of the participants, then to the interview, and to the classroom observations about teacher educators' pedagogical conceptions and their practices. It was very helpful in exploring about the teacher educators' experiences with these pedagogical strands. The thematic analysis, which based on the thematic areas of teacher educators' conceptions of teacher education pedagogy, teacher educators' pedagogical practices, and challenges that the teacher educators confronted in their pedagogical practice was used to find out teacher educators' ideas on the topics. The analysis technique was preferred because it enabled getting a deep understanding of all sampled participants' perspectives and to summarize the result of the topic under the study. Its purpose was also to stress the importance of keeping track of and analyzing data in an effort to efficiently identify the themes that emerge from the study and to ensure that meaningful findings will result from the analysis (Creswell, 2009). In the process of thematic analysis, after transcribing the data from the open-ended questions of the questionnaire, the data were organized using themes, sub-themes or categories, codes, and examples. Whereas coding represented specific topics that relate to the sub-themes or categories, themes represented the more general topics, grouped of the sub-themes or categories. Likewise, examples represented the more specific topics related to the code. This hierarchy of themes was essential in helping the researcher to identify the themes patterns for this study. Constant comparisons were made in an attempt to identify themes or patterns that existed among the data sources. Moreover the participant teacher educators were labeled using codenames that consist of abbreviations and numbers. For example, the first participant from the sampled college Hawassa, was labeled as PHa1, from Hossana PHo1, from Bonga PBo1, and so on.After analyzing it further and further, it was discussed interpreting the ways in which the two sets of findings informed each other in the discussion stage. In the interpretation section, after the researcher presents the general qualitative and then a quantitative result, a discussion was followed that specifies how the qualitative results help to expand or explain the quantitative results.

3.10 Ethical considerations

In determining the value of the research undertaken, ethical considerationswere considered to be parts of ascertaining the quality of the study (Creswell, 2009). In this study, to take issues of research ethics into consideration, prior to commencing any data collection, informed consent was obtained from all participants, institutions and supervisors. The researcher communicated ahead the aims of the investigation to the informants, participants and appropriate representatives of institutions, and kept them updated about any significant changes in the research program. Having debriefed the participants about the purpose of the research, they were invited to participate voluntarily without any implication to them to the final report of the study. It was made clear that the informants have the right to withdraw from participation at any time, without this entailing any negative consequences for them; i.e., no perceived harm, risk, or possible hurt is anticipated from the proposed intervention during the research. As part of this effort, the identity of the participants of the study was made confidential in the analysis and reporting of the results. Furthermore, the officials and teacher educators who took part in the study were made anonymous in the analysis and reporting of the interview results through the use of related acronyms followed by subsequent numbers. For example, TEr 1, TEr 2, TEr 3, TEr 4 and TEr 5 for the five interviewees and PHo, PHa and PBo for open ended questionnaire participants each with the assignment of two-digit numbers.

All data were stored on my password-protected computer and in a locked file cabinet located in my home. The researcher had caution to ensure that there is no wastage of research time, populations or of institutional settings. Moreover, the relationship between the researcher and the participants as well as appropriate institutional representatives was based on honesty and being sensitive to any locally established institutional policies or guidelines for conducting research.Ethical issues were also taken into account in the analysis, verification, and reporting of the research results (Kvale & Brinkmann, 2009). In this line, efforts were made to present, analyze, cross-check, and report the findings without violating the research ethics expected from a social science researcher. All data were documented, recorded and secured according to the guidelines and requirements of AAU.

CHAPTER FOUR: ANALYSIS AND PRESENTATION OF DATA

Introduction

As stated in previous chapters, this study used a convergent parallel mixed methods design to examine teacher educators' lived conceptions and their likely practices. A mixed-methods approach was chosen because it helps to seek and provide an in-depth description of the concepts of the study using data provided by participants (Meriam, 2009).

Accordingly, this section is devoted to the presentation of the results of the study based on the themes of the study, drawn from its basic research questions: teacher educators' conception of their pedagogy, teacher educators' pedagogical practices, relationship between teacher educators' conceptions and their teaching practices, and challenges that affect teacher educators' pedagogy. For this purpose, this chapter presents a detailed analysis and interpretations of the data collected through questionnairesof both open-ended and closed-ended items, interviews of both teacher educators and student teachers, and classroom observations. A summary of the pilot study report is also presented, preceding the results of the main study.

4.1 Pilot study results

Before the actual data collection, an initial version of questionnaire was designed and applied to a sample of sixty - one teacher educators selected from Dilla CTE. The referred CTE was selected for pilot study because it was one of the colleges of teacher education in the study area, but was not involved as a sample in the final study. The responses from this questionnaire allowed the researcher not only to check the clarity of the questionnaire items, but also to adjust

the sequence of the questions. Beyond familiarizing the researcher with administration of the instrument, this process also permitted to refine the final version of the questionnaire by rewriting some questions and eliminating some others.

Based on the pilot study, the researcher pointed out which questions were weak or irrelevant. In this line, the internal consistency of items, i.e., how closely related the set of items are as a group in the dimension of the questionnaire, was computed using coefficient of reliability of Chrombach's Alpha. Accordingly, the coefficient of reliability of the first dimension of teacher educators' conceptions of their pedagogy, teacher educators' pedagogical practices, and challenges that teacher educators face were 0.902, 0.821, and 0.833 respectively. As the amount coefficient of reliability of each of the dimensions is greater than .70 (Streiner, 2003) and the corrected item-total correlation of each item is greater than .25 (Azwar, 2017), it was quite high enough to judge the instrument as reliable for the study (George and Mallery, 2003; Orodho, 2005).

A reliability analysis for the sub-scales was also conducted. Accordingly, in the first dimension, for the application of theory conception(4 items), $\alpha = 0.748$), and for the realistic conceptions (5 items), $\alpha = 0.895$. Similarly, in the second dimension, for the transmissionist practices (3 items), $\alpha = 0.621$ and for the constructivist practices (6 items), $\alpha = 0.795$. And in the third dimension, forteacher educators related constraints (3 items), $\alpha = 0.758$ and for the context related constraints (7 items), $\alpha = 0.773$. Except for items of transmissionistpracticesin the second dimension, $\alpha = 0.621$, with moderate validity, all others are high enough to judge the scales as reliable.

4.2 The background data and participants'profiles

4.2.1 Profile of the participants of the questionnaires

This part provides demographic data of the participants of the questionnaires. It was regarding to their sex and qualification by colleges in the first part as well as field of study, assignment, teaching experience in primary or secondary schools, and teaching experience in colleges of teacher education by colleges in the second part, as portrayed as follows:

Table 1: Number of participants by sex and qualification

	Hawassa CE	Hossana CE	Bonga CE	Total	%
Female	5	4	4	13	5.56
Male	78	71	72	221	94.4
Sub Total	87	71	76	234	100
Diploma	0	0	1	1	0.43
Degree	16	4	9	29	12.4
Masters	69	67	65	201	85.9
Doctorate	2	0	1	3	1.28
Sub Total	*87*	*71*	*76*	*234*	*100*

As Table 1 displays, the study was conducted in three colleges of teacher education out of population of five colleges. Quantitative data for the study was collected from 234 participants, composed of 13 (6%) female and 221 (94% boys) male teacher educators. This directly shows that males appear to dominate the population proportion in the pool.

The table also confirms that graduates with a 0.43% diploma, 12.39%-degree, 85.90% master's degree, and 1.28% doctorate degree appear to have a better chance of participating in the study. This shows that 87.18% of participants had attained a master's degree or higher. In this regard, the participant profile data appears to match the corresponding rhetorical policy documents in that 87 percent or more of the teacher educators have a master's degree or higher (McKinsey & Company, 2007; MoE, Roadmap, 2018).

Table 2: Participant teacher educators' teaching experience by college

	College Name			Total	%
	Hawassa	Hossana	Bonga		
1. Do you teach classes in other fields other than in your major and minor field?					
Yes	18	20	13	51	22.08
No	69	51	60	180	77.92
Sub Total	87	71	73	231	100
2. Do you have experience in teaching in primary or secondary schools?					
Yes	77	67	60	204	88.31
No	10	2	15	27	11.69
Sub Total	87	69	75	231	100
3. Teacher educators' teaching experiences in schools					
1-5	30	18	13	61	29.19
5.1-10	25	23	32	80	38.28
10.1-20	20	24	14	58	27.75

More than 20	3	4	3	10	4.78
Sub Total	78	69	62	209	100
4. Teacher educators' experience in colleges					
1-5	28	44	32	104	44.83
5.1-10	31	9	27	67	28.88
10.1-20	21	16	16	53	22.84
More than 20	6	2	0	8	3.45
Sub Total	86	71	75	231	100

As depicted in Table 2, the percentage of teacher educators who teach in classes other than their major or minor was 22%. As this proportion of teacher educators teach with no relevance and appropriate training for the level, it could be observed as it influence a lot negatively preparing quality teachers. It indicates that the majority (78%) of the teacher educators are teaching in their major or minor field of study. In a similar manner, 88% of the teacher educators have taught in primary or secondary schools. Moreover, 70.81% of the teacher educators taught in primary or secondary schools with experience of 5 or more years of teaching in schools, indicating relatively adequate numbers of years of experience in teaching in schools. On the other hand, 45 percent of the teacher educators had teaching experience of less than 5 years in colleges, while 55 percent had teaching experience of more than 5 years. Consequently, though most of the teacher educators (55%) had above 5 years of teaching experience, a great deal of them (55%) had teaching experience below 5.

In general, as one of the preconditions of being a teacher educator in colleges of teacher education, teacher educators should possess not only the proper level of qualification but also experience in teaching in both colleges of teacher education and in the primary or secondary schools for which student teachers are being prepared. In this regard, the analysis shows that the majority of the participants have a master's degree or higher. Similarly, many of the participants not only have 5–10 years of teaching experience in schools but also teach in their minor or major fields in colleges. However, regarding the participants' teaching experience in colleges, a great number of the participants have 1–5 years of experience, and the number of female participants was so minimal, implying the teacher educators are relatively less experienced in teaching in colleges and are male-dominated. It seems that more experienced teacher educators are leaving teacher education, which does not align with the mission of the Ethiopian policy stated as

"*Teaching will be developed as a profession of choice*" (ESDP V, 2015:35). Though, it is one of the areas for future research, temporarily some issues will have been analyzed in the following parts of the present study.

4.2.2 Profile of the interviews participant teacher educators

This part provides demographic data of the participants of the interviews of the teacher educators with regard to their sex, qualification, field of study, teaching experience in primary or secondary schools, and teaching experience in colleges of teacher education by colleges.

Table 3: Background profile of the interview participant teacher educators

Variables	Hawassa (1)	Hawassa (2)	Hossana (1)	Hossana (2)	Bonga
Number	1	1	1	1	1
Sex	Male	Male	Male	Male	Male
Qualification	MSc	MA	MA	MA	PhD
Field of study	Physics	Chemistry	Curriculum and Instruction	Curriculum and Instruction	Mathematics Education
Responsibility	Vice dean	Practicum facilitator	Stream Head	Department head	Dean of the college
Teaching experience in years in primary or secondary schools	20	5	17	14	10
Teaching experience in years in colleges of teacher education	11	25	15	15	25

As Table 3 displays, five interview participantsof teacher educatorswere selected from the three sampled colleges of teacher education out of a population of five colleges. Four of them are MA holders and one was a PhD holder. Their field of study, as shown above, is diversified fields of physics, chemistry, curriculum and instruction and mathematics education. Similarly, they were from different areas of authoritative positions such as: vice dean, practicum facilitator, stream head, department head, and dean of the college. They had a minimum teaching experience in primary or secondary schools of 5 and a maximum of 20 and a minimum teaching experience in colleges of 11 and a maximum of 25. It also shows that all participants had attained a master's degree or higher. In general, the teacher educators possessed the qualification of master's and

above, which is recommended for teaching in colleges and also have sufficiently large number of years of experience in teaching in both colleges of teacher education and in the primary or secondary schools for which student teachers are being prepared.

Regarding the participant student teachers, all of them were from graduating class of Mathematics, English, Biology, Hadiyyisa, and Environmental Science. Both the teacher educators and student teachers were labeled using codenames that consist of interviews.For example, TEr and ST were labels for teacher educators and student teachers respectively and the numbers based on their turns in the interview course. For example, the first interviewedteacher educator- was labeled as TEr1 and the first interviewed studentteacher was labeled as ST1. In-person interviews with teacher educators took place in their respective offices, and student teachers were interviewed in open classes. Prior to the interviews, the statement of consent was reviewed for understanding. The interviews were scheduled to last approximately 30 minutes; however, most interviews exceeded this expected time frame as most of the teacher educators took time to elaborate in detail about the topics of the interviews. A smartphone was used to record the interviews in addition to the notes taken. Overall, the interview process was very important in helping to explore teacher educators' experiences with teacher education pedagogy. The narrative analysis method was used because it helps to focus on the stories the teacher educators told and the interpretations, they used to make sense of them. It was also preferred because it enabled a deep understanding of the participants' perspectives and a summary of the results of the topic under study.

4.2.3 Background data of classroom observation

A profile of each participants of the observation is provided prior to the analysis and evaluation of the teacher educator's classroom instruction in order to provide a broader framework for their practices.

Table 4: Background data of classroom observation

Teacher Educator	Observation of Lesson	Subject	Number of Student teachers	Title of the Lesson
1	1	Personal and Socio-Emotional Development	33	Personal and Socio-Emotional Development of young Children

	2	″	35	Benefits of Personal and Socio-Emotional Development
2	3	Foundation of Education	30	Types of Education - Formal Education
3	4	″	31	Informal and Non-formal Education
4	5	Concepts of Teaching	32	Types of Theories of Learning
	6	″	33	Relationship between the Learning Theories

As displayed in the table4, six distinct classroom lessons, based on four purposivelyselected teacher educators were observed. As could also be observed above, the teacher educators were those assigned to teach courses in subject methodology, content area, and general pedagogy.

Following the review of the participants' background profiles, the data was analyzed based on the above instruments and are presented in four thematic areas: teacher educators' conceptions of their pedagogy, teacher educators' pedagogical practices, the relationship between teacher educators' pedagogical conceptions and their teaching practices, and challenges that the teacher educators perceive in their pedagogical practice.

The analysis was outlined as follows:

4.3 Teacher educators' conceptions of their pedagogy

This part of the analysis focuses on identifying teacher educators' conceptions of their pedagogy based on paired sub-scales (indicators). While the percentage was applied to find out the magnitudes of relationships, Wilcoxon signed-rank test was computed to see the significance of these differences.

Accordingly, participants were asked to try out 9 items that were split into two sub scales of application of theory (items 1, 2, 3&5) and realistic (items 4,7,8,9, &10) items. The two sub scales were analyzed separately by frequency countand first, the data of participants'responses for the application of theory scale items was portrayed as displayed in the following table.

Table 5: Teacher educators' conceptions of application of theory

No	Teacher educators' pedagogy is characterized as:	1(VL)		2(L)		3(M)		4(H)		5(VH)	
		f	%	f	%	f	%	f	%	f	%
1	Teacher educators' academic and professional competence only.	7	3	14	6	62	27	102	43	49	21
2	Teacher educators' performance of his/her professional practices only.	4	2	14	6	70	30	106	45	40	17
3	Teacher educators' effect, which is not necessarily related with the pre-service teachers' effectiveness.	15	6	49	21	103	44	59	25	8	4
5	Creating learning experiences that inform pre-service teachers to practice from theories.	5	2	36	15	72	31	92	39	29	13
	Sub Total	31	3	113	12	307	33	359	38	126	14
	Grand Mean										3.6

Note: VLstands for very low; L stands for low, M stands for medium, H stands for high, and VH stands for very high.

As indicated in table5, participants rated as 3%, 12%, 33%, and 38% 14% for "very low", "low", "undecided", "high", and "very high" respectively for the items. Accordingly, the percentage of the participants on the application of theory items of the questionnaires rated at least "low", "medium", and at least "high" was 15%, 33%, and 52%, respectively. This count infers that the majority of the participants conceptualize teacher education pedagogy as an application of theory. Similarly, as shown in the table below, participants provided their responses for the

realistic conception scale items. Accordingly, 5%, 17%, 31%, 32%, and 5% rated for “very low”, “low”, “undecided”, “high”, and “very high” respectively, as shown below:

Table 6: Teacher educators’ realistic conception on teaching about to teach

No	Teacher educators’ pedagogy is characterized as: -	1(VL)		2(L)		3(M)		4(H)		5(VH)	
		f	%	f	%	f	%	f	%	f	%
4	Demonstrating skills of teaching practically by both teacher educators and pre-service teachers.	7	3	30	13	86	37	84	36	27	11
7	Engaging in teacher education researches that examine and inform the pedagogy of teacher education.	15	6	39	17	70	30	83	35	27	12
8	Reflective practices with the kind of envisioned, research-based proven effective teaching strategies.	11	5	49	21	75	32	69	29	30	13
9	Integrating technology in teaching and learning.	17	7	49	21	69	30	61	26	38	16
10	A purposeful commitment to the teacher education profession.	8	4	27	11	64	27	82	35	53	23
	Sub Total	58	5	194	17	364	31	379	32	175	15
	Grand Mean									3.5	

Note: VLstands for very low; L stands for low, M stands for medium, H stands for high, and VH stands for very high.

Likewise, as shown on the Table 6, participants rated at least "low", "medium", and at least "high" as 22%, 31%, and 47%, respectively, which also infers that majority of the teacher educators conceptualize their pedagogy as realistic pedagogy.

In addition, the grand means for the both scales ofapplication of theory and realistic conception were3.5 and 3.6 respectively. Comparing these two scales’ ratings, it is apparent that teacher educators dominantly conceptualize their pedagogy as application of theory, as the differences of

both percentage (52% - 47% = 5%) and grand means (3.6 - 3.5 = 0.1) support it. To see whether this difference is significant or not, Wilcoxon signed-rank test was used. Using this test, it was investigated about the change that exists in scores from the two sets of scores those represent both application of theory (AC) and realistic conceptions (RC), as shown below.

Table 7: Wilcoxon signed rank on teacher educators' conceptions on teaching about to teach

Wilcoxon signed rank		N	Mean Rank	Sum of Ranks
RC - AC	Negative Ranks	129[a]	111.72	14411.5
	Positive Ranks	87[b]	103.73	9024.5
	Ties	18[c]		
	Total	234		

a. RC< AC
b. RC > AC
c. RC = AC

Test Statistics[a]

	RC - AC
Z	-2.930[b]
Asymp. Sig. (2-tailed)	0.003

a. Wilcoxon Signed Ranks Test
b. Based on positive ranks.

Descriptive Statistics

	N	Mean	SD	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
AC	234	3.5	0.70	1.25	5	3.0	3.5	4
RC	234	3.4	0.89	1.00	5	2.8	3.4	4

Consequently, illustrated in the table7's legend, 129 participants had a higher AC than RC. 129 more participants rated the application of theory conceptions than the number of participants who rated realistic conceptions. However, 87 more participants had a higher RC, and 18

participants were undecided in their view score. The total of the ranks for the negative differences and the mean of the negative ranks are larger than that for positive ranks suggesting that values for conceptions of application of theory are generally larger than for realistic conceptions. By examining the test statistics table, we can see whether these differences, due to teacher educators' conceptions, led overall to statistically significant differences in their conception scores. Accordingly, from the test statistics, the differences of the two conceptions (application of theory and realistic)of the teacher educator in teaching the teaching elicited significant change ($Z = -2.93$, $p = 0.003$). Therefore, the Wilcoxon signed-rank test showed that participants had significantly conceptualized their pedagogy as application of theory, with the median conception score rating of both application of theory and realistic conceptions of 3.5.

Accordingly, it was found more participant teacher educators agreed that pre-service teachers learn through teacher-led application of theory of learning to teach. The participants had significantly conceptualized their pedagogy as application of theory ($Z = -2.93$, $p = 0.003$), with the median conception score rating of 3.5 between application of theory and realistic conceptions. The result, thus, showed the teacher educators' strong convictions of application of theory on their pedagogy. This result also goes with the findings based on the data from the open-ended items, as portrayed below.

Participants in the questionnaires replied to the open-ended question that sought information about their conception of their pedagogy. It asked, "In your own understanding, please state the main characteristics of effective pedagogy for teacher educators." Accordingly, five sub-themes, which were merged into two themes of application of theory and realistic conceptions of pedagogy, emerged. The process was illustrated in the following figureinduced from its subsequent table:

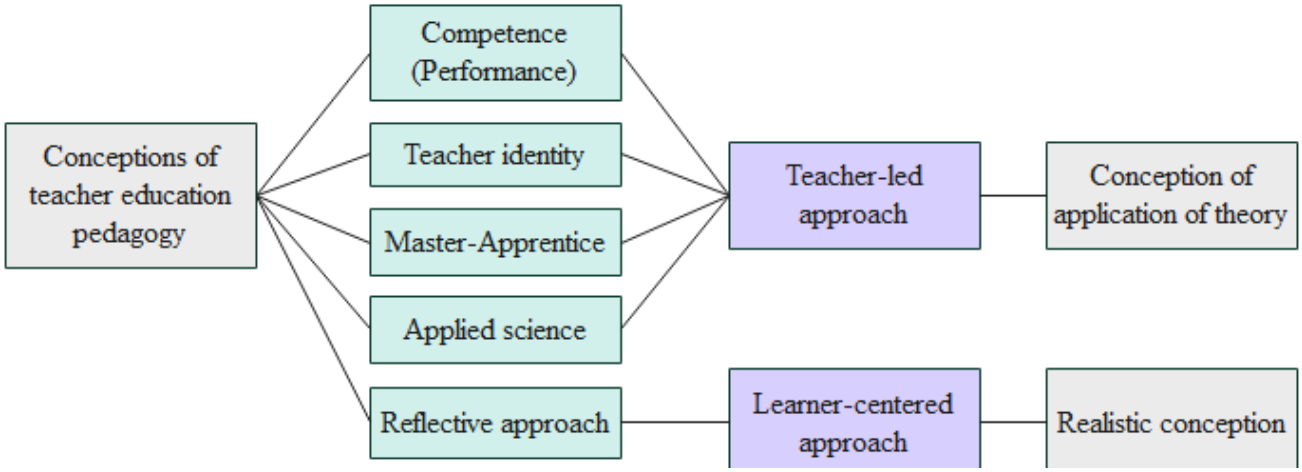

Figure 4: Teacher educators' conception of their teaching about to teach

The themes were emerged from the frequently appearing data, as illustrated below:

Table 8: Teacher educators' conceptions of their teaching

Themes	Codes	Example
Application of theory	Competence or Performance	Competent in the profession, well organized in his/her profession, use well versed assessment techniques
		The teacher educators' competency in terms of subject matter knowledge and professional skill including using various learner centered methods, assessment techniques and having professional ethics
		Uses different methods of teaching that scaffold all levels of learners and who have sufficient knowledge on his specialization area supported by technology assisted instruction
	Applied Science	Active learning associated with teacher - centered
		Lecture based explanation, group discussion and presentation
		Pre-service teachers first learn theories of teaching and learning in their classrooms and then practice outside to improve their skill.
	Master-Apprentice	The teacher educators should be task-oriented, disciplined in their duty, and make all professional efforts to ensure the purpose of the institution.

	Teacher Identity	Introducing different types of teaching methods and classroom management strategies for learners that can equip them to be professional teachers. Create learning experiences that are committed to the welfare of the teacher education. Respecting his/her working time, profession, and the students.
Realistic	Reflective	He/she should be able to identify and use the most appropriate strategies, method and techniques based on the nature of the subject matter/ content of the lesson so that pre-service teachers would be able to learn both the strategies and the content intended. It is characterized by their commitment to work collaboratively, devote their time and effort towards shared responsibility, readiness to carry out responsibilities, open mindedness and ready to learn from others

As can be observed in Table8, themes resulted from the teaching strategies (codes) of competence or performance, applied science, master-apprentice, teacher identity, and reflective approaches. As discussed before, while competence or performance, applied science, master-apprentice, and teacher identity are grouped under the conception of application of the theory theme, reflective teaching strategy (code) comes from the realistic conception of the theme.

Therefore, teacher educators' conception of their pedagogy is found to be both an application of theory and a realistic approach, as illustrated above in the figure as well as in the table.

In a more precise manner, teacher educators' conceptions of teaching were summarized in a chart as shown below:

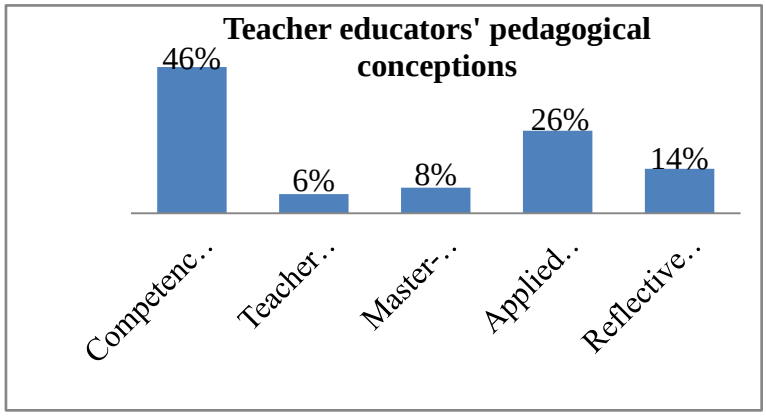

Figure 5: Teacher educators' conceptions of their pedagogy

However, 33% of teacher educators conceptualized teaching in teacher education pedagogy as competence or performance, 31% conceptualized it as an applied science, 13% of teacher educators conceptualized it as master-apprentice, 6% of teacher educators conceptualized it as teacher identity, and 17% of the teacher educators conceived it as a reflective approach. This indicates, except for the 17% reflection, majority of teacher educators (83%) conceptualize teaching as an application of theory.

These findings about the conceptions of teacher education pedagogy based on the data from the participants of the questionnaires of the open-ended items as well as the interviews, was discussed as follows:

Application of theory (teacher-led) conception of teacher educators' pedagogy

As discussed before, competence or performance, direct instruction, applied science, master-apprentice, and teacher identity are grouped under the conception of application of the theory theme.

To elucidate some of the referred quotes;

> An effective teacher-educator is one who uses different methods of teaching that scaffold all levels of learners and who has sufficient knowledge in their specialization area supported by technology-assisted instruction (PH, 55).

The other participant had to say similarly, as follows:

> Effective teaching in teacher education needs proper knowledge of the subject matter, skills and techniques of the profession, research skills, and educational technology (PH, 50).

For this reason, as the participants stated, teacher educators should possess demonstrated professional competencies (sets of skills) that make them competent teacher educators to enable the student teachers to master theoretical courses. This also infers that most of the teacher

educators conceptualize their pedagogy as application of theory. Here it was not surprising to see that reflection was less rated, since; they are less understood and believed to be effective pedagogies in teacher education, which could be observed as the missing concepts by the teacher educators. However, as all these sub-themes, except reflective, are categorized under application of theory (Korthagone, 2017), the majorities of the teacher educators conceptualize their pedagogy as application of theory approaches. This kind of conceptions of pedagogy, that are conceived as effective pedagogies in teacher education, alone cannot form the basis of good teaching in teacher education because they are grounded in known educational practices, though good teaching in teacher education is situated in time and space.

Some of the participants, on the other hand, mentioned effective teacher educators' pedagogy in relation to professional development programs as teacher educators should be life-long learners, including updating themselves periodically on strategies, methods, and techniques of teaching and learning. Others also noted their conception of teacher educators' pedagogy as teacher educators who are committed to the student teachers' success and have positive and gender-sensitive teacher-student relationships with student teachers, as represented by one of the respondent's notion as;

> Effective teacher educators are characterized by their commitment to work collaboratively, to devote their time and effort towards shared responsibility, their readiness to carry out responsibilities, their open-mindedness, and their readiness to learn from others in positive and gender-sensitive teacher-student relationships (PHo, 6).

Moreover, some of the participants described the pedagogy of teacher educators as a dimension of teacher educators' effect, which is characterized by a purposeful commitment of the teacher educators.Accordingly, teacher educators' pedagogy revolves around the concept of teacher educators' competency in terms of their subject matter knowledge and professional skills, including using various learner-centered methods, assessment techniques, and professional ethics.

The other approach that emerged from the participants' responses under this theme was the applied science approach. As discussed in the previous sections of the present study, according to

this conception, student teachers learn theoretical courses that teach them foundational knowledge pertaining to education in the classrooms of the college through lecture methods and practice it in schools during the practicum course.

In support of this, participants mentioned the following:

> To me, it is better when pre-service teachers learn theories of teaching first and learn in their classrooms and then practice outside to improve their skills. As the teacher-educator is the primary actor in teacher-educator pedagogy, he/she needs to be tactful, effective in subject matter and methods of teaching, active, creative, honest, educated, and responsible so that he/she can equip the student teachers to teach effectively (PBo, 86).

Other participants described the pedagogy of teacher educators as follows:

> Teaching about to teach is nothing but teaching how and what to teach in order to have pre-service teachers apply it in practical ways (PHa, 38).

The teaching-learning strategies such as lectures, direct instruction, and micro-teaching were reported by some of the participants as their conception of teaching in teacher education pedagogy. Accordingly, these participants conceptualized the ways the student teachers learn by simply receiving information passively provided by the teacher educators as the only information they need to learn. They noted that student teachers learn best when an appropriate level of theoretical knowledge is imparted. For example, among their explanation,one of the participant's views was displayed as follows:

> The best way in which student teachers learn is through theory-based classroom learning followed by practicing those theories and reflecting on them. It needs to be based on equipping them with subject matter knowledge, teaching methods, and contents for practice.Thus,it needs to provide a variety of methodologies based on their individual differences and interests (PHo, 27).

According to the Association of Teacher Educators (ATA, 2006),in order for teacher educators to impact the profession, they must successfully model appropriate behaviors in order for those

behaviors to be observed, adjusted, replicated, internalized, and applied suitably to students of various ages and learning preferences.

One of the participants described as:

> Offering lessons and practicing according to the level, ability, and interest of the learners; introducing different types of teaching methods and classroom management strategies for learners that can equip them to be professional teachers; and providing opportunities for their critical observations of their communities and environments that make them learn from it could distinguish effective pedagogy in teacher education (PBo, 28).

In line with this, otherparticipant also described similarly as:

> A teacher educator should be able to identify and use the most appropriate strategies, methods, and techniques based on the nature of the subject matter or content of the lesson so that pre-service teachers will be able to learn both the strategies and the content intended (PHo, 8).

Participants also spoke of the conception of teacher education pedagogy in which a teacher-educator is expected to be professionally dedicated to working hard for students' success, as evidenced by one of the participant’s idea as:

> Teacher educators pedagogically show commitment, work collaboratively, have self-discipline and effort towards shared responsibility, and are open-minded and ready to learn from others (PBo, 86).

In teacher education, to see individuals as active agents in making their professional identity, teacher identity approach should have a room, as exemplified by a report of one of the participants as:

> Teacher education pedagogy should treat students with care and respect, provide clear explanations, use varied instructional techniques, provide significant information, provide immediate and frequent feedback, and communicate at the level of all students in the class so that the learners can follow him or her (PHo, 94).

Beyond these, teacher educators conceived teaching in teacher education in terms of their professional identity as committed and skilled in new technologies to connect innovation to their new generation, which shows their view about the value of technology-based learning:

> Effective teacher education pedagogy is related to a teacher educator who loves his or her profession and is committed and skilled in new technologies to equip his or her student teachers and empower the student teachers to be autonomous (PHa, 16).

Others also reported direct instruction as the main characteristics of teacher educators' pedagogy, as to impart professional skills and knowledge to the student teachers in the sense of empowering them in their professional development. It was complemented by the participants' quotes as:

> A teacher-educator, in his or her teaching, offers lessons theoretically according to the level, ability, and interest of the learners. He/she also introduces different types of teaching methods and classroom management strategies for learners that can equip them to be effective teachers (PHa, 28).

In every case, as depicted above, teacher teaching about teaching was defined as ensuring both theoretical and practical training and education in a holistic manner in the sense of empowering student teachers in all-round professional development.

Interview participants were also conversed with the guiding question, "How do you conceptualize the pedagogy of teacher education?", and the themes applied science approaches, and competence or performance were emerged as their conceptions of teacher educators' pedagogy.As discussed in the literature part of the present study, these themes are grouped under application of theory. The participants also replied that they teach the student teachers theory via lectures before their practical school experiences. They explained as that teacher educators' teaching in teacher education pedagogy was as a theory - practice approach rather than allowing student teachers to have pedagogical practice and reasoning (guided practice) experiences. As discussed earlier, this kind of conception of pedagogy is known as applied science approaches. In this regard, one of the teacher educators (TEr, 1) elaborated that teacher education pedagogy in colleges of teacher education was understood as that student teachers learn theories dominantly by the teacher-led methods that would be practiced in the schools during practicum.Their

practice, as he extended, is evaluated after they return to college. The participant's notions were quoted as follows:

> The conception and, as a result, the practice of teacher educators' teaching in teacher education pedagogy in our college are theory-to-practice approaches. Teacher educators have to impart knowledge and skills of teaching to the student teachers through teacher-led methods so that they can practice them in their schools.

Adding more, TEr 1 portrayed the fact more beautifully as:

> Even as we observe during the practicum supervision, it is less likely to find student teachers who can implement at least sufficiently the theory he/she learned in college. It needs student teachers' critical thinking, reasoning, and acting skills and abilities for the theory-practice model. It also needs teacher educators' beliefs and their responsibility for what and how all student teachers learn.

According to Robinson and Jancic Mogliacci (2019), this type of conception is termed an applied science approach. In this kind of learning, in addition to the low level of students' engagement and their passive listening, power is primarily with the teacher educators. Students learn through responses to environmental stimuli by reacting to reinforcements and punishments.

There was also another conception of teaching with the implication of competence or performance approach. As participant TEr3 noted, some teacher educators demonstrate professional competencies in teaching their student teachers. He extended his notion on this conception as that teacher educators plan their works, equip themselves with good subject matter and knowledge of pedagogy, support and mentor their student teachers toward quality teaching, and use their time properly. In the extended attempts of the interviewer to investigate the latent feelings and understandings of the teacher educator towards his view of teacher education pedagogy, he (TEr3) noted passionately the following:

> A teacher has to equip his students with knowledge, skill, and attitude based on the course of subject matter and methods of teaching via lecture-dominated methods. There is no question concerning the necessity of knowledge of both the subject matter and pedagogy. For example, we can see that teachers who graduated with

> knowledge of both subject matter and method of teaching are more effective than those who graduated with knowledge of subject matter only, as they are observed being challenged to transmit their knowledge to their learners.

One of the participant's (TEr 2) responses was also quoted similarly as:

> In our college, student teachers learn the theory first through the lecture method, and then they practice it in the real world. Before their practice in schools, candidate teachers need to be equipped with knowledge of subject matter and pedagogy that promotes their learning progress or cognitive development. Although all approaches have their strengths and weaknesses, in teacher education, direct instruction followed by practical activities outweighs them.

The above teacher-educator's explanation is related to the conventional teacher-led conception of teaching. It implies that teacher educators conceptualize that candidate teachers learn best to teach when they are imparted the knowledge base of the profession in a teacher-led method of teaching. They believe that focusing on the learning progress or cognitive development of each teacher candidate based on both subject matter and pedagogical knowledge fosters effective learning to teach. This is aimed, as reflected by the participants at acquiring the professional knowledge that would help the candidates learn practical skills in the school environment.

Realistic (learner-centered) conception of teacher educators' pedagogy

On the other hand, some teacher educators to the open-ended items of questionnaires replied that they teach their student teachers through reflection of their own practice.

To quote some of the participants' concerns:

> As we are producing professionals, prospective teachers learn best to teach when teacher educators use pedagogy that focuses on doing things practically in a resource-intensive environment rather than sticking to mere teaching theory (PHa, 14).

> After supporting them to observe phenomena in the school context, we usually proceed to teach them to use practical skills to instruct themselves. i.e., practice integrated with theory to enrich their own learning (PHo, 22).

> It is better to teach them through regular microteaching and intensively supervised practice, which encourages them to develop their own theory (PBo, 51).

> They learn effectively when they are practically engaged in the activities of learning for teaching and demonstrate the ways in which they are going to teach practically in their real school environment (PBo 53).

> Teaching about to teach is characterized by the teacher-educators' commitment to work collaboratively, to devote their time and effort towards shared responsibility, their readiness to carry out responsibilities, their open-mindedness, and their readiness to learn from others (PHo, 6).

> In my opinion, a teacher-educator is expected to be professionally qualified, competent, and dedicated to working hard for students' success. This necessitates the teacher-educator conducting research to examine or reflect on his day-to-day performances in order to address the gaps (PBo, 47).

As demonstrated by the participants more, the reflective practice of teacher educators plays an important role in teacher education pedagogy, including:

> Teacher education pedagogy is viewed as practically intertwining theoretical lessons with appropriate active learning strategies so as to fully address the objective of teacher education (PHa, 33).

Teacher education pedagogy is so complex that it needs the teacher educators' reflective practical conception to deal with the intricacies and to evaluate their duties in relation to those difficulties.

Participant PHo1 also defined an effective way of learning to teach well as that by connecting the lesson with students' prior knowledge and life experience, while making the lesson authentic, giving them enough opportunity to practice, assisting students in becoming independent teachers

and shifting the focus of the assessment from exams to performance.Another participant teacher educator, PHo 94 was able to identify the key concept in effective teacher education pedagogy: constructing knowledge of teaching from practical learning in his or her college classes and learning from the practicing schools. Accordingly, by giving students feedback on their reflections of their practical teaching experience, authentic classroom settings become the greatest places for student teachers to learn how to teach. Similarly, PH 54 added that by connecting what they have studied to what they will teach, student-teachers at teacher education colleges can acquire the skill of teaching.

The other participants shared the ways student teachers learn based on their prior knowledge and motivation, as well as the support and facilitation provided by the college of teacher education. As a result, student teachers learn best if they live on campus and get enough basic needs like food, shelter, and security (PHo 37). Similarly, the other participating teacher educator, PHo 14, had to say, "They learn best to teach when the best learning experiences, supported with technology, and necessary resources are created". Moreover, the other participant, PHo 38, added that by facilitating conducive learning conditions to enable them to learn by their own effort.
All the above quotes and narratives on the emerging theme emphasized that teacher educators conceptualize learning to teach as helping student teachers regularly practice teaching and encouraging them to develop their own theories from their exposure to the school environment. This is consistent with constructivist pedagogy thinkers' belief that individuals create their own new understandings through an interaction between what they already know and believe (Melrose, Park, & Perry, 2013). Similarly, in postmodern society, teaching is understood to be a contextual, reflective, and cooperative activity that calls for instructors' judgment in interpreting practice situations in a setting that is easy to use and supported (Tubbs, 2005; Schumck, 1997). This notion of teaching is not at all technical that educating teachers how to follow a set plan.

Discussions with the interview participants, with the guiding question, "How do you conceptualize the pedagogy of teacher education?" were also the sources of the theme reflective approaches the analysis as their conceptions of teacher educators' pedagogy.Some participants, on the other hand, didn't abstain from exposing that there are elements of realistic conception of teacher education pedagogy among the teacher educators. These teacher educators conceptualized teaching student teachers to learn about teaching by reflecting on what they

learned from their practice-based learning. One of the participants, TE4, discussed this notion, saying that sometimes teacher educators were allowing student teachers to present what they learned from the school environment about learner management mechanisms, the delivery of lessons, and the approaches to teaching by the mentors (schoolteachers) after they returned to the college. The discussant also notified that some teacher educators were allowing their student teachers to present their project work and conduct microteaching.

In this regard, TEr 4 justified his understanding focusing more on experiential learning as follows:

> The way teacher educators envisioned their work was that people's experiences should come first, because what they observe in the classroom should lead to the theory for their subsequent practice, i.e., a practice-theory-practice approach. Their school learning can sometimes lead to theory. People's experiences based on their observations should come first and lead to theory, but they should also go to practice so that they can find any gaps they have. It is better to start by enhancing their prior knowledge.

Participants also asserted that student teachers learn best to teach through approaches that raise their interest in learning. It is undoubtedly a clear matter that when our interest is aroused in something, we enjoy working hard at it. In teacher education, interest matters for academic achievement since it stimulates learning and directs career and academic paths, and contributes to a more engaged and motivated learning experience for the student teachers. In this regard, the participant (TEr 4) noted more that good teaching has everything to do with compassion and humility by helping students feel that a subject can be mastered and encouraging them to try things out for themselves and succeed, as displayed by:

> Preparation for teaching has nothing to do with making things hard or frightening student teachers. It has everything to do with compassion and humility and trying to help them feel and be encouraged to try things out for their learning and teaching.

Coupled with this, teacher educators need to craft different varieties of methods of teaching that enable student teachers to be interested in and understand the material. Accordingly, teacher

educators have to predominantly experience the ways of different methods of teaching in order to create an enabling environment to learn teaching effectively. It also needs teacher educators to set high standards and articulate clear goals for student teachers. This involves knowing what students understand and then forging connections between what is known and what is new. Student teachers should know ahead of time what they will learn and what they will be expected to do with what they know.

TEr 5 also expressed his conception of learning to teach in that teacher candidates learn best to teach when they are dominantly practicing teaching beyond learning theoretical knowledge of teaching. In addition, the other interviewee noted that "teacher candidates learn to teach effectively when they practice and construct knowledge about what they learned in their classrooms. They have to learn both theoretical knowledge and practical skills in their classroom as well as in practicum schools". Moreover, he added that teacher candidates have to learn by practicing what is in the schools, such as:

> The best way to learn to teach is to make the school environment part of the classroom environment. That means teacher candidates have to learn by being exposed frequently to the school environment, in addition to the existing practicum program. They have to exercise how to teach contents to manage the learners as well as the classrooms effectively. It is true that theoretical knowledge is important, but they also have to learn how to manage class, students' behavior, how to teach, and so on.

Participant TEr 5 asserted that student teachers learn best to teach through approaches that engage them in active and explicit practical work. He also added that teacher candidates learn most about teaching when they are engaged in not only practical teaching but also in reasoning out or reflective teaching through an integrated theoretical knowledge of teaching with the likely practical experiences of school environments.

However, the majority of teacher educators' position on the discussion point, indicating their conception of preparing teachers by merely equipping them with the "what" and "how" of the professional knowledge stipulated above. For this purpose, as the response shows, teacher educators need to use and the candidates have to learn through the conventional teacher-centered

methods of teaching, like lecture methods, direct instruction, microteaching, etc. It is also learnable that teacher educators have a strong conviction that learners can only learn what is intended to be learned through only teachers' teaching potential. It was supported by one of the participants' (TEr 1's) explanation as quoted below:

> In teacher education, although we are not experiencing it in classrooms and catchment schools, it is more beneficial to combine theoretical and practical exercises. It implies that putting teacher candidates through hands-on experiences that align with their theoretical background would improve them as educators.I think the modular approach that the candidate teachers are learning makes them tend to learn only.

The findings based on all the instruments (questionnairesof closed-ended items, questionnaires of open-ended items, and interviews) infers that teacher educators have conception of pedagogy as an application of the theory, which is based on imparting a set of skills (competencies) that each teacher needs to acquire (Pantić & Wubbels, 2010).Accordingly, the teacher educators conceptualize teaching in teacher education as merely transmitting knowledge to the student teachers without considering working with the student teachers who do not understand the internal logic of their content.

4.4 Teacher educators' pedagogical practices

The quantitative data for this theme was obtained through survey questions of Likert-Scale with 9 items that quest teacher educators the type of instructional activities they use. The survey was split into two approaches of transmissionist (the first three items) and constructivist items of teacher education pedagogy. Based on that, the teacher educators' pedagogical approaches on their teaching were analyzed descriptively as follows:

Table 9:Teacher educators' transmissionist pedagogical strategies

No	You use	1(N)		2(S)		3(A)		4(O)		5(VO)	
		f	%	f	%	f	%	f	%	f	%
5	Teacher educators deliberate showing of specific teaching strategy.	8	3	57	24	80	34	69	30	20	9

7	Didactic presentation where the lecturer is seen as the expert disseminating the knowledge.	5	2	39	17	82	35	78	33	30	13
10	Direct instruction that is led by the teacher educator regardless of quality.	24	10	36	15	67	29	76	33	31	13
	Sub Total	37	5	132	19	229	33	223	32	81	12
	Grand Mean										3.3

As revealed in the table 9above, the percentages of the participants on the transmissionist items of the questionnaires rated as “never”, “sometimes”, “average”, “often”, and “very often” are 5%, 19%, 33%, 32%, and 12% respectively. Merging “never” and “sometimes” “less than average” and “often” and “most often” as “above average” will help us to conclude the response in a more manageable way. In addition, the grand mean of the scale transmissionist practices is 3.3. Accordingly, teacher educators’ practices of transmissionist pedagogical strategies are summarized as 24% below average, 33% average and 44% above average, showing that majority (44%) of the teacher educators use the transmissionist pedagogical practices often. Likewise, as shown below, the percentages of the participants of the constructivist items of the questionnaires rated as “never”, “sometimes”, “average”, “often”, and “very often” are 8%, 26%, 29.3%, 26.3%, and 10.4% respectively.By a similar analysis, their constructivist pedagogical practices are summarized as 34% below average, 29.3% average and 36.7% above average, showing that majority (36.7%) of the teacher educators uses the constructivist pedagogical activities often and the grad mean of the scale is 3.

Table 1: Teacher educators’ constructivist pedagogical approach

No	**You use**	**1(N)**		**2(S)**		**3(A)**		**4(O)**		**5(VO)**	
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1	Teaching systematically both from particular contexts and from more generalized theory about teaching	14	6	81	35	76	32	53	23	10	4
2	Giving opportunity to go into their field to collect and correlate data on a specific topic.	39	17	76	32	61	26	40	17	18	8
3	Giving them opportunities to teach a small portion of a lesson to a small group.	15	6	46	20	79	34	64	27	30	13

6	Conducting debates, discussions, experience sharing etc. on a particular subject.	29	12	70	30	61	26	58	25	16	7
8	A form of learning in a small group so that they work together to maximize their own and each other's learning.	6	3	37	16	72	31	74	32	45	19
9	Helping them to construct their own meaning about teaching through practice.	11	5	54	23	63	27	80	34	26	11
	Sub Total	114	8	364	26	412	29.3	369	26.3	145	10.4
	Grand Mean										3.0

Comparing these two scales' ratings and grad means, the dominant number of teacher educators use teacher-led pedagogical strategies, as the differences between the percentages (44% - 36.7% = 7.3%) and the grad means (3.0 – 3.3 = 0.3) favor it. As observed above on table 10, they employ instructional strategies such as lecturing, didactic presentation, and direct instruction.

To see whether this difference in both scales is significant or not, the Wilcoxon signed-rank test was used. As a result, as shown in the following table, the survey data of the Likert scale of two sub-scales that were split into transmissionist and constructivist approaches was analyzed by Wilcoxon signed-rank test to investigate the significant difference between the two related groups. It was investigated about the change that exists in scores of the two sets of conceptions of both transmissionist (TA) and constructivist approaches (CA), as shown below.

Table 2: Summary of teacher educators' pedagogical approaches

Ranks

Wilcoxon signed rank		N	Mean Rank	Sum of Ranks
CA - TA	Negative Ranks	128[a]	112.71	14426.5
	Positive Ranks	76[b]	85.31	6483.5
	Ties	30[c]		
	Total	234		

a. CA < TA
b. CA > TA
c. CA = TA

Test Statistics[a]

CA - TA

Z	-4.719[b]
Asymp. Sig. (2-tailed)	0.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Descriptive Statistics

	N	Mean	SD	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
TA	234	3.25	0.73	1.00	5	2.66	3.33	3.66
CA	234	3.05	0.76	1.75	4.83	2.50	3.00	3.66

The ranks statistics table provides a comparison of the number of participants in both transmissionist and constructivist practice items. We can see from the table's legend that 128 more participants had transmissionist pedagogical practices than those with a constructivist practice of pedagogy. However, 76 more participants had learner-centered practices, and 30 participants were average. The meaning of the negative ranks is larger than that for positive ranks suggesting that values for transmissionist approach are generally larger than for constructivist approach. By examining the test statistics table, we can see whether these differences, due to teacher educators' pedagogical approaches, led to overall statistically significant differences.

Accordingly, from the test statistics, the differences of the two approaches (transmissionist and constructivist)of the teacher educator in teaching the teaching elicited significant change (Z = -4.71, p = 0.000). Therefore, teacher educators were significantly practicing a transmissionist pedagogical approaches in their teacher education pedagogy (Z = -4.71, p = 0.000).

Participants of the questionnaires were also forwarded their reflections in their written responses to the open-ended question that demanded them to list some of the most often used pedagogical strategies (methods and techniques) in their teaching and learning practices. Their responses were categorized under themes that emerged from the data, as presented in the following figure and table.

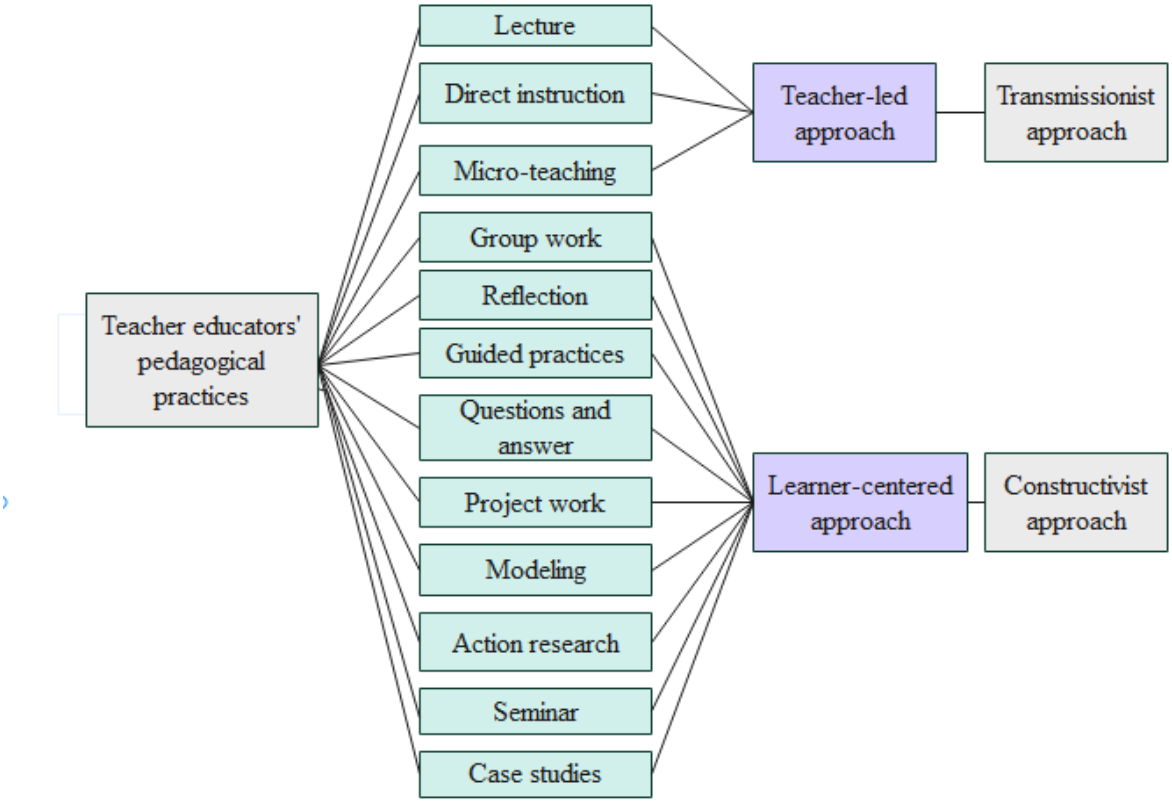

Figure 6: Teacher educators' pedagogical approaches

The data was thematized from frequently appearing data, as represented as follows:

Table 3: Teacher educators' pedagogical practice

Themes	Codes	Examples
Transmissionist approach	Lecture	Lecture, Lecture, Lecture!
		Lecture method, which is based on explanation, group discussion,
		Teacher centered methods like demonstration and lecture
	Direct Instruction	Direct Instruction, Lecture, and Demonstration
		Teacher centered methods like demonstration and lecture
		Conceptual change model, Demonstration, and direct instruction
	Micro-teaching	Micro as well as pear teaching
		Microteaching and Group Presentation
Constructivist approach	Group Work	Active Learning methods like cooperative learning followed by feedback

	Group Presentation and group discussion
	Guided practice and whole class discussions
	Practical works led by the teacher
Guided Practice	Guided practical works on the modeling role of the teacher educator
	Reflection based on simulation, role playing, debating, and journal
Reflection	Individual as well as group reflection based on project works
	Integrative and reflective inquiry
	Question and answering techniques
Q&A	Brainstorming by question-and-answer techniques
Project Work	Independent and group project-based tasks
	Presentation of field work
	Simulation on individual, pair, and group works
Simulation	Simulation and dramatization
	Individual activities curried out in class, home and in project manner
Independent work	Learners' individual work
	Treating learners individually
Modeling	Modeling of teacher educator to his learners about the practice of teaching particularly the effective methods of teaching
Action Research	Conducting research on critical incidents
	Research based teaching
Seminar	Seminar based cooperative learning individually or in group
Case study	Solving problems by case study technique

This is supplemented by the frequency table and its subsequent chart, as displayed as follows:

Table 4: Teacher educators' pedagogical practice

Themes	Codes	f	%
Transmissionist Approach	Lecture	164	53
	Direct Instruction	43	14
	Micro-teaching	10	3
Constructivist Approach	Group Work	40	13
	Guided Practice	13	4
	Reflection	6	2
	Question & answering	7	2
	Project Work	2	1
	Simulation	2	1

	Independent work	3	1
	Modeling	2	1
	Action Research	3	2
	Seminar	5	2
	Case study	3	1

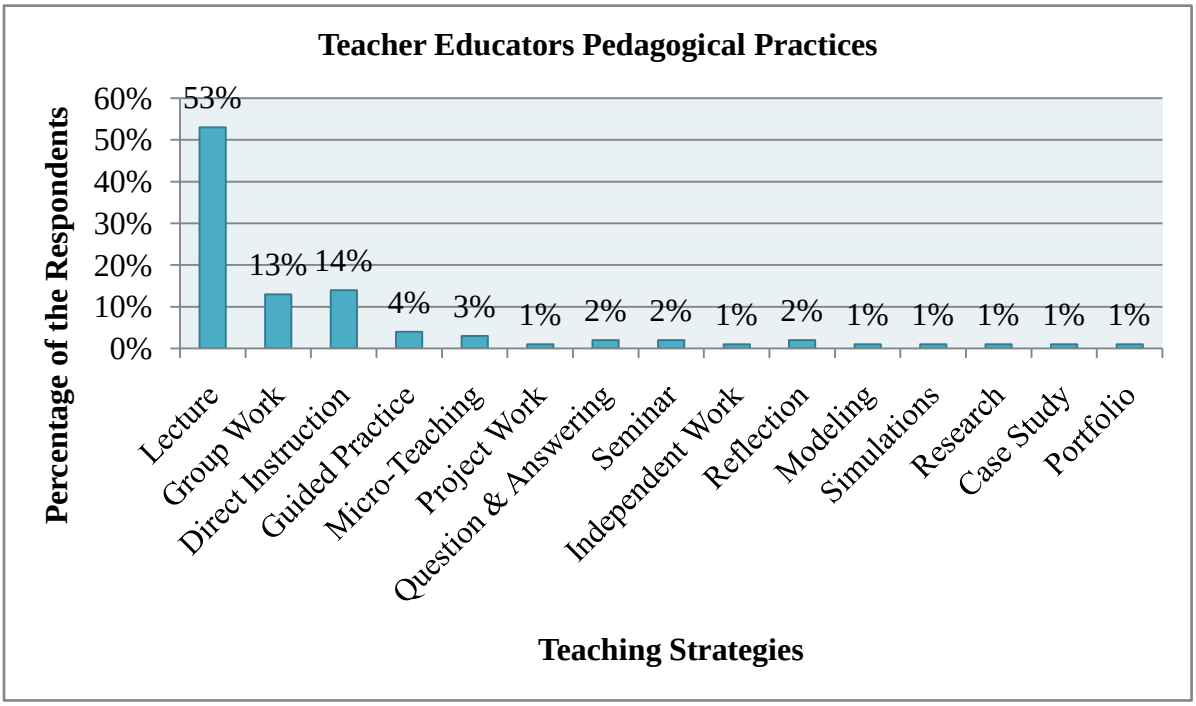

Figure 7: Teacher educators' pedagogical practices

As shown in the above figure 8, teacher educators reported that 164 (53%) use lecture, 43 (14%) direct instruction, 40 (13%) group work, 13 (4%) guided practice, 10 (3%) microteaching, 2 (1%) field/project work, 7 (2%) questioning and answering, 5 (2%) seminar, 3 (1%) independent works, 6 (2%) reflection, 2 (1%) modeling, 3 (1%) research, 3 (1%) case study, and 2 (1%) simulation. While adding up the three percentages, those rated as lectures, direct instruction, and microteaching give 70%, which means that transmissionist pedagogical practices were largely used. Again, adding up the rest also gives 30%, which means the extent of using constructivistinstructional techniques including questioning and response, seminars, solo work, modeling, field/project work, group work, guided practice, and reflection, research, case studies, and simulations is less when compared to that of teacher-centered pedagogical practices.

As the above reviews indicated, teacher educators are preparing their teachers mostly with transmissionist pedagogical approach. Consequently, they mainly employ instructional strategies such as lecturing, direct instruction,andmicroteaching.They proved about it by expressing their irritation with their state of implementing pedagogical strategies as "the most often used teacher education pedagogical strategy is the transmissionistlecture method, which is commonly known by the adage Chalk and Talk!" (PBo, 10, 13, 28, 36). Others also added, "As usual, the teacher dominated 1) lecturing, 2) lecturing, and 3) lecturing" (PHa 21).

On the same issue, another teacher educator said:

> Lecture is the most widely used method in teacher education pedagogy. But it would be better if seminars, cooperative learning, and guided practice methods were delivered (PHa, 10).

Participant, PHa 74, appeared to reflect on the existence of contextual factors that he usually observes, and those discouraged him from applying the reformed pedagogical strategies put forth as "the dominant pedagogical strategy used in the regions' colleges of teacher education is lecture; it is because most of the time student teachers are passive learners". This participant also shared the PHa 10's idea about the existing problem in the pedagogy of teacher education that is related to involving students in the actual classroom teaching and learning process. Particularly, he noted that "students" were not active participants in taking part in the process of learning to teach and that they were passive listeners.

The other teacher educator, PHa 44, stated the commonly observed pedagogical strategies practiced by some of the most experienced and motivated teacher educators as: "Lecture (often), group discussion (occasionally), questioning (occasionally), whole group discussions (occasionally), pyramiding (occasionally)". Adding more, "Actually, it depends on the content and the class. But I use the lecture method mostly because of the large class size" (PBo, 57). This participant further articulated a problem while stating that he is influenced to practice lectures. His response indicates that he has a conception of constructivist pedagogy, but due to the constraints that exist, most of the time he is practicing lecture.

On the other hand, some of the participants expressed their experiences of teaching as it needs to be a practically interwoven of both theoretical lessons and appropriate active learning strategies

so as to fully address the objective of the lesson. It needs, accordingly, the teacher educator's competence, as reported by one of the open-ended items' participants as:

> In my opinion, a teacher-educator is expected to be professionally qualified, competent, and dedicated to examining or reflect on his day-to-day performances through research in such a way as to address the gaps in his or her pedagogical practices (PHo, 77).

Concurrently, effective teacher educators are characterized by their commitment to work collaboratively, relate daily learning to practice, use problem-solving techniques of teaching, and research-based teaching methods that help totranslate knowledge into meaningful practices, as noted reported by one of the following participants as follows:

> A teacher-educator has to be resourceful, technique-full, managing, honest, active in subject matter and communication, and a researcher, letting the student teachers learn on their own by giving more tasks besides classroom learning (PBo, 77).

The pedagogical practices of teacher educators were found dominated with the teacher-centered approach of transmissionist practices. The approaches were justified in terms of the applied science and competence or performance of teaching with lecture and direct instruction format through which the learners were simply receiving the information passively. Its aim was focusing on the learning progress or cognitive development of each teacher candidate.

Accordingly, student teachers learn to teach the theories first through the teacher-centered methods and then they practice it in the real world. They believed that the best learning occurs for student teachers when teacher educators provide a suitable level of theoretical knowledge prior to practical learning and adjust assessments accordingly.They also conceived that before the student teachers are exposed to the practice environment, they have to master the theoretical knowledge needed for their teaching in primary schools. This implies that, teacher educators' pedagogical practice is shaped not only by their conceptions of application of theory in learning to teach but also by their dichotomized (isolated) conception of both theoretical knowledge and practical reasoning of teacher education pedagogy. Likewise, their conceptions as well as their practice of teacher education pedagogy reflect the commonly held conceptions and the related practice, which is still prevalent in teacher education.

Furthermore, some of the participants appeared to disclose that they didn't possess the reformed conceptions of teacher education pedagogy and reflected that student teachers learn best to teach through constructivist approach. These participants reasoned out their opinion in that equipping student teachers with the knowledge base of teaching requires effective reasoning out or reflecting on their teaching to create a good match between the content of teaching and its practicality.

Participant teacher educators were also interviewed to discuss on their pedagogical practices (methods and techniques) they used in their preparation of quality teachers. As a result, four pedagogical strategies: lecture, questioning and answering methods, cooperative learning methods, and project works, were strands thematized from the discussion as they were mostly employed in the preparation of teachers. As discussed in the literature part of the resent study, while lecture method s categorized as transmissionist approach, questioning and answering, cooperative learning, and assignment methods of teaching are categorized as constructivist approach of teaching and learning in teacher education.

Accordingly, participants, for example (TEr 2), elaborated on the teacher educators' use of transmissionist practices as:

> To tell the truth, teacher educators use the traditional lecture approach to teaching, starting from the beginning to the end. It would be better to give learners opportunities for practical activities. But, there are challenges to practicing effective teacher education pedagogy.

The other participant, TEr 3, addedabout the methods of the teacher educators' use of lecture, including his actual classroom teaching practices. He admitted that teacher educators in their classrooms tend to apply the method of teaching that they had been taught in their pre-service teacher education. His explanation was quoted as:

> Teacher educators use a theoretical approach, the lecture method of teaching. It is commonly used because it is the method, they learned in their pre-service teacher education. A student-centered approach is believed to be good and is expected to be

> used by teacher educators. But the problem with this approach is that it is time-consuming. For example, in cooperative learning, the allotted 50-minute period wouldn't be feasible for the group to discuss, summarize, and reflect. Therefore, very few committed teacher educators, particularly those whose subject suits, may use it rarely.

Participant TEr1 also stated the usual practice of the teacher educators, by relating the response he gave during his first interview question, as follows:

> As I previously stated, teacher educators primarily use lecturing.While some teacher educators employ hands-on learning in laboratory settings, others employ question-and-answer sessions. The traditional approach, in which student teachers acquire theories and subsequently apply them in their practicum, is utilized by the majority of teacher educators.

Moreover, as summarized by the following quotation from TEr 3, teaching in teacher education tends to be conceptualized as simply telling;

> We usually present the theory of content and demonstrate how to apply it at the primary school level. We had to observe how they could use the theoretical material from the theoretical lecture during the practicum.

On the other hand, participants had also revealed that sometimes they employ some elements of constructivist approach in their pedagogy. One of the participants, TEr 4, explained that after he presented the objective of the lesson, he proceeded to the group tasks, to attain the specified purpose of the lesson:

> When I present a lesson, I usually emphasize presenting the objectives of the lesson because student teachers have to stress the why of the topic before they proceed to their practical activities. Then, I go to group discussions after the student teachers understand what is expected of them to achieve the lesson's objective.

These are an indicators of the teachers' educators tending towards constructivist approach in which student teachers actively engage and reflect on their practical works learned in groups together to maximize their own and each other's learning (Johnson, D.W., 2009).

TEr4 added, stressing the practice of the cooperative works strategies, stated that the teacher educators, particularly in science streams, usually give the student teachers assignment or activity to be completed in class or labs so that they demonstrate what they grasped a concept.

> If you see our method of teaching, as mostly science, we make our students to be guided to the practical; there are practical courses, and also non practical courses for that we teach them connecting with the reality.

As an effort to make and gauge the participants' understanding on the point of discussion through probing on teacher educators employing of questioning and answering methods over the course of the interviews, one of the subjects TEr1 responded as follows:

> Sometimes, we invite the pupils to participate as they begin the lesson by questioning and answering. Some kids are receptive, whereas others are active and dominant. However, its function was to continue (review) the previous lesson, to interject discourse to elicit collaboration from the students, and to guide the students' observations and reflections.

However, one of the participants, TEr 5, pointed out that some teacher educators forward questions and make the student react for the sake of, may be just for the singularity of the lecture method. The participant emphasized that, dominantly, teachers are being observed while, instead of group formation, forwarding questions and making the students interact and react after they deliver the lesson.

Almost all of the participants in the survey proposed that the teacher education pedagogical practices were not according to the standards of the teacher educators' profiles. They made a convincing case that the majority of teacher candidates were taking classes using the prevalent traditional transmissionist approaches, with little practice given to them by teacher educators as well as by the teacher candidates themselves. The way these participant teacher educators viewed their pedagogy seemed to be derived from their own feelings of dissatisfaction with their

observations of the actual ways of teaching in colleges of teacher education.According to these tactics, which were previously covered in the current study, student instructors are expected to practice in classrooms during the practicum phases after learning theory through traditional lecture-based instruction in college classrooms.

Consequently, participants' responses to their practice of teacher educators' pedagogy in relation to all texts and contexts are highly debatable, as teaching is primarily associated with simply talking about teaching. As discussed earlier, teacher educators conceptualized learning to teach as well as teaching about to teach as an application of theory. As it is unfeasible to gather from the uncommitted, a teacher-educator approach to practice was expected. Teaching about teaching must, as was previously mentioned, make the pedagogical reasoning—which is essentially distinct from that of general education, where teachers solely teach the subject matter—clear, explicit, and meaningful for students.

Likewise, student teachers had raised significant issues concerning the teacher educators' pedagogical practices during the interview discussion with them. The purpose of the interview with the student teachers was to get their opinion on the pedagogical experiences of their teacher education. Theywere asked to describe the ways the student teachers learn to teach, the most important learning experience in college, importance of the learning experience, frequency teacher educators' modeling the student teachers a lesson plan or a teaching technique, the most frequent activities student teachers carried out or conducted in college, and regularity they go to schools to learn.As a result, the data, based on major points raised during the interview with the student teachers pertaining to the guiding interview questions, were transcribed and organized as follows:

The ways student teachers learn to teach

Interviews with the student teachers about the ways they learned to teach have pointed out some indicators of both the conceptions and practices of teacher education pedagogy. As evidenced by the student teachers' voices below, it has been discussed that the ways they learn to teach are related to the conception of the application of theory or to the transmissionists practices of pedagogy, as discussed in the previous parts of the present study.

> We learned to teach by being exposed to mastering the subject matter knowledge, method of teaching, and contents of practices. Teacher educators offer us no choices about how to teach or the alternative techniques of teaching that we can use to teach a particular content in different contexts (ST, 8).

Discussion with the participants also revealed that, though there are elements of participatory approaches in the pedagogy of the teacher educators, little emphasis was given to the teaching techniques of teacher education pedagogy by the teacher educators. The teaching approaches that teacher educators follow show their adherence to the teaching techniques of school pedagogy rather than the pedagogy of teacher education, as evidenced as follows:

> Teacher educators tell us to follow participatory approaches to teaching, such as group work, question and answer methods, microteaching, etc. rhetorically, but practically, they insist on teacher educator-centered methods of teaching such as demonstration, direct instruction, and lecture methods of teaching (ST, 12).

Similarly, providing the student teachers opportunities to practice teaching and to reflect on the practical activities is believed to be a better strategy for learning about teaching and is considered one of the two sides of a coin in teacher education pedagogy. However, as evidenced by one of the student teachers' viewpoints as follows, the teacher educators in the college classes do not encourage the student teachers to practice teaching.

> With the exception that some teacher educators provide us group works to work activities in groups and to present our works to the classes, most teacher educators provide little opportunity to student teachers to practice and apply the knowledge and skills of teaching they are learning individually in familiar situations continuously. Practices of teaching, in general, are given to the only practicum course, which was programmed in the last semester of the final year (ST, 13).

Likewise, student teachers discussed that teacher educators do not ensure all student teachers are learning and do not keep them engaged throughout a lesson (ST, 10). Moreover, participant student teachers were aware of the assessment techniques that the teacher educators used to ensure the learning of all student teachers, as verified as follows:

> Teacher educators assess if student teachers are learning key knowledge and skills from the courses they are teaching. They do not identify each student teacher's level of understanding and their needs and teach them accordingly. Moreover, in the cases of assignments and project work, they do not attempt to check whether or not the work was his/hers. Individuals and their contributions in their respective groups were not verified, as most of the time, student teachers tend to copy each other or elsewhere. Moreover, teacher educators do not probe individual student teachers' responses—especially incorrect ones—to gauge each one's comprehension of the subject matter under discussion (ST, 11).

Since the role of technology-based instruction is growing as education becomes more individualized and time- and place-independent, it calls for education institutions to enable their teacher educators to instruct their student teachers using technology-based instructions. As colleges are higher institutions, they are expected to possess and use such technology resources to help pre-service teachers raise the motivation necessary to boost their academic performances. Regarding this way of learning, the researcher asked the interview participants to explain the ways of their learning or the opportunities that prevail to implement instructional innovations in their colleges. One of them had said the following confidently:

> Teaching by supporting different technology-based methods has become important these days. In our colleges, the non-availability or inadequate provision of instruction through technology-based instructional approaches, such as using computers and the internet, hindered us from learning effectively. Moreover, teacher educators are not seen while using innovative instructional media (ST, 10).

The most important learning experience that college student teachers had

Student teachers were asked to discuss the most important pedagogical experiences they had as a result of their stay in the colleges of teacher education. A student teacher (ST, 4) elaborated concisely on his college experiences by stating, "Equipping us with the knowledge of teaching using lecture methods of teaching could be mentioned as an experience we had in the classes of the college. Occasionally, some teacher educators provide us with activities to work on in groups and to present to the class in the presence of our instructor. This can teach us the use of

cooperative learning strategies, making learning active, the practice of continuous assessment, and the use of instructional materials to make learning concrete and long-lasting." However, as could be inferred from the researcher's observations, the group work of teacher educators' pedagogy was not effective as the assignments given to groups were performed by only those student teachers who were relatively high performers. Similarly, the other student teacher (ST, 2) had to reflect his opinion that "experience sharing and developing knowledge of the concept of subject matter followed by practicing in groups were some of the most important experiences learned from the colleges."

The other most important learning experience in college was that teacher educators' demonstration of their own personal passion for the subject they were teaching. Learning objectives, are also identified and occasionally shared with the student teachers at the beginning of courses, were also considered animportant learning experience in college.

Student teachers were also families to the pedagogical support that would have been given by the teacher educators, as demonstrated as follows:

> Some teacher educators acknowledge positively what students have learned and praise the efforts that they have made. However, most of them do not respond to incorrect answers sympathetically and do not encourage such students by scaffolding subsequent attempts to answer (ST, 12).

As evidenced by one of the interview participants, although there is some variation in the nature of learning tasks, the teacher educators often develop a factual knowledge and procedural skills rather than conceptual understanding. It has given little emphasis to developing a conceptual understanding of learning to teach (ST, 11).

The other most important learning experience that the participant student teachers forwarded during the interview as they experienced in their pre-service education was school experiences through the practicum courses. Student teachers discussed that, they had the most important learning experiences of observing the school environments, learning from their mentors, practicing the actual teaching as well as other general pedagogies in practicum courses, as articulated nicely by the participants as follows:

> Practicum courses for school experiences were the most important learning experience we had in colleges. We go to schools to learn from mentors and from the authentic schools environments by observing the school environment, by work under experienced teachers, and by conducting an independent teaching (ST, 6).

The other student teacher had to reflect similarly on the most important experiences he had as follows:

> We visit the physical setting and observe the actual working conditions of the schools; we learn from mentors about lesson planning, lesson delivery, preparing instructional materials (aids) and evaluating text books. Similarly, we also learn from our mentors about classroom management, lesson presentations, assessment, and providing feedbacks. In the final course of the practicum, we teach a normal classroom independently, after we prepare ourselves and our lesson plans with the help of our mentor's lesson delivery observation (ST, 4).

On probing of how they were assisted to their school experiences, one of the interview participant student teachers had to say the following:

> Before we go to school observation, we consult instructors assigned to assist us and they explain to us how we do all tasks and activities in the module. In the school, practicum coordinators and mentors help us and guide where and how we will get the information we deserve (ST, 12).

Assessment mechanisms were also the other important experiences they had in their school experience courses:

> In all the practicum courses, we prepare the report and are ready for reflections. Although, each practicum courses have different assessment mechanisms, our college supervisors, mentors of the schools and our peers evaluate us based on our portfolio reports of our school experiences and our oral reflections. Finally, our teacher educators compile our assessment results and reach on his/her decision. Feedbacks will be given sometimes by peers, school mentors, and college supervisors (ST, 7).

Moreover, the goal of practicum was designed to ensure the creation of communities of practice and reflective teacher education pedagogy. However, as discussed above, in the practicum courses, the student teachers learned by the prescription of the transmissionistspedagogyof both mentors as well as the teacher educations. The student teachers were learning about teaching as they prescribed by the guides, rather than building their knowledge in a community of reflective practices.Thus, practicum activities should serve as a platform for creating supportive learning and practice communities and encourage student teachers to develop their professional identity.

In general, student teachers' learning experience in both their college and in practicum schools was discussed as the prescription of the transmissionistspedagogy. This in turn infers that the teacher educators' do not use the teacher education pedagogy that demands them to follow the reflective practices realistic conception, based on both the theoretical notions of teaching as well as their practical activities.

Student teachers highlighted the significance of the learning experience, saying that in order to be effective in their upcoming teaching, it was necessary to create an environment that supports the use of various teaching approaches. They explained their claim that the majority of the knowledge and skills they acquire about teaching come from their teacher educators' presentation of those skills in a way that is more akin to general education. One of the student teachers (ST, 1) mentioned that "teacher educators' pedagogywas very essential for us to practice teaching in schools effectively and to become effective future teachers. When our teacher educators impart us knowledge of subject matter and knowledge of pedagogical skills, we learn what and how to teach." Another student teacher (ST, 3) emphasized that "the teacher educators usually present their lesson about learning to teach and assess based on what we learned. It helped us practice teaching based on the theories we learned in our college classrooms for the practicum courses." According to the other participating student teacher (ST, 5), "We can learn from our teacher educators the professional identity, commitment, and dedication so that we can work hard for our students' success through experience sharing and knowledge construction on the concept of subject matter, followed by self-practicing and practicing in groups."

Student teachers conceptualized practicum as the most important learning experience in college, if practiced effectively, as they get opportunities to learn from the authentic school environment and from theirreflective practicesof teaching. As discussed previously, student teachers learn best

when they are truly engaged in what they are intended to learn and whenget the opportunity to explore, debate, discuss, examine, defend, and experiment with the concepts and skills they are ready to learn.

Teacher educators' modeling of a lesson plan or a teaching technique as perceived by the student teachers

Student teachers described that their teacher educators were the dominant, if not only, sources of knowledge for their professional learning. They were aware of the pedagogical influence that their teacher educators have. It implies that the teacher educators' modeling of best teaching techniques influences the student teachers in their future teaching. As was previously mentioned, teaching about teaching must make the pedagogical reasoning clear, plain, and meaningful for students, which is fundamentally different from that of general education, where teachers solely teach the subject matter. It was also discussed that it is impossible to teach people how to teach powerfully by merely telling them to imagine what they have never seen or practiced in the classroom. Particularly, the reformed and research-based teaching strategies need to be learned from the teacher educators' practical implementation, since it helpsto develop a professional identity among the student teachers.

However, the participant student teachers insisted in their discussion that their teacher educators do not model either the reformed techniques of teaching or planning for teaching, and in general, they do not encourage the student teachers to actively build the professional identity of teaching. Although, as discussed above, teacher educators' modeling plays the most important role in their future professional careers, they were not able to find such an opportunity, as evidenced by the following extracted text from the discussion:

> Teacher educators not only do not model the best teaching practices and planning for teaching but are also not seen while they use other resources in addition to module works or textbooks. They rarely provide 'real-life' and culturally relevant examples to engage student teachers to learn how to apply the theories of teaching (ST, 10).

As it has been discussed in the present study, in teacher education, "the medium is the message." Student teachers' learning about teaching might be enhanced by the teacher educators' paying attention to their own experiences in order to better understand how to approach teaching. This

demands that teacher educators become reflective practitioners who work in ways that are consistent with the types of teaching envisioned by reforms and demonstrate their teaching practically. As also discussed, teacher educators must effectively model appropriate behaviors for their research-based, tried-and-true best practices to be observed, modified, repeated, internalized, and applied to learners of all levels and learning styles. Only then will teacher educators be able to make an impact on the profession.

The most frequent activities student teachers carried out or conducted in college

These data show how frequently lecture and group work approaches are used in teacher preparation courses. These activities resemble the instructional strategies examined by the other research techniques used in this investigation. As was previously discussed, the teacher educators' primary concern appears to be mastering the methods and contents of teaching for the student teachers using the transmissionist method of teaching. The participant student teachers in the interviews argued that during their time in college, student teachers participated in limited group projects, reflective activities, presentations, school observations, and practicum. They discussed that they were dominantly prescribed the limited techniques and contents of teaching, despite the fact that teacher education plays a significant role in generating relevant techniques of teaching for the contents and the preparation of quality prospective teachers and helping them manage obstacles that they will face in their future employment.

> Except teacher education presentation (lecture method of teaching), we didn't learn by any more techniques of pedagogy in our college (ST, 13).

The other participant had to justify the most frequent activities they carried out or conducted in college by learning about varied methodologies and contents of teaching based on their individual differences and interests by listening attentively to what their teacher-educators dictated (ST, 8). He extended his view on the issue that the student teachers had to stay on studying what they learned on the courses for the assessment. Rather, as he said, it would be useful if they had the opportunity to learn through the experience sharing of both each other and from their teacher educators and knowledge construction on the concepts of subject matters, followed by self-practicing and practicing in groups, as seconded by the other participants, as follows:

> It would be better if our most frequent activities carried out or conducted in college would be learning, being practically engaged in the activities of learning, and demonstrating how we are going to teach practically in our real school environment (ST, 7).

> As we are being prepared to be professionals, teacher educators would have taught us frequently through pedagogy that focused on doing things practically in a resource-intensive environment rather than sticking to mere lectures (ST, 9).

Teacher educators are expected to be able to identify and use frequently the most appropriate teacher education pedagogical strategies, methods, and techniques based on the nature of the subject matter/content of the lesson and contexts, so that the pre-service teachers will be able to learn both the strategies and the content intended effectively. As already discussed, some of these strategies, common in teacher education, include cooperative learning, case studies, videoconferencing, approximation of practice, guided practice, modeling, integrating technology, reflection, seminars, microteaching, and teacher identity (Darling-Hammond & Snyder, 2000; Padkasem et al., 2013).

Regularity they go to schools to learn

Student teachers discussed on the regularity they go to schools to learn from mentors and from the school experiences through the practicum courses, divided in to four parts, last almost for two years. Each part, delivered for a semester starting from second year onward to the final year of the training. The courses were arranged in such a way that the later builds on its former (its pre-requisite). One of the discussants' texts was put as follows:

> We go to schools to learn from mentors as well as from the school experiences nearly four times starting from our second year in our stay in college. We get an early opportunity to observe schools, assist and work with experienced teachers, conduct an independent teaching and study student behaviors from the courses (ST, 9).

In general, the participant student teachers discussed that by the beginning of the practicum courses of school observation, they visit the physical setting and observe the actual working

conditions of the schools for four weeks, a day for each week. In the next course of working under the mentor, they learn from mentors about lesson planning, lesson delivery, preparing instructional materials (aids) and evaluating text books for three weeks, a day for each week. On the course assisting the mentor, they learn by assisting our mentors about classroom management, lesson presentations, assessment, and providing feedbacks, again for three weeks, a day for each week.

Similarly, in the last course of independent teaching, they teach a normal classroom for seven weeks independently, including its first week, in which they prepare themselves with the help of classroom teacher. It also includes mentor's lesson delivery observation; preparing lesson plans and being ready to take over the class from the mentor were our preparation for the independent teaching.And lastly, conducting independent teachingbecomes our end to learn from our mentors.

Moreover, a total of six college classrooms were observed, and they all had some characteristics in common. For instance, the rooms were all built in blocks that were spaced a few meters apart from one another. With their rectangular shapes and nearly identical sizes, the rooms provided teacher educators and student teachers with more chances to move about as well. Additionally, there were no curtains covering the windows in the rooms, which would have distracted the student teachers while they were learning. In each of the rooms, there was a single seat reserved for each student teacher and six to seven rows of armed chairs arranged in six columns. Although there were seldom abouttwenty to thirty student teachers in the classroom, the rooms could usually hold aboutfifty. Each room has a clean floor and adequate ventilation. However, the researcher noticed significant issues, particularly with the design of the seats assigned to student teachers and the brightness of the classrooms. In these regards, the observer (the researcher) detected that except one, which was arranged in a "U" shape, all student teachers had to sit with their faces on the blackboard in the remaining rooms. That is to say, the seating arrangement would restrict student teachers' participation and cooperation during class instructions. As a result, this seating arrangement can make student teachers reliant on the lectures, justifications, critiques, and remarks of their teacher educators only. Moreover, all the rooms lack lamps or any other measures done to make the rooms bright, and it is significantly challenging to look at the writings on the blackboards. This situation of classrooms for learning and teaching purposes was

inappropriate with regards to their brightness. As observed in all classrooms, the student teachers were observed suffering to look at the written materials on the blackboard. More impressive was that the student teachers had no voice and seemed to accept whatever they faced. They have no idea about their rights and obligations.In spite of these flaws, all of the rooms appeared to employ effective pedagogical techniques in teacher education.

Teacher Educator 1's Lessons

The researcher conducted two classroom observations in teacher educator 1's lessons. The observation data revealed conceivable instructional procedures the teacher-educator employed in her classroom lessons. These procedures could be framed as introduction, presentation, discussion, and conclusion. For instances, the excerpt below, from the teacher educator's first lesson indicated this.

> The teacher-educator inquired the student teachers about the topic of the previous lesson, "what was our last session lesson? After she spent a few minutes reminding student teachers about what they did in the previous lesson, she recapped that they had learned about the relationships young children need to have. Its main purpose, as noted by the teacher educator during the post observation discussions, was both to help student teachers consolidate their understanding of the lessons and to make students aware about the continuation of the present lesson from the previous one. Proceeding to the presentation stage, the teacher educator introduced as, "Today we will discuss about personal and socio-emotional development of young children" and wrote it on the blackboard after she asked the student teachers whether they have any idea about the topic. However, none of them reacted. After writing the descriptions of the topic and explaining about it, the teacher educator called for two pairs of student teachers to act out the role-play. On this activity, the student teachers were asked to put corks one on the other and hit it from about two meters with a stone to dismount it. Its aim was to show the student teachers how to teach young children a lesson related with learning outcomes that results of personal and socio-emotional development of the children. Then, the teacher moved on to the third phase of the lesson, discussion. However, after a few occasional activates of discussions like giving explanations on the topic of the lesson, the teacher educator skipped the

> discussion stage of the lesson and moved on to conclusion stage. Finally, she concluded the day's lesson by revising the main points of the day's lesson and asking any inquiry if they have concerning the topic of the lesson, for which the student teachers had no response (Ob1, TE1).

The teacher educator presented the lesson to student teachers in two ways. One, she simply wrote the descriptions of the lesson on the blackboard for the student teachers and gave brief oral explanations on it. Here it was observed that the teacher educators' poor utilization of the blackboard was indicated by writing materials improperly and in disorganized ways. In the other case, the teacher educator requested that student teachers act out a role-play by being in two groups and encouraging the whole class of the student teachers to deduce a lesson from the role-play. However, since the teacher educator's major activities in this stage included informing and telling lessons to the student teachers and giving brief explanations to them, with the exception of inquiring student teachers to act out the role-play, the classroom observation data failed to reveal her interactive lesson, and the classes dominantly (about 60%) looked confused and did not have much understanding of the lessons. Moreover, as teacher education pedagogy, the techniques and usage of the blackboard of the teacher educator were not the kind that student teachers could model. It was also evidenced that at the ends of the lessons, almost none were to react to the questions she asked at the end of the lesson.

She used the same pedagogical approach in her second lesson as well, with the exception that she asked student teachersto put activities on the blackboard, as evidenced by the excerpt below:

> She had just revised the concept of personal and socio-emotional development when she called on about six student teachersto put the concepts' constituent parts on the blackboard. The teacher-educatorthen moved on to her presentation of lesson of the day, by outlining the title "benefits of personal and socio-emotional development" and providing its explanations.By these manners, she informed student teachers about lesson issues and ways student teachers needed to work on. In her discussion phase of the lesson, the teacher educator discussed with the whole class on the benefits of personal and socio-emotional developmentof young children. In this stage, the teacher educator tried to internalize the lessons' issues and to rise upthe students' involvement by asking the student teachers some questions related to the

> days' lesson. Yet, all student teachers were not encouraged to ask questions and participate on the lesson, other than giving responses to the teacher's questions. However, in post observation discussion, the researcher noted that the student teachers had been given more discussions and explanations of the topic before she ends the lesson. Finally, she concluded her lesson by summarizing the days' lessons verbally and by inviting student teachers if they have any questions. But none of them were reacted to ask or answer questions. The teacher educator occasionally employed these procedures repeatedly until the period ends(Ob2, TE1).

Accordingly, as evidenced by the observation's data, the teacher-educator allowed some student teachers the opportunity to engage in practical activities so they could learn how to teachchildren practically. By asking a few student teachers to reflect on the topics of the lesson, she seemed to monitor the overall instructional events focusing on some of the student teachers. As a result, the majority of the student teachers appeared confused and lacked comprehension of the teachings, even though the teacher educator made an effort to get them to address the problem through questions and answers. Thus,as more student teachers were not participating in the activities, the teacher educator appeared to blame college administration for the fact that student teachers performed worse than she had anticipated.

In conclusion, as discussed above, teacher educator 1 conducted her classroom instructions in the form of introduction, presentation, discussion, and conclusion. In the introduction stage, she introduced activities by simply writing the title of the lesson on the blackboard, after she revised the previous lesson. She did not give student teachers more explanations of the nature of the day's activity focusing on not only its function on their future career, but also being model on how to execute the introduction phase of a lesson. The presentation segment of her lesson, in which the teacher educator focused on explanations, in that simply telling in the form of lectures was, characterized the instructions. However, in the pedagogy of the teacher education, beyond its function to engage student teachers on the learning, student teachers need constructivist practices while executed by the teacher educators' explicit, deliberate, and modeling practices. As medium is the message, student teachers learn more while the teacher educator employs the specific method of teaching-constructivist teaching method. Moreover, in the discussion phase of the lesson, the teacher educator seemed to be more reluctant in enforcing students' involvement

in the activity given. The teacher educator tried to make interactions with a few volunteered student teachers on the answers for the questions given.

In general, teacher1's classroom instructions could be described as presenting something on the blackboard to student teachers, taking time for student teachers to copy it from the blackboard and summarizing the day's lesson focusing on the man points of the lesson. The lessons were focused on the explanations, in the form of lectures, seemingly on mastering of method courses contents. Yet, there were some elements of teacher education pedagogy, for instance, a role-play activity in the first lesson and questioning and answering techniques in the second lesson. Except these signals that indicate some signs of teacher education pedagogies, the classes dominantly (about 67%) looked confused and did not have much understanding to the lessons. Even, at the ends of the lessons, she asked them some questions from the days' lessons and almost none were to react. Then, the teacher educator had to provide at least the directions for the questions before her endof the day's lessons.

Teacher Educator 2's Lesson

In teacher educator 2's lessons, two classroom observations were conducted by the researcher. The observational data provided insight into potential teaching strategies that the teacher-educator used in his lessons. Like the first teacher educator, teacher educator 2 also employed the explanation or lecture method of teaching. He had similar teaching procedures in his both lessons, which could be structured as introduction, presentation, discussion, and conclusion. For instance, the following excerpt, from his first lesson, indicated this.

> He attempted to summarize the previous lesson "formal education" to his student teachers during the first lesson's introduction.In his presentation, he just wrote some notes about "informal education", on the blackboard. While some of the student teachers were copying notes from the blackboard, others were just disinterested and wandering on the lesson. Followed presentation, his discussion stayed for a very short period of time and lasted for about three minutes. It was so shallow that based on the summary of the types of education: formal, informal, and non-formal education. In his last phase, the conclusion, he stated, "If you have questions about

> informal education, you are well come". However, they still remained silent(Ob3, TE2).

The above observation extract show that during the lesson's introduction, the teacher educator attempted to summarize the previous lesson to his student teachers rather than provoking reflection among the student teachers. In his teaching approach, the student teacherswere not allowed to participate. Moreover, the poor interaction between the teacher-educator and student-teachers as well as the shallow coverage and depth of the content of learning characterized the classroom instruction.

Similar data from the second observation showing the teacher educator's explanation of the lecture method of teaching is supported by the following excerpt.

> The teacher-educator started his lesson by revising his previous lesson entitled "Formal and Informal Education." He asked the student teachers, "Can you say something about the previous lesson?" They couldn't respond immediately, and he waited for about five minutes, hopping to see if there was at least one student teacher to say "something". In the meantime, one student teacher said, "Formal education has a plan and program of entry and exit, whereas informal education has no formal entry or exit program". The teacher educator accepted the response as "very good", and proceeded to today's lesson.It is about "none-formal education". He proceeded to his presentation by writing its description and the advantages and disadvantages of informal education. In his discussion phase, he tried to involve student teachers by asking the student teachers some questions related to the lesson. He was explaining more about non-formal education, saying, "For example, distance education, as an informal education, has many advantages and also has its disadvantages. Lastly, he summarized and ended his lesson(Ob4, TE2).

The teacher educator's major activities in all stages of his two lessons included informing and telling lessons to the student teachers accompanied with brief explanations. Moreover, the introduction was not adequate enough to base the day's lesson, as he moved on to his presentation without clear indication of the new day's lesson. At this point, he is expected to motivate and encourage his student teachers by providing them with a clear understanding of the

day's lesson so that they are ready to learn.The observation data also show that his mastery of content knowledge without concern for the student teachers resulted in ineffective pedagogy. Based on the teacher educator's telling and the absence of student teachers' involvement, the teacher educator's classroom practice lacks meaning to ensure the learning outcomes stated on his course outline. Consequently, the classrooms observedas they failed to reveal his interactive lesson and the classes looked did not have much understanding of the lessons. It was also evidenced that at the ends of the lessons, almost none were to react to the questions she asked at the end of the lesson. Unlike the teacher educator 1's lessons, in which there were some elements of teacher education pedagogies such as a role-play and questioning and answering techniques, teacher educator 2's lessons were focused on only explanations of lecture method. The student teachers did not have much understanding to the lessons. Even, at the ends of the lessons, she asked them some questions from the days' lessons and almost none were to react. Then, the teacher educator had to provide at least the directions for the questions before her endof the day's lessons. Student teachers were not engaged in the learning process through a variety of means such as asking and answering questions; learning either in individual, pair, or group work; or via discussion. Rather,they were simply watching or listening to the teacher educator's explanation and/or lectures and copy down notes from blackboard.In general, the teacher educator's pedagogical conceptions and related practices were observed as the traditional teacher-led approach of the teacher education pedagogy.

Teacher Educator 3's Lessons

Teacher educator 3 delivered his lessons by writing them on the blackboard and discussing them with volunteered participants of student teachers. Excerpts, for example, from the first observation suggestthis as put as following:

> The teacher educator wrote theories of learning such as behaviorism, cognitivism, humanism, and constructivism and asked the student teachers whether they had a prior idea about them. However, they couldn't respond, and he went on to give some hints for about twenty minutes on the above theories. Then he moved on to write some notes about the theories of learning on the blackboard and discussed it. Then he went to discuss the concepts with student teachers, raising the question, "Which of these theories do you believe is more effective than the others?" But there is still no

response. The teacher-educator spent five to seven minutes giving them advice on their roles and responsibilities. Finally, he ended the lesson after checking if they had any unclear ideas about the lesson.

As the aforementioned observation excerpt showed, the teacher educator attempted to conduct mini-lectures on the lesson subjects and invited student teachers to respond with their earlier views about learning theories. However, they were unable to respond. Here, he is supposed to make connections between the lesson and what they have already learned, stimulate their curiosity, and get them ready to learn by various means.By writing the text on the blackboard, the teacher-educator also took more time to explain the subject. During this part of the course, he mostly used a "talk and chalk" style of instruction. This result appeared to contracted with the pedagogy of teacher education. But he noted in the post-observation discussion that the students' lack of preparation for learning had complicated his pedagogical approach.Consequently, it appeared that the teacher educator's explanation-focused instruction was a result of students' readiness and motivation to learn as well as his own pedagogical skill. As the aforementioned texts showed, most of the pupils lacked the proficiency to participate in question-and-answer sessions. The instructor appeared to observe that he was compelled to concentrate on the conventional teaching techniques because of the student teachers' inadequate prior knowledge and lack of enthusiasm. Consequently, the teacher educator appeared to view student teachers as a significant barrier to implementing his well-intended educational strategies.

In summary, observed college classrooms shared certain traits. Every room was constructed with rectangular blocks and was found to offer sufficient space for movement for both teacher educators and student teachers. With everything remaining constant, the rooms seemed to use instructional strategies effectively. The researcher did, however, see several noteworthy problems, namely with the arrangement of the student teacher seats, which required each student teacher to sit with their face facing the blackboard. Additionally, there are no lamps in any of the rooms, which reduced their brightness and made it more difficult to see the writing on the blackboards. Moreover, the teacher educators' classroom practice lack their detailed plan meant to ensure the learning outcomes stated specifically, except the general and crude plan stated on their course outline.

The observational data showed potential teaching strategies that the teacher-educators employed and organized into introduction, presentation, discussion, and conclusion sections. After reminding their student teachers of their earlier learning, the teacher-educators introduced the day's lessons in their introduction stage. They proceeded on to their presentation without clearly stating what the new day's lesson was, which meant that their introduction was insufficient to serve as the foundation for the lesson of the day. With the exception of the role-play used in one of the observation classes, their presentation stage was characterized as merely writing the descriptions of the lessons on the blackboard and providing brief oral explanations on it to the student instructors.Their mastery of content knowledge does not guarantee the student teachers effective learning to teach. In their discussions, they ask the student teachers some questions for the sake of plurality of the teaching methods and end the lessons after they ask if they have any unclear ideas about the day's lesson. Thus, the teacher educators were informing and giving materials to the student teachers and giving brief explanations to them, and the classroom observation data failed to reveal their interactive lesson as the classes predominantly looked confused and did not have much understanding of the lessons.

Moreover, in the case of teacher education pedagogy, the techniques of the teacher educators' pedagogy were not the kind that student teachers could model, though some of the teacher educators appeared to blame college administration for the fact that student teachers performed worse than they had anticipated. Poor interaction between the teacher-educator and student-teachers as well as the shallow coverage and depth of the content of learning characterized the classroom instruction. In general, the teacher educator's pedagogical conceptions and related practices were observed as the traditional teacher-led approach of the teacher education pedagogy.This implies that, teacher educators' pedagogical practice is shaped not only by their conceptions of application of theory in learning to teach but also by their dichotomized (isolated) conception of both theoretical knowledge and practical reasoning of teacher education pedagogy. Likewise, their conceptions and their pedagogical practices reflect the commonly held conceptions and practice, which is still prevalent in teacher education. The aforementioned instances, along with the data from the preceding sections, suggest that Ethiopian teacher education techniques adhere to comparable systematic procedures that don't significantly change based on variations in the disciplines.

4.5 Correlation between teacher educators' conceptions of teaching about to teach and their pedagogical approaches

From the above findings of the two concepts (conceptions and practices that characterized the teacher educators' pedagogy), it was analyzed that the teacher educators had a predominant conception of application of theory and abundantly used the transmissionist teaching approach. To investigate more about the association between these concepts, i.e., teacher educators' conceptions of their pedagogy andtheir practices correlation test was computed. As a result of the violating test of the assumption of normality, the researcher used the Spearman rho statistics. Consequently, as shown in the table below, all scales show a positive and statistically significant correlation with each other.

Table 5: Correlations between scales of teacher educators' teaching conceptions and approaches

Spearman's rho		ConstructivistTeaching Approaches	Transmissionist Teaching Approaches
Application of theory Conception of Learning to Teach	Correlation Coefficient		.241**
	Sig. (2-tailed)		.000
Realistic Conception of Learning to Teach	Correlation Coefficient	.324**	
	Sig. (2-tailed)	.000	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
N = 234

As shown in the Table 14, there is a significant positive relationship between teacher educators' conception of application of theory to teaching and their transmissionist pedagogical approaches *(r (234)* =.241, *p* < .01). Similarly, realistic conception of learning to teach and their constructivist pedagogical approaches of teaching about to teach are correlated significantly as *r (234)* =.324, *p* < .01. From this analysis, the correlation between realistic conception of learning to teach and their constructivist pedagogical approaches of teaching about to teach is greater than the correlation between conception of application of theory to teaching and their transmissionist pedagogical approaches, as 0.324>0.241. It is found that teacher educators' conceptions of teaching are related more to their constructivist pedagogical approaches than to their transmissionist pedagogical approaches. This infers that teacher educators' constructivist practices are highly related with their related realistic conceptions of learning to teach. This also indicates that teacher educators' realistic conceptions of their pedagogy were contributors to their constructivist practices.

As there were considerable relationship between the teacher educators' conceptions and pedagogical approaches (*r (234)* =.294**, *p* < .01), this indicates that teacher educators' conceptions of their pedagogy were contributors to their practices.

4.6 Teacher educators' perceived pedagogical challenges

Participants were asked to rate out 10 items, in which three items (items 4, 5, and 7) were teacher-educators related constraints and seven items (items 1, 2, 3, 6, 8, 9 and 10) were context related constraints. The following table shows how the responses were organized.

Table 6: Teacher educators perceived pedagogical challenges

No	**Teacher education pedagogy is challenged by: -**	1(SD)		2(D)		3(ND)		4(A)		5(SA)	
		f	%	f	%	f	%	f	%	f	%
4	Lack of teacher educators' commitment to employ effective teacher education pedagogy	18	8	47	20	45	19	89	38	35	15
5	Lack of knowledge/ understanding to practice effective teacher education pedagogical practices.	57	24	70	30	45	19	44	19	18	8

7	Teacher educators' lack of willingness to learn from one another and to share experiences.	27	12	40	17	47	20	85	36	35	15
	Sub Total	102	15	157	22	137	19	218	31	88	13
	Grand Mean										3.0

As revealed in the table 15above, the percentages of the participants on the teacher educators-related items of the challenges rated as "SD", "D", "UD", "A", and "SA" are 15%, 22%, 19%, 31%, and 13% respectively. By a similar analysis, as portrayed in the table 17 below, the percentages of the participants on the context-related items of the questionnaires rated as "SD", "D", "UD", "A", and "SA" are 7%, 14%, 17%, 39%, and 23% respectively.

Table 7: Teacher educators perceived pedagogical challenges

No	**Teacher education pedagogy is challenged by: -**	1(SD)		2(D)		3(ND)		4(A)		5(SA)	
		f	%	f	%	f	%	f	%	f	%
1	Lack of facilities of instructional resources such as computers, projectors, facilitated classrooms, etc., by the college.	15	6	41	18	34	14	89	38	55	24
2	Lack of professional development	22	9	45	19	42	18	87	37	38	16
3	Lack of motivational aspects or incentives such as increased career levels to pursue salary and status that discourage teacher educators.	7	3	13	5	23	10	77	33	114	49
6	Dominance of teacher educators' traditional teaching practices.	16	7	33	14	42	18	101	43	42	18

8	Presence of poor performing pre-service teachers.	21	9	27	12	49	21	99	42	38	16
9	Presence of unmotivated pre-service teachers.	10	4	32	14	49	21	94	40	49	21
10	Pre-service teachers' inability to show any observable commitment to improving their academic skills.	20	9	31	13	44	19	92	39	47	20
	Sub Total	111	7	222	14	283	17	639	39	383	23
	Grand Mean										3.5

Merging "SD" and "D" as "at least disagree" and "A" and "SA" as "at least agree", percentages of the participants on the teacher educators-related items of the challenges becomes 37%, 19%, and 44% for at least disagree, for undecided and for at least agree respectively. In similar analysis, percentages of the participants on the context-related items of the challenges become 21%, 17%, and 62% for at least disagree, for undecided and for at least agree respectively. These two merged analyses show that the teacher educators agree that teacher education pedagogy suffers because of the two scales items of both teacher-educator related as well as context-related items. As obviously observed from this analysis, more of the teacher educators agreed on the prevalence of context-related challenges than those agreed on the presence of teacher-educators related challenges (62%>44%).

Moreover, to see whether this difference of both scales [(context-related (CR) and teacher educator related (TER)] is significant or not, Wilcoxon signed-rank test was used, as displayed as follows:

Table 8: Wilcoxon signed rank on challenges of teacher educators' pedagogy

		N	Mean Rank	Sum of Ranks
CR - TER	Negative Ranks	81[a]	91.3	7395.5
	Positive Ranks	144[b]	125.2	18029.5
	Ties	9[c]		
	Total	234		

a. CR< TER
b. CR > TER
c. CR = TER

Test Statistics[a]

	CR - TER
Z	-5.440[b]
Asymp. Sig. (2-tailed)	0.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Descriptive Statistics

	N	Mean	SD	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
TLC	234	3.	1	1	5	2.33	3.0	3.67
LCC	234	3.5	0.6	1.43	5	3.14	3.57	4

As observed in the table 17above, 144 participants had higher agreed on context-related challenges than those agreed on the teacher educators related challenges. Besides, 81 participants agreed more on teacher educators' related challenges and 9 participants were undecided in their agreement. From the Test Statistics table, we can see that teacher educators agree significantly on the existence of the context related challenges on their pedagogical practices ($Z = -5.44$, $p = 0.000$). Therefore, the Wilcoxon signed-rank test showed that participants had agreed significantly on the context related challenges against their pedagogical practices with the median score of 3.57. Thus, teacher educators also agreed that teacher education pedagogy suffers because of both teacher-educator related as well as context-related factors. Moreover, the Wilcoxon signed-rank test showed that participants had agreed significantly on the context related challenges against their pedagogical practices ($Z = -5.44$, $p = 0.000$) than teacher educator related challenges.

The replies from the interview participants regarding the challenges of teacher educators implementing their effective pedagogy were framed in two key discussion points: teacher educator-related and context-related factors, as discussed below.

Teacher educator-related challenges

Participants believed that teacher educators' lack of commitment and professional competence were among the most significant obstacles affecting their pedagogical practices. Accordingly, teacher educators insist on sticking with their previous experience of the lecture method,

maintaining the statuesque of a teacher-centered approach rather than searching for or adopting effective reformed methods of teaching. As one of the participants, TEr 3, said:

> Most of the time, we do not see teacher educators keeping up with or creating innovative methods of teaching. Rather than looking for the most effective teaching methods, teacher educators insist on sticking with their previous experiences of the lecture method. Though I don't think that they have any problem related with their background knowledge specific to the profession, their dedication of teacher educators outweighs the challenge.

Another participant, TEr2, commented on the reasons for the teacher educators' loss of commitment and professional competence. As quoted below, the salary and other related motivational measures were the most dissatisfactory factors in this respect.

> Teacher educators' low commitment and professional competence is the most profound challenge that obstructs the preparation of effective teachers. For example, in this college, there are teacher educators who taught me about twenty years ago, and there are also teacher educators whom I taught about ten years ago. Surprisingly, all these three types of teacher educators are at the same occupational level, known as the lecturer level. i.e., zero years of service are equivalent to thirty years of experience in colleges, all earning the same salary, which is so dissatisfying. As a result and the very unpredictable event in this regard is that those whom we taught and are working in schools earn a higher salary and have a higher occupational status than us.

Consequently, the reason for the low commitment and professional competence, as the interviewees stated, is the administrative problem in that they are treated equally but unfairly, regardless of their occupational experiences and efficiencies in terms of salary and other motivational aspects.

The other reason for the low commitment, as the interviewees stated, is the student teachers' low motivation as a result of low background knowledge, beyond the administrative problems discussed above.

Here is also the other participant's, TEr 1's, turn to critique the status of the teacher educators' working conditions.

> They are impassively expressing their dissatisfaction and irresponsibility in preparing teachers effectively due to contextual situations such as the student teachers' low background knowledge, the absence of monitory motivations based on their effective experience, and other related factors (TEr, 1).

This view goes with Herzberg's (1959) Motivation-Hygiene theory, whose function is serving as a tool to create motivated employees. According to this theory, maintaining the status of employees at a satisfactory level (extrinsic factor) can prevent job dissatisfaction. And conversely, unmotivated and then ineffective teachers stay temporarily in the teaching profession till they get other career options (Ambissa, 2021). Thus, de-motivational factors and causes for lack of commitment are closely related (Giertz, 2016). Therefore, to come out from the traditional box we experienced in and shift to the newer ones, teacher educators need empowerment training and motivating likely, which in turn leads to bring commitment and then results to higher student teachers' achievement.

Furthermore, researchers in teacher education argue that teacher preparation should recognize, beyond cognitive and technical conception, the professional commitment (Ambissa, 2021). In this regard, "value-based pedagogy" that constitutes qualities such as teacher educators' sensibilities, attitudes, commitments, ownership, dispositions, and relationships (Curtis, 2012) plays its important role in professional development processes. The process of teacher preparation becomes effective when high-performing student teachers join the profession and also, when the high-performing teachers are prepared in the profession.

Context-related challenges

Participants also noticed that challenges related with leadership and management, policy and its implementation, student-teachers' behavior, curriculum, socio-economic status and motivational issues were discussed as the out coming issues that affect teacher educators from delivering effective pedagogy. As discussed by the participant teacher educator, TEr 2, leadership and management were realized in terms of insufficient instructional resources and facilities, absence

of strong professional development, and unable to creating supportive learning environment. Teacher educators are grasped as they suffer from the limitations of instructional resources, ineffective and less facilitated classrooms, absence of support, unfair workload distribution, and inaccessible technology. Another challenge that was conveyed in the interview was the less accessible technology-supported classrooms in which teacher educators fail to use full package technologies that support delivering interactive teaching (TEr 3). In conjunction with this, it has been found that school facilities contribute a lot to quality, equity, efficiency, and access (UNESCO, 2015b). Thus, as leadership is widely regarded as a key factor in accounting for fostering the learning of their students through supporting staff efforts by providing the resources, professional development, and time that teachers need to become proficient at their jobs, it becomes critical contributor for institutional learning.

The other challenges that obstruct and demotivate the teacher educators to render effective pedagogy, was the low background knowledge of the student teachers, and the absence of monitoring incentives as a result of policy and its implementation. All agreed that the problem with students should have been resolved in the selection step of the teacher education, as they pointed out; teacher education pedagogy is entangled with the problem of ineffective policy and its reluctant implementation in such ways as:

> The selection is characterized by the recruitment of less performing and less motivated students left after higher education's eligibility (TEr, 4).

To deliver a twenty-first-century curriculum that infuses technology and favors project-based learning and collaboration, it needs to ensure the coherence and consistency of the teacher education curriculum implementation. There should be concern in that teacher educators need more support, so the future teachers to be considered of strengthening selection, preparation and professional development.

Besides these, it has also been discussed that teacher educators are not only demotivated but also dissatisfied due to two main reasons. First, the salary is low when compared to other sectors, even in the education sector. Second, there are no incentives as a result of efficiency in their career; rather, all those with a master's degree are grouped under lecturer level, irrespective of

their occupational experiences and efficiencies. Participants have asserted more seriously about the sameness of their status as:

> The very unpredictable event in this case is that those whom we taught and are working in primary and/or high schools earn higher salary and got higher occupational status than us (TEr, 2).

The goal of the teacher education curriculum is unmistakable: to prepare teachers to be researchers and users of research, as well as to have a strong stock of content, pedagogical strategies, and subject matter knowledge. Hence, the process of ensuring coherence and consistency between the content of learning to teach and the intended outcomes as specified in the teacher education curriculum is one component of a well-designed curriculum. As one of the interviewees, TEr5 portrayed, there are courses like BSC, integrated science, etc., that are to be taught in a modular approach, requiring a group of teachers from more than one department. Most of the time, this approach makes it difficult for teacher educators to effectively communicate their pedagogy. In addition, what the student teachers learn in the colleges and the subjects that they would teach in primary schools should be aligned. For example, despite the fact that there is an environmental science subject at the primary level, no such teacher had graduated from a teacher education college as of May 23, 2012.

Preparation of future teachers should be taken into consideration by means of increasing the quality of selection, preparation, and professional development, basically assisting the teacher educators to acquire such capacity.

> Teacher education in colleges should be given emphasis by the government in all phases of selection, preparation, and distribution in terms of resources and facilities, as well as motivation factors for the teacher educators. Student teachers' selection should be made in such a way that students should enter the field being interested and motivated by what they will earn after graduation and their assignment for the job (TEr, 4).

Generally, an educational institution's environment is what is located outside and inside the "systemic" that limits its body. In order to sustain a learning community culture in the profession

and ensure their well-being and achievement, all organizations and individuals at the respective organizational levels should engage in systems thinking, which allows them to look both within and to the larger system for connections that will help them maximize institutional effectiveness (Scheerens 2013). As one of the other participant teacher educators, more inclusively, has said the following:

> I don't believe we are ineffective by ourselves. Our commitment is diminished because of the administrative problems and the lower-performing students enrolled. Although we accept such low-performing students, institutions and teacher educators have a greater role and responsibility to produce quality teachers than merely blaming the earlier levels of education systems (TEr, 3).

Accordingly, it calls for both the internal and external environments' integration in advance for the betterment of the common goal, as stated in the policy: "Teaching will be developed as a profession of choice" (ESDP V, 2015:35). Based on the plan, it also corresponds to the basic principles of the curriculum framework for primary pre-service teacher education, which specify the following:

i. Anchor the pre-service program in the primary school curriculum.
ii. Emphasize pedagogical principles from the primary school curriculum.
iii. Value practical experience in teaching professional development.
iv. Develop good professional primary teachers with strong professional identity and commitment (MoE, 3013).

Though recently in Ethiopia, there have been certain measures taken to match the fact that more qualified young people prefer to join prestigious fields (Tesfaye, 2014), tasks still need to be realized to satisfy the pool of applicants that are capable of the desired level of academic competence and interest in the teaching profession. Indicating that, as building a quality education system begins with building a culture of trust and the right level of status for teachers, teacher educators should establish a culture of practice-theory integration rather than merely giving lectures on theory and making them have practice separately.

The analysis of challenges that affect teacher educators' pedagogical approaches, based on the responses of the participants were synthesized as follows:

Table 9: Challenges that affect teacher educators' pedagogical practices

Themes	Sub-themes	Codes	Examples
Teacher educator related	Professional competence and commitment	Commitment and motivation	Low level of motivations and job dissatisfaction
			Low commitment and willingness to make more effort of teaching
			Lack of motivation among teacher educators due to lack of clear policy (or abusing) of promotion and competition
		Professional competency	There are reluctant teacher educators to update oneself regarding the reformed practices

			There are teacher educators who do not promote student teachers' learning
		Adherence of conventional teaching	Teacher educators' adherence of the traditional teaching strategies
			Teacher educators' persistent traditional style of teaching.
Contextual factors	Leadership and management of the college	Lack of instructional resources and facilities	Lack of adequate pedagogical centers, facilitated class rooms, and resources centers
			Lack of ICT infrastructure like broadband internet provided as a higher institution, to use technology-based teaching resources
			Lack of some assistive technologies for students with special needs
		Lack of professional development opportunities	Lack of trainings on the skill gaps of the teacher educators and access to get/share new pedagogical practices to implement active learning methods
			Lack of technical support like mentoring, supervision and assisting teacher educators to change the persistent traditional style of teaching
			Leaders are not committed to the professional developments of the teacher educators by linking it with the professional career
		Creating safe & facilitated environment	Poor selection criteria, and as a result poor academic environment and lack of motivation, follow up and feedback mechanisms as a result of leadership problems
			Lack of documentation of research works & publications
			Lack of promotion for teacher educators through career structure and a clear policy of competition or abusing policy of competition.
Contextual factors	External factors	Student teachers' characteristics	Lack of motivation and commitment due to poor background knowledge and the lowest level of living condition
			Student teachers' wash-back effect of their graduating as a teacher and earning money
		Socio-economic status	Poor life situations and impoverished livelihood of the student teachers

	Arrogant economy, high inflation rate, very low incentives provided for the student teachers
Lack of incentives and related support	Lack of promotions and incentives for the teacher educators, especially after lecturer level, led to the consideration that there is no use of college service and work experience after lecturer status.
	Poor admission criteria led to the obtaining of incapable learners, which resulted in the production of ineffective professionals that could not struggle with corruption, cheating, rent seeking, etc.
	Low salary scale, lack of proper attention, and wrong perception of the profession
Curriculum and program related	Misalignment between college-level courses and the subjects for which they are training
	The curriculum is not designed in ways that engage the student teachers to enhance their critical thinking as well as solve real-life problems.
	Wide content coverage and module-based training
Policy and its implementation	Lack of promotion for teacher educators through career structure; lack of clear policy of competition or abusing it
	Poor and non-welcoming academic environment
	Poor selection criteria, lack of motivation, follow up and feedback mechanisms as a result of leadership problems

Based on their responses, the data were analyzed grouped under two themes of context related and teacher educator related factors. The context related factor was the theme emerged from two sub-themes of external factor and leadership and management of the college. The sub-theme leadership and management are derived from the codes of learning environment, professional development, and instructional resources and facilities. Similarly, the codes under the external factors sub-them are curriculum and the program, policy and its implementation, student teachers' profile, socio-economic status as well as incentives and facilities. Likewise, the teacher educator related theme was resulted from the sub-themes of professional competence and

commitment, which in turn emerged from the three codes of commitment and motivation, professional competency, and adherence to conventional teaching.

Furthermore, the design of the analysis was structured as presented in the following figure.

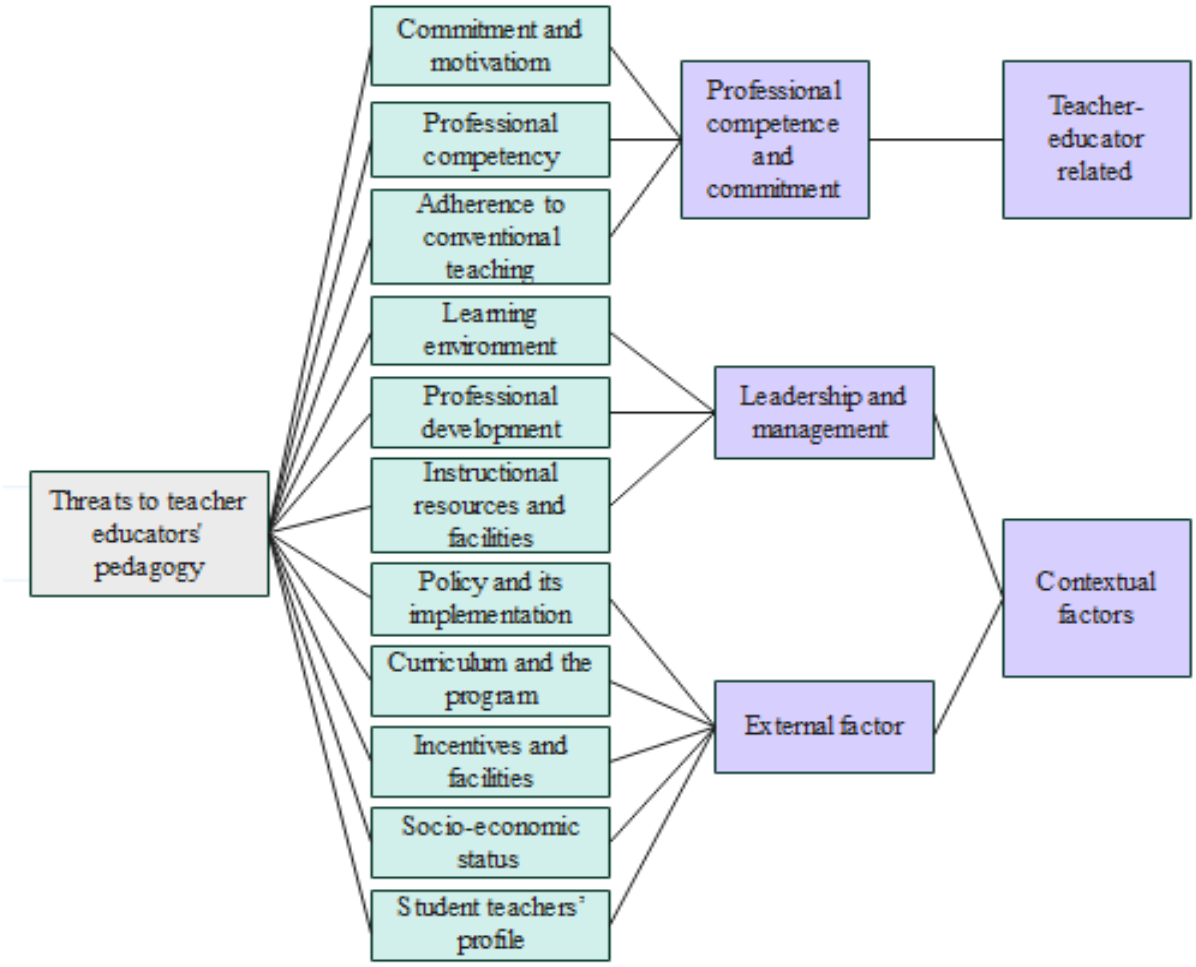

Figure 8: Threats that affect teacher educators' pedagogical practices

This classification is similar to the study of Scheerens (2013), in which a quantitative measure of the institutional teaching quality factor is outlined based upon five key determinants such as quality of teaching and teachers, quality of the student body, adequacy of the basics, governance and ethics, and general ambience. It is also consistent with Satyendra's research, which states that internal and external factors play a significant role in determining an organization's success or failure (Satyendra, 2020). According to this definition, inner factors are those over which the organization's administrators and workers have a lot of control, whereas external factors are those over which the organization has less direct control. As discussed under 4.2.2.4, effective

work experiences are impacted by the challenges related to teacher educators, college administration, and the external government (mostly). Based on this, the presentation of the data was outlined as follows;

Context-related factors

Constraints reported by the participants on context-related factors were leadership and management of the college as well as factors other than the college level. Under these factors, leadership and management, lack of instructional resources and facilities, lack of professional development opportunities, and lack of creating a safe and facilitated environment were analyzed. Challenges other than those at the college level were analyzed including student teachers characteristics, socio-economic status, lack of incentives and related support, curriculum and program-related, and policy and its implementation.

The profile of the analyzed data seemed to show a disparity in this regard and participants had to say the following:

> The challenges that resist teacher education pedagogy are large class sizes and a lack of technology-based resources like computers, projectors, and the internet access (PHo, 77).

Similarly, the other participant had to say the following:

> Less equipped offices, such as resource centers, classrooms, laboratories, etc., are challenges that deter the teacher education pedagogy (PHa, 28).

Moreover, participants also added that their offices, classrooms (demonstration rooms), resource centers, and laboratories, facilitating the dormitories for all student teachers and supplying some assistive technologies for student teachers with special needs are among the challenges of teacher educators in delivering quality pedagogy. A participant had to say the following confidently as stated as follows:

> Inadequate resources, large class sizes, a lack of time, and an inability to properly use the academic calendar cause teacher educators to cover the portion rather than think about effective teaching (PHa, 32).

They noted further about the challenges related with the inclusive education as:

> Lack of assistive technologies for students with special needs is among the challenges of teacher educators' pedagogy (PHo, 85).

Participants also commented specifically on the challenges of creating a safe and supportive learning environment regarding the living conditions of the student teachers, indicating that they were living outside of colleges as a proponent of effective pedagogy. One of the participants had to say:

> Lack of facilities, such as dormitories for student teachers and housing for teacher educators, pose challenges to effective teacher education pedagogy (PHa, 26).

They have also posited that a poor socio-economic status, particularly for student teachers, was a significant constraint, as realized by one of the participants as:

> Teacher educators' pedagogy is challenged by low living and working conditions. Student teachers' impoverished livelihoods pose challenges to effective pedagogy in teacher education (PHa, 59).

Teacher educators also noted that a lack of organizational-level facilities was the most challenging strand. As discussed in other studies, a quality education requires organizational levels' engagement in systems thinking, which allows them to look both within and to the larger system for connections that will help them maximize institutional effectiveness (Scheerens 2013).

> Organization level challenges such as lack of research documentation and publications, lack of financial support, distant practicing schools, insufficient support and cooperation from schools, and an unwillingness to solve the problem of professional career development were the main constraints in our college (PHo, 47).

As quoted above, the participants replied that among the challenges that constrain teacher educators from rendering quality teacher preparation are instructional resources and facilities. However, studies recommend that when students feel safe and supported in their school environment, they are more likely to be engaged and motivated to learn (Dix, 2012; Van Maele

& Van Houtte, 2011). Contemporary instructional media researchers concentrate on the use of technologies, as well as concepts and contexts, to advance and accelerate students' learning (Flew, 2009; Heinich, 1996; Skylar, 2004; 2012; Thornburg, 2014). Others also placed emphasis on the significance of instructional media as they ensure effective communication (as a result of the availability of appropriate resources) by reducing uncertainty levels and achieving a good match between media and the level of ambiguity in a message (Fulk & Collins-Jarvis, 2001).

Furthermore, participants emphasized that lack of academic freedom, lack of support, and the existence of leadership problems indicated by irrelevant interferences were the most dominant challenges to the practice of teacher educators' pedagogy. Particularly, the absence of a close relationship between college leaders and academic staff is among the challenges that devalue devotion and organizational teamwork PHo 91& PHa 14. In this regard, one of the participants added that:

> Lack of academic freedom, lack of motivation, political interference, and limited living standards, as a result, created a non-conducive environment for teaching and learning that challenged our pedagogical practices (PHo, 59).

This is similar to the study stated in the new Ethiopian Education Development Roadmap (2018–30), as the system of teacher education is suffering from unnecessary interference from both the MoE and REBs and frequent and sudden policy changes (MOE, 2018:37).

The other challenges that participants posed go with the student-teacher profile related to their low academic background knowledge and lack of commitment.

> Poor academic background knowledge of our student teachers, a lack of commitment among the stakeholders, a lack of academic freedom, and politicizing the educational setting challenge us (PHa, 36).

Some of the participants reported the presence of student teachers who have poor background knowledge and motivation caused an inability to use different pedagogical strategies caused adherence to the traditional method of teaching (PHo, 60). Complementing this, they stated that student teachers lack readiness for the colleges of teacher education and also do not motivate themselves to learn teaching, as confidently stated as follows:

> Student teachers lack motivation and readiness as a result of their financial difficulties, which force them to live in the most basic of conditions (PH, 62).

Another teacher educator also stated that the candidates have not only deficiency of academic proficiency but also lack of commitment and motivation to learn about teaching. They forwarded their observed evidence as that the interest, commitment, motivation, and willingness to practice (attitude) of student teachers are too low to learn effectively (PHo, 60, PBo, 10, 28, 48, 51, 56, 58, PHa 55, 67, 85).

Others associated the low motivation of the student teachers with contextual problems of low socio-economic status or living conditions of the student teachers and problems of good governance as follows:

> Student teachers' lack of motivation and commitment due to the bad living conditions and nepotism are challenges (PHa, 42).

They also disclosed that the student teachers' low academic and attitudinal competency inclined them to need compromised assessment results for their performance. Moreover, some participants commented specifically on the challenges of creating a safe and supportive learning environment in terms of assessment.

> There are sentiments of free graduation, in which grade "C" is the last grade that teacher educators are encouraged to provide for the student teachers. This leads to poor commitment among student teachers to work hard (PHo, 62).

Complementing this, participants portrayed that the student teachers developed a negative wash-back effect by narrowing down the content of teacher education, as evidenced by one of the participant's report as:

> There are sentiments of free graduation among the student teachers. Student teachers washed back the effect of graduating as teachers and earning money was also one of the major challenges (PHa, 23).

Planning for motivational aspects, follow-up and support opportunities, and refreshment trainings related to the teacher educators' professional activities would also make the realization of the program, as portrayed by the participants as:

> The concerned body's lack of technical support, such as mentoring, supervising, and facilitating for teacher educators to upgrade their status and change the persistent traditional style of teaching, is questioned (PBo, 63).

One of the participants, indicating the lion's share of leaders focuses on institutional improvement as a result of the practicality of professional development programs. As one of the participants said, "Leaders are not committed to ensuring effective pedagogy" (PHa, 42).

As discussed by many studies, professional development programs have three major advantages, particularly, to pedagogy: modification in the classroom practices of teachers, change in teachers' attitudes and beliefs, and change in the learning outcomes of students. These teachers' changes in knowledge, skills, and practice grew when they received professional development (Garet et al., 2001; Darling-Hammond & McLaughlin, 1995; Desimone, 2009). However, as discussed below, no emphasis was placed on professional development prospectsin the study area's colleges. Moreover, in this prospect there should be a role shift from being a teacher to becoming a learner, which may challenge their identity as a teacher of teachers. In complement to this, the other participant added:

> Lack of training on the skill gaps of the teacher educators, lack of monitoring and checking on the teachers' persistent traditional style of teaching mechanisms, and lack of discipline-based teaching and learning materials challenge the teacher educator (PHa, 55).

This justification goes with Guskey's notion described as that the three main objectives of professional development programs are to improveteachers' methods of teaching in the classroom, changing their attitudes and beliefs, and improving students' learning results (Guskey 2002). It is signified by the position that "*no professional was born a professional, but is a product of learning and relearning*," aiming at improving the teaching-learning process and thereby the universal goal set for education of ensuring inclusive and equitable education and promoting life-long learning opportunities for all (D. Hammond and N. Richardson, 2009).

Similarly, in the Ethiopian CPD Framework document, this is divided into two broadly classified parts: "updating and upgrading," where professional development is aimed to yield new knowledge and skills, improve teaching and leadership, and contribute to student learning and achievement (MOE, 2009b).

Similarly, Clarke and Hollingsworth (2002) also portrayed, the features of professional development strategies aiming to improve or change classroom practice, by;

a. providing teachers with hands-on teaching, assessment, and observation assignments that shed light on the processes of learning and growth;
b. grounding in participants' questions, inquiries, and experiments as well as profession-wide research;
c. collaborative and sharing of knowledge among educators;
d. based on and linked to teachers' work with students, as well as subject-matter and teaching method analyses;
e. prolonged and intense, reinforced by coaching, problem-solving, and modeling around particular practice issues; and
f. related to other issues of school transformation.

The ideas of the participants above show that professional development opportunities for not only teacher educators but also for leaders and education expertise in the colleges of the study area received the least attention. The only observable institutionalized form of professional development program in colleges of teacher education is the Higher Diploma Program (HDP), which is given to all newly deployed teacher educators in their first years of deployment. However, there is no framework or direction as to what should follow after the completion of the HDP. This implies that it requires revision in its approach, structure, and practicality in order to embed sound motivation, as concluded by one of the participants: "There are many teacher educators who have no skill of pedagogy, since they are not trained on the methods of teaching" (PBo, 6). They depicted the challenges in relation to the curriculum as being unstable, bulky, misaligned, and not engaging. The curriculum, as indicated by one of the participants, is unstable, of wide content, and module based (PHa, 65); minor courses are more than the major courses (PHa, 74); and it is misaligned between the contents of the courses and allotted time (PBo, 48).

Furthermore, participants were able to state that the curriculum was unable to equip student teachers with the primary purposes of colleges in society, such as;

> The curriculum is not designed in ways that engage the student teachers; it is not structured to enhance critical thinking and solve real-life problems (PHa, 44).

To mention some of the major shortcomings in relation to the curriculum, they state as follows:

> The main challenges are poor curriculum quality, in which minor courses outnumber major courses bulky content, and misalignment between course content and allotted time (PHa, 74).

Providing opportunities for teacher educators to participate collaboratively in the (re-)design of curriculum motivates teacher educators and empowers them with responsibility for the effects of curriculum in colleges since it offers chances for reflection on the curriculum beginning with individual knowledge and beliefs, practice, and learning objectives for students (Borko 2004; Simmie 2007; Voogt 2010). These golden goals seemed unfeasible in the colleges of teacher education of the present study area, as participants had said, short-term trainings on teacher educators' skill gaps, as well as long-term trainings (upgrading) and access or opportunities to get or share new pedagogical practices to implement active learning methods, challenged teacher educators' pedagogy (PHo, 84; PHo, 41; PHa, 65).

The teacher educators' responses to the question about the challenges related to the student teachers were that the candidates' prior knowledge, skill, and attitude were not adequate to the standard of the level. They stated that the poor performance level of the student teachers because of their low background knowledge is the main challenge of the pedagogy in teacher education (PHo, 10, 12, 15, 31, 37, 48, 60, 86, 87; PHa, 6).

With regard to the policy and its implementation, participants had to state the dominant challenges related to the teacher education policy and criteria of admission as follows:

> Admission policy and its criteria should be revised so that it helps to obtain capable and interested learners. The existing education system needs a strong reform to avoid corruption, cheating, incompetence, etc. (PHa1, 12). In my opinion, the existing educational and training policy is the outriding challenge (PHo, 29).

Participants indicated that poor policy-related measures and implementations carried out by the government were other potential sources of challenges for their pedagogical practices.

> Lack of motivation due to lack of promotion through career structure, occurrence of nepotism, lack of a clear policy of competition, or abuse of the policy of competition for both recruitment and deployment of teacher educators are the most prevailing challenges. In addition, lack of motivation and commitment due to the low level of living conditions and academic backgrounds of student teachers challenges the pedagogy (PHa, 42).

They also commented on the constraints that challenge teacher educators in their pedagogical practices as a lack of an effective admission policy or criteria, saying; “The main problem is SELECTION! This means that from the beginning, low-scoring students are selected for this profession” (PBo, 63).

Participants had to conclude their response relating to challenges related to support from the government as follows:

> There is no emphasis on primary teacher education from the government at all (PBo, 77). Lack of motivation due to a lack of academic freedom, political interference, and the limited living standards of both teacher educators and student teachers is the main challenge that confronts the process of teacher education pedagogy (PHo, 59).

Participants also mentioned a lack of material support from the government as a challenge to their pedagogy, as follows:

> As a higher institution, there are no adequate facilities like instructional resources, lab equipment, infrastructure, and classrooms (facilitated) (PBo, 78). Large class size; lack of technology-based resources like computers, projectors, and internet as a result of lack of funding (PHa, 20).

The other participants' view of the lack of support from the government was concerning about inclusive education and facilitating dormitories for candidates, which helps to ensure equity as well as quality teacher education, as follows:

> Teacher educators are challenged by the lack of some assistive technologies for students with special needs and dormitories for all candidates (PHa, 85). Input-process inconvenience due to less equipped offices, resource centers, laboratories, and classrooms, and a lack of incentives and promotions (PHa, 28).

Here, the participants stated that the preparation of primary teachers was entangled with the failure of input-process integration. In fact, they have solidified not only the issue of the provision of financial as well as material supports from the government but also the duties and responsibilities of technically capacitating the colleges in order to render effective or reformed leadership. As the government has a role in re-designing policy, ensuring its enactment, and checking its effectiveness, the government should work to create good governance, develop effectiveness, and empower the colleges, as stated as follows:

> Lack of technical support such as: follow-up, monitoring, supervision, feedback, academic freedom, and freedom from political interference (PHa, 4). Lack of training and monitoring of teacher educators' working conditions results in a persistent traditional style of teaching (PHa, 84).

As stated below, the entire idea of participants on the challenges related to government support appears to point out the main gap of building a bridge with government bodies for better commitment to foster quality teacher education pedagogy:

> Government or leaders are not committed to ensuring effective pedagogy (PHa, 59).

In actual practice, the degree to which educational institutions are concerned with improving their effectiveness is likely to be shaped by higher-level policies and contextual conditions. As well as the challenges related to socio-economic status, curriculum, policy, admission criteria, and the technical and material support provided by the government, the government also has to maintain the status quo in teacher education with regard to the fairness of the salary. The participants were irritated, explaining this teaching profession's challenge, which has lasted decades and requires easing the government's fierce resistance to proportionate it with that of the other sects. As they noted, the challenges that teacher educators face and have a negative impact on their pedagogical practices are primarily related to the low motivations of teacher educators due to the low salary scale relative to the market (PHo, 51; PHa, 51; PBo, 84) and other sectors

(PHa, 6, 12). The salary given to teacher educators is even lower than that of primary school teachers, which demotivates them (PHa, 48).

The other related challenge, to which almost all teacher educators responded that demotivated them to render effective pedagogy, was benefits or incentives through promotion because of effective professional experiences, as stated as follows:

> The main challenging issues in their pedagogy are teacher educators' low motivation due to a lack of promotions and incentives, particularly after lecturer level, or due to no use of college service and work experience after lecturer status (PBo, 85).

There are no incentives or motivational strategies in place for teacher educators. All teacher educators are paid similarly and have the same status regardless of their service or experience, especially after the lecturer level (PHa 6, 8, 21, 48; PBo, 9; PBo, 34). Of course, this indicates the result of ineffective management in the system of teacher education in the regions that needs to revise policy-related issues and solve the problem, as the impact of the problem is damaging the quality of pedagogy in teacher education, as confirmed as follows:

> Most teacher educators work in private schools and colleges due to a lack of incentives (PHa, 66). Low status is given by society to teachers due to a lack of incentives and the low salary scale (PHa, 10).

This was related to what was discussed previously in that the occurrence of the de-motivational factors—the absence of promotion through effective work experience and low salary—in the teacher educators of primary teacher education caused a lack of commitment or motivation among teacher educators to execute effective pedagogy (Giertz, 2016).

Teacher educators-related factors

Although Wayne and Youngs (2003) initiated the evidence of the effects of teachers' content knowledge and certification status on student accomplishment gains to be minimal and conflicting, such competency is apparently one of the central predictors for effective teaching in teacher education (Darling-Hammond 2000; National Council for Accreditation of Teacher Education, 2002).

Based on the participants' responses, the challenges related to this component were put as that teacher educators' inability to use appropriate instructional strategies, to learn each other, to update themselves professionally, to teach learners based on the learners' prior knowledge, and poor digital competence are the most challenging aspects of teacher educators' pedagogy (PHo, 22; PHo, 45; PHo, 60; PHo, 75; PHo, 80). Similarly, other teacher educators expressed their concern about teacher educators' lack of professional competence. As they reported, a lack of professional competency among teacher educators is indicated by their lack of commitment and an inability to evaluate the needs of the learners (PBo, 36; PBo, 60; 53, 65). In its subsequent illustration, it was revealed that there were many teacher educators who were teaching in colleges who graduated with only subject matter knowledge, as stated as follows:

> There are many teacher educators who have no skill in pedagogy since they are not trained in general pedagogy except subject matter (PBo, 6).

Participating teacher educators stated that the pool of teacher educators, who are either graduates with only subject matter knowledge or with both subject matter knowledge and knowledge of pedagogy, was the root cause of the teacher educator-related challenges. At this point, in Ethiopia, it is common to observe that mostly those first-degree graduates who are unable to get jobs become teachers as a temporary solution. It is therefore not surprising that a widespread lack of interest and motivation prevails among the teachers—the pool of teacher educators in teacher education.

It was also supported by the following participants' reflections displayed as:

> Reluctance of teacher educators to update themselves regarding pedagogical practices due to lack of facilities, lack of commitment, and the political and socio-economic situation of the country are challenges that prohibit effective teacher education pedagogy (PHa, 14).

In general, as discussed above, according to the teacher competency framework conceptualized by Blömeke and Delaney (2012), a motivated teacher regulates behavior and utilizes appropriate strategies to achieve professional objectives (Blömeke and Delaney 2012). As it requires teacher educators to explicitly "unpack" the pedagogical practices of teacher education, low teacher educators' motivation and commitment become the most serious challenges in the teaching

profession. According to Herzberg's (1959) Motivation-Hygiene Theory, the factors that create motivation and job satisfaction (which are intrinsic) include responsibility, performance, work itself, advancement, and development. Therefore, it is believed that motivation is a crucial component that helps people to grow in their interest, dedication, satisfaction, morale, attitudes, and passion for their work.The factors that cause job dissatisfaction if they are not maintained at a satisfactory level are management, the competence of the leader, the relationship with the leader, company policies, working conditions, salary, status, and security that affect personal life. However, factors such as nonattendance, misbehavior, and attrition are reflections of low motivation (Richardson, 2014).

Nonetheless, participants stated that there are challenges with commitment to execute effective pedagogy due to constraints related to motivation, as evidenced by the one of the partcipants report, stated as follows:

> Poor commitment and lack of motivation of teacher educators due to the lack of promotion through career structure, i.e., similar payment regardless of their service or experience, especially after lecturer level, is the most challenging aspect of effective pedagogy—devaluing experience (PHo, 8).

In other words, "teachers who have served for many years at a given rank are paid the same salary and benefits as those that are newly promoted or hired" (PBo, 42). Participants didn't also hesitate to specify the inferior salary scale of the profession when compared to the other sectors, as stated by the road map as "the inadequacy of teachers' salaries in view of the cost of living and the pay that individuals with similar qualifications get in other which did not motivate them.

> Low levels of motivation, as a result of the low salary scale, constrained teacher education pedagogy and resulted in job dissatisfaction PBo, 84).

In addition, other participants emphasized the challenge of the low salary scale, which caused teacher educators to look for additional jobs and give less emphasis for their main profession as:

> Due to a lack of incentives, most TERs work in private schools and colleges (PHa, 66).

On the other hand, according to Herzberg's Hygiene Theory, increasing the salary (the intrinsic factor) does not lead to long-term job satisfaction, but it can prevent job dissatisfaction.

Generally, the teacher educators' response to the challenges of their pedagogy in relation to their pedagogy revealed a major challenge. All of the teacher educators believed that student teachers could successfully learn to teach when they have minimum learning competency, which is indicated by knowledge, skill, and attitude. Moreover, they stated that it was not only their academic competency that was low, but their motivation and commitment to practice pedagogical classroom and field activities, as stated by one of the participants: "no observable commitment of student teachers to improve their skills" (PHa, 25). The performance of an organization is affected not only by its internal environment but also by external environmental factors such as social and political aspects, government policies, and government support (Satyendra, 2020). Accordingly, teacher educators who participated in the present research stated the challenges with regard to socio-economic status, curriculum, policies, incentives, and support from the government.

In general, the above analysis of challenges that affect teacher educators' pedagogical practices is summarized as follows:

Table 19: Challenges on teacher educators' pedagogical practices

Themes	Sub-themes	Codes	f	%
Teacher Educator Related	Professional competence and commitment (16%)	Commitment and motivation	23	7%
		Professional competency	11	3%
		Adherence to conventional teaching	20	6%
Contextual Factors	Leadership and Management of the College (34%)	Instructional resources and facilities	64	20%
		Professional development opportunities	16	5%
		Safe & facilitated learning environment	28	9%
	External Factors (50%)	Student teachers' characteristics	79	25%
		Socio-economic status	6	3%
		Incentives and related support	40	13%

	Curriculum and related programs	10	4%
	Policy and its implementation	15	5%

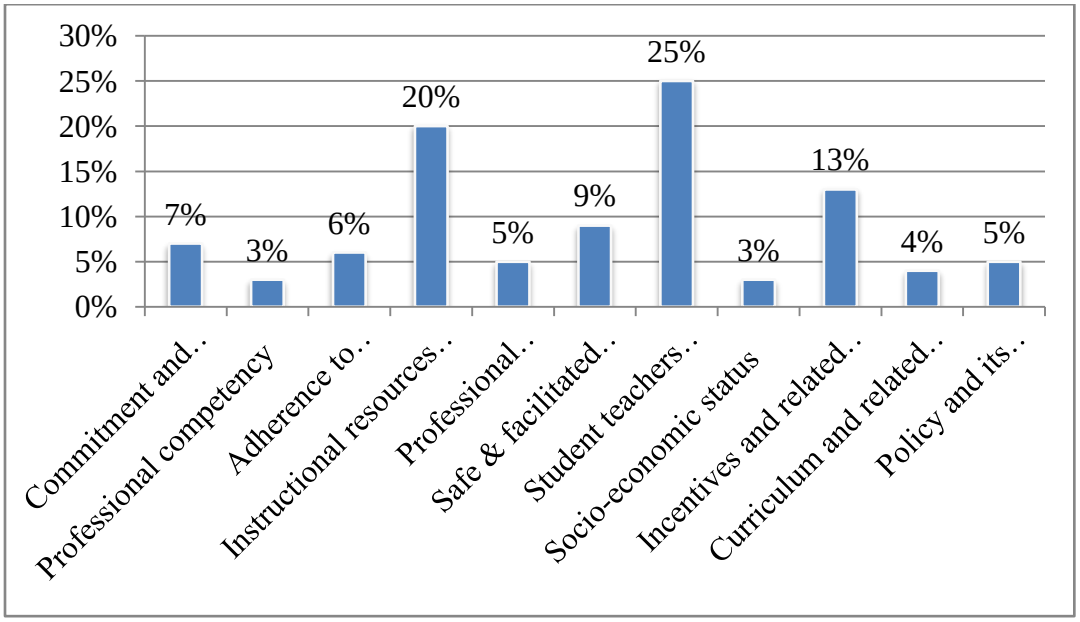

Figure 9: Frequency distribution table on threats that affect teacher educators' pedagogy

As revealed above, the themes that emerged from the participants' responses about the challenges of teacher education pedagogy were teacher educators related as well as contextual factors. From these categories, 84% of teacher educators rated the contextual factors as well as 16% teacher educators rated the teacher educators' related factors as inhibiting challenges to their pedagogy. The theme teacher educators related (16%) is categorized based on the codes of commitment and motivation (7%), professional competency (3%), and adherence to conventional teaching (6%) in teacher educators related them. The contextual factor's theme (84%) resulted from the sub-themes of leadership and management of the college (34%) and external factors (50%). The sub-theme leadership and management of the college resulted from the codes of instructional resources and facilities (20%), professional development opportunities (5%), and safe & facilitated learning environment (9%). Similarly, the sub-theme contextual factor was resulted from the codes of student teachers' characteristics (25%), socio-economic status (3%), incentives and related support (13%), curriculum and related programs (4%), and policy and its implementation (5%). Therefore, the most significant barrier preventing teacher educators from implementing effective pedagogical practices appeared to be contextual determinants (84%), of which factors beyond the college level (50%) are greater determinants than the college level

factors (34%). In this regard, effective pedagogy requires impactful leadership at the college and beyond the college level, with leaders setting directions and keeping track of performance. Particularly, as the data from the participants shows, there should be an adequate supply of instructional resources and facilities. There should be opportunities for professional development for teacher educators based on their needs, particularly their motivation and commitment. It also becomes important to work on the quality of admissions for student teachers. Since education quality in postmodern society is viewed in terms of a user-friendly environment (Amare et al., 2006), creating a safe and supportive learning environment becomes imperative. Colleges also have to work to improve both teacher educators' and student teachers' characteristics, in terms of commitment and motivation during admission or disposition.

These are the responsibility of the colleges, as far as the colleges are autonomous enough. In the Ethiopian context, colleges of teacher education seemed to favor the integrated model or mixed patterns of centralization and decentralization among the four models outlined by Smith (2015) as the asymmetric model, matrix model, integrated model, and decentralized model. In this model, organizations are positioned as an independent unit that possesses the power to make decisions, use resources, hire and fire staff, and work at higher administrative levels with respect to the other dimensions. In this line, the curriculum and teacher education policy contexts are mostly in the realm of centralization, but more autonomy is provided to the colleges, i.e., decentralization, to create conditions for the expansion, enrichment, and improvement of the relevance, quality, accessibility, and equity of education and training (MoE, 2013).

However, because the overall purpose of colleges is to prepare quality (improved) teachers, thereby increasing future students' achievement of the country's general education, this corresponds to the system's thinking i.e., quality education requires a system that supports effective learning. As previously discussed, in order to sustain a culture in which teachers learn to teach effectively and their well-being and achievement are realized, all organizations and individuals at all organizational levels should engage in systems thinking, which allows them to look both within and to the larger system for connections that will help them maximize institutional effectiveness (Scheerens, 2013). As a result, it requires external environment integration ahead of time for either college-mandated or above-college duties. In terms of external factor challenges, the data clearly demonstrated that if quality teacher education is

required, there is a pressing issue for which stakeholders must accept responsibility and feel compelled to act regarding the motivational aspects of teacher educators. It is an issue of balancing the living costs with their salary, providing sustainable and holistic support, and creating motivational strategies as per the effective experiences of the teacher educators.

In general, participants believed that teacher educators' lack of commitment and professional competence were among the most significant obstacles affecting their pedagogical practices. They emphasized that teacher educators insist on sticking with their previous experience of the lecture methods that were used for teaching in schools to maintain the statuesque of a teacher-centered approach rather than searching for or adopting effective methods of teaching in teacher education. The reason for the low commitment and professional competence, as the interviewees stated, is the teacher educators' low motivation due to the contextual problem such as policy and its implementation, leadership and management, student-teachers' behavior, curriculum, socio-economic status and motivational issues.

Thus, the root cause that makes the picture of teacher education troubling was found the deficit of conceptualizing and re-conceptualizing teacher education (development) as a system and the uneven distribution of it, which include coherent and complementary components of recruiting, preparation, inducting, and supporting to develop effective teachers professionally. Besides, it has also been discussed that teacher educators are not only demotivated but also dissatisfied due to the low salary and absence of incentives, no matter to what extent they serve in the teacher education.

CHAPTER FIVE: DISCUSSION OF THE FINDINGS

Introduction

The previous chapter was concerned with the presentation of the results of the study based on both quantitative and qualitative data that led to the findings of the study. The present chapter is devoted to determining the attainment of the findings in line with the objectives of the study. In other words, the realization of the purpose of the study will be evaluated against the existing theories based on the following research questions:

5.1 How do teacher educators conceptualize their pedagogy?

5.2 What pedagogical strategies do teacher educators practice to facilitate learning to teach?

5.3 Is there a statistically significant relationship between teacher educators' pedagogical conceptions and their pedagogical practices?

5.4 What are the major challenges for teacher educators to implement their effective pedagogy?

5.1 Teacher educators' conceptions of their pedagogy

This section addressed the first research question that interrogated teacher educators' conceptions of their pedagogy. Conceptions of teacher educators' pedagogy matters as significant change or improvement in teachers' practice generally results after a significant change in teachers' attitudes and beliefs (Guskey, 2000).Here, it implies that teachers' views and conceptions cause improvements in their practice. However, in contrast to this linear model, there are studies that assume a change in teachers' practices is the prerequisite of a change in teachers' beliefs, or "personal constructs," that determine how they approach their teaching (Richards et al., 2001). It is because our teaching approaches, strategies, and styles reflect our personal values and beliefs.

Accordingly, two major deductions of teacher educators' conceptions of pedagogy that are concerned with Korthagen's (2017) theoretical frameworksteachers conception of pedagogy were found. These are application-of-theory and realistic approaches. In a similar manner, researchers in the field of teacher education framed teacher education pedagogy in to two approaches as performance assessment oriented as well as realistic strategies(Mekonnen, 2023). Accordingly, the realistic approach of an integrated, continuous, and developmental clinical experience allows student teachers to continuously reflect on their experiences. In contrast, performance assessment oriented strategies support student teachers in developing teaching practices and learning to teach skills through microteaching, performance tasks, teaching portfolios, and etc.

Each of these is discussed as follows:

5.1.1 Conceptions of application of theory

As presented in the precedinganalysis part of the present study, most of the participants conceived of teacher educationpedagogy as theapplication of theory,a way in which theoriesare first taughtvia lectures or direct instructions in the college classrooms to be practicedby the student teachersin the practical setting of the schools. Teacher educators with this conception noted that teacher candidates need to have a set of skills (competencies) that make them competent teachers in schools of practicum and also in their future schools that are taught in a teacher educator-led approach. These participants believed that focusing on the mere student teachers' cognitive development by ensuring their learning progress would result in effective learning to teach. According to Korthagen, this type of conception is known as an application of theory (Korthagen, 2017), which comprises of a group of separate courses in which theory is offered without much connection to practice. This also includes competence or performance, applied science, master-apprentice, and teacher identity approaches. Moreover, in this conception, while student-teachers learn the theory first and then apply it in the school environment, teachers tend to avoid activities they believe will force them and their students to the practical activities (Bas & Senturk, 2019).

They reasoned out further the necessity of imparting the theoretical professional knowledge of teaching, among others, because of the student teachers' profiles, as put by one of the participant teacher educator, TEr 1, as:

> Constructing knowledge precedes the student teachers' ability to think critically, reason out, and act, even in the theory-practice model. As a result, student teachers learn theoretical courses that teach them foundational knowledge pertaining to education in the classrooms of the college through lecture methods and practice it in schools during the practicum course. As we observed during the practicum supervision, let alone construct knowledge for themselves, it was less likely to find student teachers who could deliver at least sufficiently the theory they learned in the college classrooms. It also needs teacher educators' beliefs and their responsibility for what and how all student teachers learn.

This analysis of teacher educators' conception of teacher education pedagogy refers to the fact that teacher educators conceptualize teacher education pedagogy as not only teaching the sole theoretical knowledge about teaching through cognitive practice and teacher-led approaches (as that of teaching in schools) but also puzzling with the dichotomized (isolated) forms of both theoretical knowledge and practical reasoning. Moreover, the teacher educators lost their confidence on development ofbelief among themselves that all student teachers can learn. As one of the participants in the questionnaire reported on the open-ended items, "philosophy of teaching and learning" held by leaders, teacher educators, and student teachers could be of great significance. In his extended notion, he noted that the meanings we attach (our conceptions) to teaching and learning should properly be understood (conceptualized) and challenged first. Thus, let's test the assumptions we held behind our actions. They also reported lecture, direct instruction, and group work as the main learning strategies of teacher educators' pedagogy, based on their likely conception, as complemented by the participants' quotes as follows:

> A teacher-educator, in his or her teaching, offers lessons theoretically according to the level, ability, and interest of the learners. He/she need to introduce different types of teaching methods and classroom management strategies for learners that can equip them to be effective teachers (PHa, 28).

This analysis also indicates that the teacher educators' pedagogy were not only suffering by the traditional teacher educator-led approach but also by the school pedagogy rather than emphasizing on the teacher education pedagogy that focus on an integration of both theoretical as well as practical strategies. As discussed in the literature part of the present study, teacher educators must successfully model appropriate behaviors in order for those behaviors to be observed, adjusted, replicated, internalized, and applied appropriately to learners of all levels and styles in order for teacher educators to impact the profession. It demands that teacher educators become archetype practitioners, demonstrating their teaching in ways that are consistent with the type of teaching envisioned in reforms. As expressed in metaphoric idioms like "teach as you preach" (Struyven, Dochy, and Janssens, 2010), "walk the talk" and "the medium is the message" (Guilfoyle, 1995; Graziano, 2008), and "practicing what I preach" (Schiller & Streitmatter, 1994; Loughran, 1996), the teacher-educators' exemplary role holds its basic importance.

5.1.2 Realistic conception

On the other hand, participants didn't abstain from explaining that student teachers had to reflect on only what they learned from their school practicum about classroom teaching, management situations, teaching techniques, lesson planning, and the ability to select and adapt teaching materials.This implies an element of existence of realisticconception of teacher education pedagogy. As they commented, their usage of these techniques was because of the singularity of their lecture method of teaching. Moreover, their usage of these techniques was not based on their proper conception of a realistic approach because teacher educators use reflective pedagogy predominantly when student teachers present what they learned from school environments in their practicums. The proper conception of this approach, as contrasting to the conception of application of theory, however, tailors the classroom to match the needs of the learners as a group and as individuals who actively participate in their learning processes(Jay, 2003; Osterman & Kottkamp, 2004; Korthagen et al., 2006). By the realistic conception, student teachers are encouraged to reflect on their own learning because of being commuted between practice and theory. In this regard, some of the participants were informed that student teachers must be encouraged to construct personal theories in and through practice. The way these teacher educators envisioned their work was that people's experiences should come first because what they observe in the classroom should lead to the construction of theory for their subsequent practice, i.e., a practice-theory-practice approach. According to their extended assertion, people's experiences based on their observations should come first and lead to theory, but they should also go to practice so that they can find any gaps they have, as justified by TEr 4 as follows:

> Some of us envisionour work as that people's experiences should come first, because what student teachers observe in the classroom should lead to the theory for their subsequent practice, i.e., a practice-theory-practice approach. Their school learning can sometimes lead to theory. People's experiences based on their observations should come first and lead to theory, but they should also go to practice so that they can find any gaps they have. It is better to start by enhancing their prior knowledge.

Some of the teacher educators during the interview discussion also noted that their conception of pedagogy was that teacher candidates learn best to teach when they are dominantly practicing

teaching beyond learning theoretical knowledge of teaching, as quoted by one of the interview participants, TEr 4, as follows:

> The best way to teach about teaching is to make the school environment part of the classroom environment. That means teacher candidates have to learn by being exposed frequently to the school environment, in addition to the existing practicum program. They have to exercise how to teach contents to manage the learners as well as the classrooms effectively. It is true that theoretical knowledge is important, but they also have to learn how to manage class, students' behavior, how to teach, and so on.

To the worries of some of the participants of the questionnaires with open-ended items, teacher education pedagogy is so complex that needs the teacher educators' and the student teachers' reflective practical conception. This kind of conception also deals with the intricacies triggered contextually and to evaluate their duties in relation to those difficulties, as evidenced by the following excerpt:

> As we are producing professionals, prospective teachers learn best to teach when teacher educators use pedagogy that focuses on doing things practically in a resource-intensive environment rather than sticking to mere teaching theory (PHa 14).They learn effectively when they are practically engaged in the activities of learning for teaching and demonstrate the ways in which they are going to teach practically in their real school environment (PBo 53).

In general, some of the participants asserted that student teachers learn best to teach through approaches that engage them in active and explicit practical work that could be termed realistic conception. They also noted that teacher candidates learn most about teaching when they are engaged in not only practical teaching but also reasoning-out or reflective teaching through an integrated theoretical knowledge of teaching with the likely practical experiences of school environments.

5.1.3 The prevailing conception ofpedagogy among teacher educators

The descriptive analysis, based on the survey data from the Likert-type questionnaire, showed that 52% of teacher educators conceptualized their teaching as application of theory, and 47% conceptualized it as a realistic approach. To identify the extent of the difference that exist between the conceptions, a Wilcoxon signed-rank test was computed, and the test ($Z = -2.93$, $p = 0.003$) showed that participants had significantly conceptualized their pedagogy as application of theory. Similarly, as observed by the frequency analysis of the data from the responses of the open-ended survey items, the ratings of the data for each sub-theme are articulated as competence or performance (46%), applied science (26%), reflective (14%), master-apprenticeship (8%), and teacher identity (6%), which is associated to the work of Robinson and Mogliacci (2019) conceptions of teaching. Moreover, the participant teacher educators to the open – ended items of the questionnaires as well as to the interviews reported that they conceptualized their pedagogy as application of theory.

As a result, findings from both qualitative and quantitative data analysis support the assertion that teacher educators have a conception of the application of theoryintheir pedagogy. In this conception, student teachers are taught through the teacher educators' imparting professional knowledge and skills in a lecture or direct instructional format. As discussed above, teacher educators not only conceptualize learning to teach as imparting solely theoretical knowledge but also are puzzling with the dichotomized (isolated) conceptions of theoretical knowledge and practical reasoning. Yet, during their interviews as well as in their response of open-ended items of the questionnaires, they were afraid that they would lose confidence in the prevailing ways of the teacher candidates' learning as they were learning through lecture methods of teaching, and they believed that it could also be one of the causes of the conception problem. Their intention was to make teacher candidates have a good set of professional knowledge and skills (competencies) and to promote the learning progress or cognitive development of each teacher candidate. Their ultimate objective is to help student teachers acquire the skills, information, and understanding required for practicum and classroom instruction.

However, the teacher educators' conceptions of their pedagogy are highly debatable in that their conceptions of their pedagogy are not to the standard of the teacher educators' professional profile.As professional profile of teacher educators' pedagogy, teacher educators need to

conceptualize their pedagogy as realistic approach in that professional knowledge is taught via both theoretically as well as practically. Moreover, studies evidence that effective teacher educators enact their intellectual ability activities such as ongoing professional learning, positive and gender-sensitive teacher-student relationships, the belief of all students can learn, maintaining positive enabling living and working conditions, and creating a supportive classroom environment (Dunkin & Biddle, 1974; Gorden, 2012; Lampert, 2010; Cuenca, 2010). By the same token, Korthagen called for effective teacher education pedagogy to be conceived as enabling student teachers to "think like a teacher," "act like a teacher," and "reflect like a teacher" (Korthagen 2016). Others also contend that teacher education pedagogy should be coherent and integrated strategies as well as experiences that links theory to practice helping student teachers to develop their own deep-seated beliefs and assumptions about teaching and learning (Mekonnen, 2023; Darling Hammond, 2006).

The traditional didactic approaches of application of theory perspective has been critiqued for not adequately describing the complexity of experiential learning and the social interactions determining what is being learned from experience as well as view of teacher education that present theories to student teachers within isolated courses (Cobb& Bowers, 1999; Greeno, 1997). Rather, realistic conceptions of pedagogy leads to the introduction of innovative pedagogical practices, such as problem-based learning, action learning and practice-focused reflective learning and the use of collaborative, flexible, and interdisciplinary teaching strategies, and to an increased focus on field experiences. As discussed previously, learning emerges from and is intertwined with our actions and those of others (Knight et al., 2015; Putnam & Borko, 2000). Aligned with this, Korthagen (2017) added that teacher learning is situated, active, constructed and social.

It is the responsibility of teacher educators to establish the theoretical and practical groundwork for teaching in the teacher education courses and in field experiences. Since teacher educators' method of teaching is the message (content) of teacher education (Dawit, 2023), teacher educators have to show practically what student teachers should learn about teaching in active, explicit, and meaningful ways rather than giving an overview of teaching for the candidates. This, in turn, requires them to show specific techniques of teaching deliberately, clearly, and explicitly, as well as monitor while he/she practices the technique. In this way, student teachers explore the particulars or specifics of teaching in focused ways, equipping them with their

professional skills and identity development. Teaching methods that are implemented by the teacher educators need to be in accordance with the level of education and the needs and requirements of the student teachers. The majority of the time, teacher educators would employ the following techniques and resources: conversations, role plays, laboratories, competitions, practices, projects, assignments, fieldwork, and supervised experience. One of the main issues that would make it difficult for the teachers to teach effectively in their future classrooms is the employment of inappropriate teaching approaches when training student teachers.For instance, if student teachers have a need to learn well about the reformed and effective methods and strategies of teaching, then the teacher educators should demonstrate and show the strategies practically and should give them the theoretical background of that strategy. As studies suggest, cognition and knowledge creation in learning establish instructional design principles of constructivist learning techniques such as open-ended learning, authentic learning, and inquiry-based learning as effective pedagogical strategies (Paavola & Hakkarainen, 2005; Abdou, 2012). This in turn needs to employ the teacher education pedagogies such as case studies, videoconferencing (VC), modeling, integrating technology, reflection, seminars, and teacher identity.

Preparing teachers in pre-service programs also needs having a perspective on a holistic practice-based process for learning to teach that is at the core a mirror image of the practice of quality teaching in schools.Similarly,the process of continuously refining one's own teaching insights under the supervision of an expert through the interaction of theoretical concepts and introspection is known as teacher development. Instructors who have realistic expectations are more likely to create engaging lessons and support learners who are struggling. This kind of educator usually encourages the teaching-learning process and a variety of challenging activities, which fits the pedagogy of teacher education in which professionals are aimed at being prepared. According to Korthagen, using a paradigm of three layers of gestalt, schema, and theory, a realistic approach unifies theory and practice (Korthagen, 2017). Because of this, the concept of a gestalt is understood as a dynamic and constantly changing entity that encompasses not only the teacher's overall perspective of the environment but also the pictures, thoughts, feelings, wants, values, and behavioral inclinations that are sparked by the situation.When an actor, in reflection on a situation and the actions that were taken in it, builds a conscious network of concepts, qualities, principles, and other things that are helpful for explaining practice, that is

when schema is developed. The formation of a logical ordering based on prior knowledge or a cohesive framework of knowledge constitutes the formation of the theoretical level (Korthagen, 2010). According to Korthagen and Kessel (1999), a realistic approach calls for a unique role from teacher educators. This role includes developing appropriate learning opportunities for student teachers, encouraging further awareness and reflection on the experiences of the student teachers,

Others argue that learning between students and teachers comes from our own behaviors in relation to others', not just from teaching them useful educational theories and from learning concepts sequentially on a scale of increasing complexity (Arnseth & Saljo, 2007). As student teachers participate in more than just theoretical learning, teacher educators must make sure their students are actively engaged in the real world. This in turn requires the teacher educators to clearly demonstrate their teaching techniques and talents in addition to the student teachers actively participating in practical experiences. In addition, they must learn from field experiences, connect theory to practice, and work with and absorb knowledge from other learners.

Additionally, according to Dewey (1998), learning is an experience that the learner is a part of, not just a "spectator" who observes. Researchers have developed the importance of experience, reflection, and context in learning to teach from his theories of learning (Webster-Wright, 2009), which is consistent with the national perspective on learning to teach. The explanation of how teacher learning is active, located, social, and constructed was its extension. According to this viewpoint, experience and emotion are deeply entwined with knowledge, making it placed. It has to do with establishing an educational environment where instructors may always learn new things. This is the most likely method to motivate students to achieve more, especially those who plan to enter the teaching profession for the first time and want to do it well.

Learning to teach, in the opinion of Korthagen and others, necessitates viewing knowledge as an object of creation rather than as an already existing subject (Korthagen, Loughran, & Russell, 2006). Regarding knowledge as an artificial subject, this leads to the theory that regards telling as instruction and listening as acquisition. It is important to provide student teachers with opportunity to learn from their own experiences and the concerns that arise from them. As a

result, learning occurs most effectively when students are fully immersed in the material and have the opportunity to experiment, discuss, debate, analyze, examine, and defend the ideas and abilities they are prepared to acquire. Additionally, they learn best when the training is engaging, purposeful, and suitably challenging, grounded in real-world issues and situations.

The results of this study, thus, seem to be in line with that of Dawit Mekonnen (2023), who found that changes to the student teachers' knowledge, beliefs, and attitudes about learning to teach will be brought about, among other factors, when teacher educators help the student teachers on learning to teach and when teacher educators model effective pedagogies for the student teachers. However, the field where common sense still rules the day is teacher learning and teacher education pedagogy (Mekonnen, 2023). The finding from this present study is also consistent with that from Adrienne E. Barnes and others (2018), who found that teacher educators in Ethiopia practically are not teaching student teachers learner-centered pedagogical strategies because they have never received teaching in doing so. They stated further that despite the several reform efforts in in-service training in teacher education pedagogy, teacher educators' conceptions of teaching remained teacher centered. As discussed by Aweke and others, each reform was linked to several threats, including failing to undertake a pilot study, failing to consider local conditions, lacking time and money, being unaware of teacher and student involvement, and not involving professional groups and communities. Quality issues had been obstructed in Ethiopian teacher education and education in general (Aweke et al., 2017).

5.2 Teacher educators' pedagogical practices

It has been analyzed that teacher educators' pedagogical conceptions were applications of theory. Consequently, on addressing the second research question that interrogated teacher educators' pedagogical practices to facilitate learning to teach, two major themes,transmissionist and constructivist approaches,that were based on Donche & Van Petegem (2011) and OECD (2018) emerged and were discussed as follows:

5.2.1 Transmissionist approach

Participants, based on the data of the questionnaires, justified the fact that teacher educators employ a transmissionist pedagogical approach in their preparation of their student teachers. By the Wilcoxon signed-rank test of the two scales of the questionnaire, it was found that teacher

educators are significantly practicing transmissionist pedagogical strategies in their teacher education (Z = -4.71, p = 0.000).Similarly, in their open- ended questions of the questionnaire, the participants discussed that lecture (53%), direct instruction (14%), and micro-teaching (3%) were the strategies and methods that they employ most often and the rest: guided practice, field/project work, questioning and answering, seminars, independent works, reflection, modeling, research, case studies, and simulations adding up 30%, which grouped asconstructivist pedagogical practices, employed rarely. They presumed that student teachers should learn theories of professional knowledge mostly through lecture or direct instruction on the premise that they may apply them in the classroom since theory informs practice. Teacher educators, in the interview discussion also expressed repeatedly that theories are frequently taught in separate courses with no relation to practice in a one-way channel of communication. As discussed by the interview participant, in this approach, the student teachers' involvement is determined to listening and rarely taking some notes.

For example (TEr,3), elaborated on this notion as:

> Teacher educators usually use the traditional lecture approach to teaching. It is commonly used method thoughconstructivist approach is believed to be good and is expected to be used by teacher educators. The challenge with constructivist approach is that it is time-consuming. For example, in our usage of cooperative learning, the allotted 50-minute period wouldn’t be feasible for the group discussion, summarizing, and reflection. Consequently, very few committed teacher educators, whose subject suits, may use it rarely.

Accordingly, the teacher educators offer the reason for not using the constructivist approach to teacher education pedagogy, labeling it as not feasible and inconvenient, which refers to a lackof proper conceptions of teacher education pedagogy among them.

Likewise, student teachers’ interviews data show thatstudent teachers were only prescribed the limited techniques and contents of teaching, despite the fact that teacher education plays a significant role in helping to generate relevant techniques of teaching for the contents and the preparation of quality prospective teachers and helping them manage obstacles that they will face in their future career.

One of the interview participant student teachers, explaining the teacher educators' impartingnature of knowledge of subject matter and knowledge of pedagogical skills, put as "teacher educators usually present their lesson about learning to teach and assess based on what we learned. The theories we learned in our college classroomshelped us to practice teaching on the practicum courses." Moreover, student teachers were also discussed about the pedagogical experiences they had as a result of their stay in the colleges of teacher education as: "Equipping us with the knowledge of teaching using lecture methods of teaching could be mentioned as an experience we had in the classes of the college. Occasionally, some teacher educators provide us with activities to work on in groups and to present to the class in the presence of our instructor. This can teach us the use of cooperative learning strategies, making learning active, the practice of continuous assessment, and the use of instructional materials to make learning concrete and long-lasting."

In the same vein, the data from the classroom observation also exhibitedthe potential teaching strategies organized into introduction, presentation, discussion, and conclusion, characterized by poor interaction between the teacher-educator and student-teachers.The classroom observation data failed to reveal the interactive lesson that the teacher educators were providing to the student teachers, as they were observed providing materials and brief explanations. The majority of the student teachers appeared confused and lacked comprehension of the lessons.

5.2.2 Constructivist approach

Some teacher educators reported their experiences of teaching in an integrated manner of both theoretical and practical pedagogical approaches in an active and engaging learning strategy to fully address the objective of the lesson. Some participants of the questionnaire and interviews stated their occasional usage of instructional strategies like questioning and answering, assignment works, action research, seminars, and independent works. However, the classroom observation data failed to reveal the constructivist approach that the teacher educators were providing to the student teachers, as they were observed providing materials and brief explanations, and the majority of the student teachers appeared confused and lacked comprehension of the lessons. Moreover, both the participant teacher educators as well as the student teachers evidenced that teacher educators couldn't build their practice on constructivist

strategies since they characterized them as time-consuming and blamed those contextual traits for challenging them to fully function.

5.2.3 The predominant pedagogical practices ofteacher educators

As discussed earlier, the teacher educators' conception of their pedagogy was application of theory. As a result, it is expected that their pedagogical practice would be shaped by their conception of application of theory, in which theoretical knowledge is merely transmitted first and then supposed to be implemented in the practical setting of the school(Harden and Crosby, 2000). Consequently, the transmissionist or cognitive practiceteaching approach was found to be employed often and very often by the teacher educators. This was evidenced by all instruments of the present study that congregated toboth quantitative and qualitative analysis.For instance, the Wilcoxon signed-rank test exposed that teacher educators' transmissionist pedagogical practices were statistically significant (Z = -4.71, p = 0.000), and more teacher educators employ their pedagogy in a transmission or cognitive pedagogical approach. Similarly, both the interview and open-ended questions' participants reflected on theirpedagogical practices and foundtransmissionist approach. Moreover, the analysis based on the observationaldata from the classroomteaching demonstrated the teacher educators' use of the mere transmission approach.This approach, in turn, imposes to employ the traditional instructional strategies and methods such as lecturing, didactic presentation, and direct instruction.

This approach focuses on the transmission of knowledge from the expert teacher to the novice learners, which was dominantly used in the teaching of secondary/primary schools and less relevant to teacher education pedagogy. In this approach, while student teachers' role mainly depend on learning facts, concepts, and theories in a mostly passive and receptive ways without obtaining much opportunities to practice, the duty of the teacher educators is to impart knowledge (Bas and Senturk, 2017; Schunk, 2008; Donche & Van Petegem, 2011; Samuelowicz & Bain, 2001 OECD, 2017; 2018).

The epistemology of this approach of teaching believes that knowledge is an objective thing that is "out there" and independent of the knower, and that the main source of learning for teaching is faculty, or textbooks and professors (Boaler, 2015a; Hiebert, 2013). This is why its pedagogy uses media and particularly designed teaching settings to transmit the established social realities

to student teachers in a one-way manner (Haworth & Conrad, 1990). Additionally, teacher educators are seen as well-versed professionals, the wise man or woman on stage who explains the material that pupils are expected to learn and accurately report back (Azeem & Khalid, 2012; Bonawitz et al., 2011). Also, it is believed that the material presented by the instructor student teachers is all that they require to understanding teaching.This type of teaching, as studies have shown, limits learners to merely absorbing information from the knowledgeable expert, the teacher, and reporting it back accurately (Azeem & Khalid, 2012). Student teachers may perceive the information provided by the teacher as the only information they need to learn (Bonawitz et al., 2011) and be unable to think critically or relate their learning experiences to the school environment.

However, teaching in teacher education is fundamentally different from those teachings in secondary/primary schools and needs teacher educators' extended pedagogical skills from those of schoolteachers.

When teaching others about teaching, teachers' professional identities of teachers is developed among the student teachers (Korthagen, 2016; Loughran, 2006), and prospective teachers learn from the reflective practical experiences of both them and the teacher educators. Furthermore, it serves as an example of how crucial it is to go past technicalist perspectives on teaching practice and provide the implicit aspects of practice knowledge clarity and significance while learning about teaching. Additional research shows that instruction is most successful when it helps students develop the knowledge, abilities, and attitudes necessary to become responsible members of society who engage in critical thought and actively contribute to the creation of a just and equitable society (Strong's, 2011; Burbules & Torres, 2000; McLaren & Farahmandpur, 2001; Cochran-Smith & Fries, 2001; Darling-Hammond & Youngs, 2002).In teacher education, effective teaching also refers to student teachers' retention, persistence, employability, graduate destination, and degree classification. In this regard, the expectations for the high standard of early teacher preparation have put greater focus on teacher education as a subject of study (Loughran & Hamilton, 2016).

Therefore, teacher preparation needs to be conceptualized as realistic and practiced from a constructivist perspective that considered a developmental or active engagement and reflective practice to teaching and learning in teacher education. The constructivist educational paradigm

views teachers as facilitators and guides who support students' active processes of knowledge construction in learning contexts. Teachers who use a constructivist approach to teaching and learning are more likely to create engaging exercises and support students who are struggling. These teachers frequently encourage both the teaching-learning processes and a variety of challenging tasks. As was previously mentioned, teaching about teaching requires making the pedagogical reasoning—which is the basis of effective practice—clear, unambiguous, and relevant for students. Teacher educators must do practically what they expect their student teachers to do in their learning about to teach as teacher education pedagogy is linked to symbolic meanings associated with the adage "the medium is the message" (Korthagen, 2016; Struyven, Dochy, & Janssens, 2010). Moreover, learning skills are developed faster if students are taught explicitly and meaningfully along with the content (Loughran, 2006; Korthagen et al., 2005; Zeichner, 2006; Feiman-Nemser, 2003, as cited in Dawit, 2008; Wilson, 1990, as cited in Cuenca, 2010). Other studies also confirm that you cannot teach people how to teach effectively by telling them to visualize something they have never seen or by acting in a manner that is entirely contrary to how they have observed others perform in the classroom (Darling-Hammond, 2006; Loughran, 2006). Because prospective teachers tend to model and learn to teach what their teachers - educators, and schoolteachers do, what they teach as content and all other teachers' classroom practices are taken as expertise models for their students.

In general, teacher preparation needs to consider a developmental or active engagement and reflective practice to instruction. Studies contend that pedagogy in higher education should be holistic (Baxter-Magolda, 2000), flexible (Taylor, 200), experiential learning (Burnard, 1999), self-directed, and a kind of learning in which students influence the content, activities, materials, and pace of learning (Collins and O'Brien, 2003). In this type of teaching and learning, the classroom is tailored to meet the needs of the learners as a group and as individuals, with students taking an active role in their learning processes. According to Starkey, "effective learning" is a kind of learning that focuses on each student's learning progress (cognitive development), focuses on students' active participation, incorporates agency into the learning process through the use of formative feedback, metacognitive techniques, and explicit instruction, self-regulation, and self-reflection (agentic), and takes into account the student teachers' requirements for social, cultural, emotional, and personal growth(Louise Starkey, 2017).

As Korthagen, Loughran, and Lunenberg in Dawit (2023) discussed;

> In addition to helping student teachers learn about teaching, teacher educators also have a responsibility to provide an example for instructors by modeling their own teaching methods. In the context of teaching content area courses, general techniques courses, or even subject-specific courses, a teacher educator's approach to course design and delivery is just as crucial as the course material.

This model is critical for high-quality teacher preparation because studies show that "how teachers define themselves to themselves and others" has a greater impact on their effectiveness (Lasky, 2005:901). "What we do is influenced by what we think we are" (Watson, 2006; Olsen, 2008). According to Ambissa, holistic teacher preparation necessitates not only cognitive and technical teaching skills, but also professional commitment (Ambissa, 2022). Professional identity of a teacher, which is paraphrased as "how teachers define their professional roles" (Watson, 2006; Thomas, Beauchamp, 2011), maintains that learning to teach is primarily a process of professional identity construction rather than knowledge acquisition. So, in teacher education, it is imperative to view students as active participants in the construction of their professional identities.

In order to foster the culture and methods necessary for teachers' ongoing professional growth, teacher educators play a crucial role in teacher education pedagogy. Additionally, student teachers must have the chance to evaluate student work samples and instructional materials. Important pedagogies that help student teachers learn to teach by methodically and purposefully analyzing their practices include action research and autobiography.The function of teacher educators is essential to its pedagogy because they foster the cultural and mentality of student teachers' ongoing professional growth. Additionally, student teachers need chances to evaluate instructional materials, student work samples, and assessment results. Autobiography and action research are also two crucial pedagogies that support student teachers to learn about teaching by systematically and purposefully analyzing their practices.

Accordingly, cooperative learning, case studies, videoconferencing, approximate practice, guided practice, modeling, integrating technology, reflection, seminars, microteaching, and teacher identity are a few of the specific pedagogies that are frequently used in teacher education

(Darling-Hammond & Snyder, 2000; Padkasem et al., 2013). However, as discussed earlier, the teacher educators are not practicing theses pedagogies. As the interviews and open-ended questions revealed, they still felt that there was a lot more they could do to improve their skills in preparing student teachers. The findings of this study also agree with study of Dawit, in which he found that teacher educator' practices, while demonstrating some compositions of active learning methods intended to improve mastery of content and practice teaching skills, largely lack elements of teacher education pedagogy (Mekonnen, 2023). Since, the theoretical components and the instructional actions during the experience are influenced by the beliefs and understandings of the teachers (Goodman, 1988); teacher educators' conceptions of teaching in teacher education determine their teaching philosophies, as they see the world through these lenses.

5.3 Relationship between teacher educators' pedagogical conceptions and their pedagogical practices

From the above two findings (conceptions and practices that characterized the teacher educators' pedagogy), it was analyzed that teacher educators employ a predominant transmissionist pedagogical approach because of their conception of application of theory. Among these synonymous terminologies of pedagogy (application of theory and transmissinist), a positive and statistically significant relationship was found. Consequently, teacher educators' conception of application of theory and their transmissionist pedagogical practice are significantly correlated ($r(234) = .294$, $p < .000$; ($r\ (234) = .241$, $p < .01$, respectively).

It was also found that teacher educators' conceptions of their pedagogy are related more to their constructivist practices, which shows that interventions on realistic conceptions foster change in constructivist pedagogical practice.In the same vein, teacher educators interpret and behave in accordance with their conceptions of the world and adopted teaching strategies consistent with their beliefs about teaching.It's because, in comparison to the institution, they seem to have fewer external constraints on what and how they teach (academic freedom), internal assessment, course self-accreditation, and quality assurance protocols. Research emphasizes how teacher educators' perspectives impact both the theoretical elements and the ways in which they educate (Wondifraw, Alemayehu, & Asrat, 2018).

These findings agree with earlier findings. Thomas R. Guskey found that significant shifts in teachers' attitudes and beliefs were typically followed by improvements in their practices (Guskey, 2009). Guskey and Yoon (2009) and argued that a successful change in teachers' practice is caused by a change in teachers' beliefs and attitudes (conception). According to Clarke and Hollingsworth (2002) and other studies, our teaching perspectives and the ideas that follow about how to learn to teach have a big influence on how we teach and help students learn. Teacher educators' views, attitudes, convictions, and comprehension of the curriculum, the teaching and learning process, and their pupils are all included in their pedagogy.Because they seem to have fewer external influences on what and how they teach (academic freedom), internal assessment, self-accreditation of courses, and relatively unobtrusive quality assurance procedures compared to the school sector, they adopted teaching strategies that aligned with their beliefs about teaching. Nevertheless, other research has shown that there isn't always a direct correlation between a teacher's ideas or methods of thinking and what they do (Donche & Petegem, 2011).However, other studies have identified that the relationship between specific teachers' beliefs or thinking and actions is not always consistent (Donche & Petegem, 2011). They further argued that personal factors, such as gender and teaching experience have been found to have a differential impact on teaching conceptions.

As discussed above, the teacher educators adhere to their pedagogy, which they were using in their primary/secondary schools, in spite of the fact that teacher education pedagogy is different from that in primary/secondary schools.However,as studies asserted that the area of teacher education is currently undergoing a significant transformation, moving from a predominate focus on defining the knowledge required for teaching to defining teaching practices that include both knowledge and action (McDonald1 et al., 2013). Teaching about teaching needs to make the pedagogical reasoning that supports quality practice clear, explicit, and meaningful for learners, as was covered in the previous sections of this study. This is fundamentally different from teaching in general schools where teachers only teach the subject matter. Because aspiring teachers frequently emulate and pick up skills from their teacher educators and elementary school teachers, this aids in the development of a professional identity among the student teachers (Korthagen, 2016; Loughran, 2006).

5.4 Teacher educators' pedagogical challenges

This section aimed toaddress the research question "What challenges do teacher educators face in their pedagogy? As a result, based on the qualitative analysis, teacher educators' pedagogical challenges were thematized under teacher educator related and context related factors. Similarly, from the quantitative analysis, teacher education pedagogy suffers because of the challenges of teacher-educator related as well as context-related challenges. Moreover, both descriptive as well as Wilcoxon signed-rank test showed that context-related challenges constrained the teacher educators overwhelmingly to executing effective pedagogy. Scheerens (2013) outlined a quantitative measure of the institutional teaching quality factors based upon five key determinants such as quality of teaching and teachers, quality of the student body, adequacy of the basics, governance and ethics, and general ambience. It is also consistent with Satyendra's research, which states that internal factors, those over which the organization's management and employees have a great deal of control, play a significant role in determining an organization's success or failure. Similarly, external factors, those over which the organization has less direct control, determining an organization's success or failure (Satyendra, 2020). As discussed earlier effective work experiences are impacted by the challenges of very interrelated structural bodies like teacher educators, college administration, and the external government (mostly). It suffices to say that for an institution to be highly effective, all these internal factors must be intelligently and harmoniously managed.

5.4.1 Teacher-educator related challenges

Teacher educators' related challenges were resulted from two factors of lack of professional competency and lack of commitment and motivation that made them to adhere to the lecture methods of teaching, maintaining the statuesque of a teacher-centered approach rather than searching for or adopting effective reformed methods of teaching.

Lack of professional competency

According to Blömeke and Delaney (2012), teacher professional competency comprised both cognitive abilities, that in turn, include content knowledge, pedagogical content knowledge, and general pedagogical knowledge and affective-motivational characteristics that involve professional beliefs, professional motivation, and self-regulation. Content knowledge is

knowledge of the specific discipline (e.g., knowledge of biology), whereas pedagogical content knowledge is knowledge about the pedagogy of the discipline (e.g., knowledge about teaching and learning biology). General pedagogical knowledge is teaching knowledge that is not subject-matter specific. Some studies relate it with cognitive resources, which are linked to one's knowledge, skills, and dispositions (Darling-Hammond & Youngs, 2002; Labaree, 2008; Cochran-Smith & Fries, 2001; Ball, Thames, & Phelps, 2008; Shulman, 1987). Similar to this, instructors' beliefs link knowledge to action; their views about the material being taught and the classroom environment establish a connection between their beliefs and their students' success (Blömeke and Delaney 2012; Bromme and Steinbring 1994). As we discussed in the preceding parts of the present study, the conception of pedagogy in teacher education needs to be framed to include a value-based pedagogy that includes teacher educators' beliefs and attitudes, dispositions, positive human relationships, explicit transactions of pedagogical strategies, inspiring virtues of sincerity and open-mindedness, and expectations of the student teachers' learning (Curtis, 2012). Studies suggest that professional development programs have three major goals: alteration in the classroom teachers'practices, change in teachers' attitudes and beliefs, and change in the learning outcomes of students. These teachers' changes in knowledge, skills, and practice grew when they received professional development (Garet et al., 2001; Darling-Hammond & McLaughlin, 1995; Desimone, 2009). However, as previously discussed, no emphasis was placed on professional development opportunities in the study area's colleges. Though Wayne and Youngs (2003) discovered that there was little evidence linking instructors' certification level and content expertise to increases in student accomplishment and such competency is apparently one of the central predictors for effective teaching in teacher education (Darling-Hammond 2000; National Council for Accreditation of Teacher Education, 2002).

Lack of professional commitment and motivation

To perform their duties effectively, teacher educators must develop one of the professional competencies—commitment and motivation. As the pedagogy of teacher education requires teacher educators to explicitly "unpack" the pedagogical practice, low teachers' motivation and commitment become the most serious challenges in the teaching profession. According to Herzberg's (1959) Motivation-Hygiene Theory, the factors that create motivation and job satisfaction (which are intrinsic) include responsibility, performance, work itself, advancement,

and development. Therefore, motivation is said to be a crucial component that helps people to grow in their interest, dedication, contentment, morale, attitudes, and zeal for their work.The factors that cause job dissatisfaction if they are not maintained at a satisfactory level are management, the competence of the leader, the relationship with the leader, company policies, working conditions, salary, status, and security that affect personal life. However, indicators of low motivation include things like attrition, malfeasance, and absenteeism (Richardson, 2014). As a one of the reasons for the lack of commitment, as the interviewees stated, is the teacher educators' low motivation due to the contextual problems, characterized as the college level and external of the college level challenges. It also corresponds to the analysis in the preceding parts of the present study, related to the challenges that affect teacher educators' pedagogical practices, such as leadership and management, low background knowledge of the student teachers, instructional resources and facilities, and loss of commitment of the teacher educators due to the aforementioned factors, since de-motivational factors and causes for a lack of commitment are closely related (Giertz, 2016). Although there appears to be one of the areas for future research, this is why experienced teacher educators leave. Momentarily, this is mainly because it may be closely related to motivation. As discussed earlier, according to Herzberg's (1959) Motivation-Hygiene Theory, unmotivated and then ineffective teachers stay temporarily in the teaching profession till they get other career options (Ambissa, 2021).

5.4.2 Contextual factors

Both college – level and structural organizations peripheral to colleges were found the two main components of contextual factors that determine teacher educators' quality pedagogy.

College – level challenges

As a manager's philosophical or leadership style directly impacts employees, progressive managers provide their staff more freedom to make many of their own decisions, in contrast to traditional managers who give clear instructions.College level challenges are mostly arbitrated leadership and managerial problems such as ensuring professional development, ensuring favorable learning environment, and supplying with instructional resources and facilities. Regarding professional development training programs, it was found that they should be tailored practically to guide student teachers' active learning and processing of knowledge. Through their

professional development programs, the goal of teacher educators' pedagogy should be to shift their attention from "technical" understandings and pedagogy implementation to continuously developing, reflective, immersive, and inspirational teaching.As stated by Guskey, the three major goals of professional development programs are change in the classroom practices of teachers, change in teachers' attitudes and beliefs, and change in the learning outcomes of students (Guskey 2002). It is signified by the position that "*no professional was born a professional, but is a product of learning and relearning*," aiming at improving the teaching-learning process and thereby the universal goal set for education of ensuring inclusive and equitable education and promoting life-long learning opportunities for all (D. Hammond and N. Richardson, 2009). Similarly, in the Ethiopian CPD Framework document, this is divided into two broadly classified parts: "updating and upgrading," where professional development is aimed to yield new knowledge and skills, improve teaching and leadership, and contribute to student learning and achievement (MOE, 2009b). Providing opportunities for teacher educators to participate collaboratively in the (re-) design of curriculum motivates teacher educators and empowers them with responsibility for the effects of curriculum in colleges since it gives them the chance to consider the curriculum in light of their own knowledge, values, and aspirations for the education of their students (Borko 2004; Simmie 2007; Voogt 2010). As the features of professional development strategies aiming to improve or change classroom practice, articulated by Clarke and Hollingsworth (2002) as;

a. experiential, involving educators in practical teaching, evaluation, and observation tasks that shed light on the processes of learning and growth;
b. basedon participants' questions, inquiries, and experiments as well as profession-wide research;
c. collaborative, involving instructors' exchanging knowledge;
d. linked to and produced by research on the subject matter and pedagogy, as well as from teachers' work with their pupils;
e. prolonged and intense, bolstered by problem-solving, coaching, and modeling around particular practice-related issues; and
f. linked to other aspects of school change.

The only observable institutionalized form of professional development program in teacher education colleges is the Higher Diploma Program (HDP), which is given to all newly deployed teacher educators in their first years of deployment. However, there is no framework or direction as to what should follow the completion of the HDP. This implies that it requires revision in its approach, structure, and practicality to embed sound motivation, as concluded by one of the participants: "There are many teacher educators who have no skill of pedagogy, since they are not trained on the methods of teaching" (PBo, 6). Moreover, in the teacher educators'professional development, there should be a role shift from being a teacher to becoming a learner, which may challenge their identity as a teacher of teachers.

Ensuring a favorable learning environment and supplying students with instructional resources and facilities becomes vital to make learning active, varied, socially engaged and self-regulating. As John Munchak (2004) indicated, resources and facilities have three main advantages of facilitating varied and active teaching approaches, to make lesson socially relevant and engaging and to facilitate students' self-regulated access to learning resources. Furthermore, everyone will come to class with their own set of abilities, motivations, attitudes, goals, and cultural background. Particularly in the teacher educationcontext, media usage is linked to symbolic meanings associated with the adage "the medium is the message" (Korthagen, 2016; Struyven, Dochy, & Janssens, 2010), i.e., teacher educators must do practically what they expect their student - teachers to do in their learning to teach. Learning skills of preparation and usage of instructional media (materials) are developed faster if students are taught explicitly and meaningfully along with the content (Loughran, 2006; Korthagen et al., 2005; Zeichner, 2006; Feiman-Nemser, 2003, as cited in Dawit, 2008; Wilson, 1990, as cited in Cuenca, 2010). Hence, since prospective teachers' model and learn to teach what their teacher educators and schoolteachers act to what they teach as content, teacher educators should demonstrate exemplary pedagogical behavior in selection and use of media-based instructional innovations.

Media Richness Theory (Daft, Lengel & Trevino, 1987) contends that effective communication reduces uncertainty levels by achieving a good match between media and the level of equivocality in a message. This claim was supported in studies rooted in cognitive and social constructivist learning principles that have been acknowledged for supporting the acquisition of productive knowledge (Fulk & Collins-Jarvis, 2001). These guidelines show where established

instructional design principles for developing constructivist, student-centered learning environments—such as open-ended learning, authentic learning, and inquiry-based learning—intersect with new perspectives on cognition and the metaphor of knowledge creation in learning (Paavola & Hakkarainen, 2005). Accordingly, the attributes of instructional media were considered in terms of attracting attention, developing interest,modifying the classroom setting and encouraging concept acceptance. Moreover, instructional media (technology) are becoming a crucial component of education as the classroom of the future becomes more individualized, student-centered, and collaborative (Andersen 2011, Lenz 2013, Bell 2010). This is because it allows students to access the higher-order competencies that are commonly referred to as "21st century skills." However, there are challenges that constrain teacher educators in utilizing media-based instructional innovatives in colleges to designing activities for teaching. These were: the classrooms that are not facilitated, on- availability or inadequate provision of instructional resources such as computers, multi-media, projectors and fast internet connection, lack of physical infrastructure and necessary environment, inadequate professional development of theteacher educatorson media-based instructional innovations, low expertise, training and development and teacher educators' heavy workload (Abayneh, et al., 2023; Ergogo et al., 2023).

Challengesperipheral to colleges

The performance of an organization is affected not only by its internal environment but also by external factors such as social and political aspects, government policies, and government support (Satyendra, 2020). Accordingly, the external challenges to the teacher educators' pedagogy include student teachers' profiles, curriculum and program of the teacher education, policy and its implementation, socio-economic status, as well as incentives and facilities. All the teacher educators believed that student teachers could successfully learn to teach when they entered the teacher education institution with minimum learning competency, which is indicated by knowledge, skill, and attitude. Moreover, they stated that it was not only their academic competency that was low, but their motivation and commitment on practice of pedagogical

classroom and field activities, as stated by one of the participants: "no observable commitment of student teachers to develop their skills" (PHa, 25). The other profound challenges in teacher education pedagogy were found regarding the policy and its extension, the criteria of admission. As discussed by the participants, the admission policy and its criteria should be revised so that they help to obtain capable and interested learners. Moreover, the existing education system needs a strong reform to avoid corruption, cheating, incompetence, etc. (PHa1, 12, 17; PHo, 29; PHa, 28, 29, 42).

As solidified by the participants of the present study, the government has a role and responsibilities in technically capacitating the colleges to render effective or reformed leadership. As a result, it has a role in re-designing policy, ensuring its enactment, and checking its effectiveness. The government should work to create good governance, develop effectiveness, and empower the colleges. The government also must maintain the status quo in teacher education regarding the fairness of the salary paid to the academic staff. In these regards, the data clearly demonstrated that if quality teacher education is required, there is a pressing issue for which stakeholders must accept responsibility and feel compelled to act regarding the motivational aspects of teacher educators. It is an issue of balancing the living costs with their salary, providing sustainable and holistic support, and creating motivational strategies as per the effective experiences of the teacher educators.

The following is what the participants mentioned about the teaching profession's challenge, which has lasted decades and requires easing the government's fierce resistance to be proportionate with that of the other sects. Besides this, it has also been discussed that teacher educators are not only demotivated but also dissatisfied due to the low salary and lack of incentives. As stated by the participants of the open-ended questions, challenges that teacher educators face and that have a negative impact on their pedagogical practices are primarily low motivations of teacher educators due to the low salary scale relative to the market (PHo, 51; PHa, 51; PBo, 84) and other sectors (PHa, 6, 12). The salary given to teacher educators is even lower than that of primary school teachers, which demotivates them (PHa, 48).

The other related challenge, to which almost all teacher educators responded that it demotivated them to render effective pedagogy, was benefits or incentives through promotion because of

effective professional experiences. In other words, teachers who have served for many years at a given rank are paid the same salary and benefits as those who are newly promoted or hired. Participants didn't also hesitate to specify the inferior salary scale of the profession when compared to the other sectors, as stated by the road map as "the inadequacy of teachers' salaries in view of the cost of living and the pay that individuals with similar qualifications get in other sectors, which did not motivate them. Of course, this indicates the result of ineffective management in the system of teacher education in the regions that needs to revise policy-related issues and solve the problem, as the impact of the problem is damaging the quality of pedagogy in teacher education. This was related to the occurrence of de-motivational factors—the absence of promotion through effective work experience and low salary—in the teacher educators of primary teacher education, which caused a lack of commitment or motivation among teacher educators to execute effective pedagogy (Giertz, 2016).

Teacher educators stated not only the lack of teacher educators' cognitive knowledge but also the pool of teacher educators, who are either graduates with only subject matter knowledge or with both subject matter knowledge and knowledge of pedagogy. To complement this point, in the newly developed road map, it has been stated that "mostly those first-degree graduates who are unable to get jobs decide to become secondary or preparatory teachers as a temporary solution (MOE, 2018). It is therefore not surprising that a widespread lack of interest and motivation prevails among trainees in secondary education—the pool of teacher educators for the colleges of teacher education. On the other hand, according to Herzberg's Hygiene Theory, increasing the salary (the intrinsic factor), though it does not lead to long-term job satisfaction, can prevent job dissatisfaction (Herzberg's, 1959). Others argue that a motivated teacher regulates behavior and utilizes appropriate strategies to achieve professional objectives (Blömeke and Delaney, 2012).

In general, what makes the picture of teacher education troubling is the deficit of conceptualizing and re-conceptualizing teacher education (development) as a system and the uneven distribution of it, which include coherent and complementary components of recruiting, preparation, inducting, and supporting to develop professionally effective teachers. As asserted by studies, quality education requires organizational levels' engagement in systems thinking, which allows them to look both within and to the larger system for connections that will help them maximize institutional effectiveness (Scheerens, 2013). Consequently, as our teaching styles, approaches,

and strategies reflect our personal values and beliefs (conception), it refers to building a proper level of commitment at all levels of the education system.

In the Ethiopian context, teacher education colleges seemed to favor the integrated model or mixed patterns of centralization and decentralization among the four models outlined by Smith (2015): the asymmetric model, matrix model, integrated model, and decentralized model. In this model, organizations are positioned as an independent unit that possesses the power to make decisions, use resources, hire and fire staff, and work at higher administrative levels with respect to the other dimensions. In this line, the curriculum and policy contexts of teacher education are mostly in the realm of centralization, but more autonomy is provided to the colleges, i.e., decentralization, to create conditions for the expansion, enrichment, and improvement of the relevance, quality, accessibility, and equity of education and training (MoE, 2013).

Because the overall purpose of colleges is to prepare quality (improved) teachers, thereby increasing future students' achievement in the country's general education, this corresponds to the system's thinking, i.e., quality education requires a system that supports effective learning. As previously discussed, in order to sustain a culture in which teachers learn to teach effectively and their well-being and achievement are realized, all organizations and individuals at all organizational levels should engage in systems thinking, which allows them to look both within and to the larger system for connections that will help them maximize institutional effectiveness (Scheerens, 2013). As a result, it requires external environment integration ahead of time for either college-mandated or above-college duties.

In this regard, effective pedagogy requires impactful leadership at the college and beyond the college level, with leaders setting directions and keeping track of performance. Particularly, as the data from the participants shows, there should be an adequate supply of instructional resources and facilities. In the college level, there should be opportunities for professional development for teacher educators based on their needs, particularly their motivation and commitment. It also becomes important to work on the quality of admissions for student teachers. Since education quality in postmodern society is viewed in terms of a user-friendly environment (Amare et al., 2006), creating a safe and supportive learning environment becomes so important. Colleges also have to work to improve both teacher educators' and student

teachers' characteristics of knowledge, skill, and attitude, as well as commitment and motivation during admission or disposition.

Therefore, teacher education should be given due emphasis by the stakeholder in all its phases of selection, preparation, and delivery. What makes the picture of teacher education troubling is, as one can deduct from the impressive analysis of the participants' data, the deficit of conceptualizing and re-conceptualizing teacher education (development) as a system and the uneven distribution of it, which include coherent and complementary components of recruiting, preparation, inducting, and supporting to develop professionally effective teachers. It could be in terms of selecting the best-performing students, supplying resources and facilities, as well as motivating the teacher educators. To attract the best-performing students to the profession, we must make the profession attractive. Effective teacher preparation and development is shaped by the policies and practices within the unique cultural and historical contexts of teacher education institutions. According to reporters and analysts, nations with a strong professional ideal for teaching intentionally celebrate teachers and treat teaching as an important profession with prestige if students are to have equitable learning opportunities (Darling-Hammond, 2017). Thus, there must be strategies for profession-building, such as standards for teaching (licensing and re-licensing), recruitment with strong demonstrated academic ability and a passion to teach, high-quality preparation for teachers, and continuing professional studies.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS OF THE FINDINGS

6.1 Conclusion

Grounded on the discussions of the previous chapters, this chapter links the findings to the objective of the study. As already discussed in the present study, the rationale of colleges of teacher education is to prepare learners not only in response to the national policy and development goals of the country but also to create innovative and problem solving citizens. These goals, aimed to resulting from quality education, are indeed significant motivators for educators to reconsider curricula and approaches to them (Rudd et al., 2000; Prensky, 2010).

However, as conversed in the previous parts of this study and based on confirmation from the studies and reports from EGRA and ENLA (Ambissa Kenea, 2021; MoE and USAID, 2008;

NOE, 2004b; Mekonnen, 2023; Gemeda & Tynjälä, 2015a; Tesfaye et al., 2015a; Kedir et al., 2007), quality education in Ethiopia was deteriorating.It was worse for the southern regions, which is not only below the minimum policy target but also below the national mean scores (ETNLA, 2017). Conversely, quality of an educational system (the knowledge and skills that students have actually acquired because of their exposure to schooling) is largely dependent on the quality of its teachers (among the in-school factors), proven on fundamental ideas and abilities to boost educational practices (Kyriakides et al., 2014, as cited in Mekonnen, 2023). Thus, teachers' quality teaching, and therefore,student teachers' knowledge, attitudes, and skills earned during their pre-service education, founded primarily in their pre-service education, have a multiplier effect in fostering better learning among school learners (Korthagen et al., 2005; Korthagen et al., 2005; Russell & Korthagen, 1995; Zeichner, 2005; Feiman-Nemser, 2003, as cited in Dawit, 2008; Wilson, 1990, as cited in Cuenca, 2010).

Considering this pioneer role of teachers' teaching quality, some initiatives are made by the Ethiopian government, including upgrading teachers and changing the form and curriculum of the teacher education through reformssuch as,the Teacher Education System Overhaul and Post Graduate Diploma. However,the teachersquality teaching remained a significant challenge(Mekonnen, 2023; Gemeda & Tynjälä, 2015a; Semela, 2014).

Particularly, its statusin the regions to which this study accentuated seems to have become worse, as evidenced by the student teacher's competence, based on theirexit exam results, as below:

Table 10: Southern regions' CTE graduates' COC results (2016 - 2021)

	2016	2017	2018	2019	2021
Result ≥ 70%	7.7%	8.1%	9.4%	12.9%	5.1%
Result ≥ 50%	58.8%	41.1%	49.1%	50.3%	36.8%

Source: Annual reports of the education sectors of the regions

As observed above, the exit exam results of the student teachers for five consecutive years were worse (even below ten) based on the 70% national benchmark. It was even very low—below 50%. Therefore, it is imperative to question the state of the teacher educators' pedagogical conceptions and practices in regions' colleges of teacher education that may have made the newly graduated teachers fail their licensing.With these premises and the purpose of examining

the status of teacher educators' pedagogy in the colleges of the southern regions of Ethiopia, the study's conclusion, which was broken down into teacher educators' pedagogical conceptions, pedagogical practice, and the challenges they faced, was made as follows:

Conclusion1: The teacher educators conceptualized the pedagogy of teacher education as application of theory — merely impartingtheories of teaching and learning to the student teachers without much connection to practices

The result of the study disclosed that teacher educators conceptualized their pedagogy as an application of theory. They noted that learning to teach is effective when the student teachers are imparted professional knowledge focusing on their cognitive development and their learning progress. Participants argued thatfor these purposes, teacher educators would have to conceptualize teaching as competence or performance, applied science, reflective, master-apprenticeship, and teacher identity. According to this conception, to start teaching, a teacher just has to possess the academic content knowledge and general intelligence (also known as "knowledge-for-practice") of teacher education; the remaining knowledge can be learned on the job (Zeichner, 2006).

Moreover, their rationale for the necessity of imparting theoretical knowledge of the profession, among other things, was due to student teachers' low academic competence. It has been assumed that their competence is based on the professional knowledge and performance imparted by the teacher educators that would be implemented in the practical setting of the schools, as quoted as follows:

> As we can observe during our practicum supervisions, constructing knowledge for themselves precedes the student teachers' ability to think critically, reason, and act, even in the theory-practice model. Let alone construct knowledge for themselves, it was less likely to find student teachers who could deliver at least sufficiently the theory they learned in the college classrooms. It also needs teacher educators' beliefs and their responsibility for what and how all student teachers learn (TEr, 1).

Accordingly, the teacher educators conceptualize their pedagogy not only as application of theory approach but also as the dichotomized (isolated) components of both theoretical

knowledge and practical reasoning. Participants emphasized that student teachers need to learn theoretical courses that teach them foundational knowledge pertaining to education in the classrooms of the college using lecture methods and experience it in actual classrooms during practical sessions.They reasoned out their conceptualization by saying that when student teachers are taught a relatively stable body of professional knowledge and/or procedures of teaching skill through imparting in a lecture or direct instruction format, they will have a potential for practical skill starting from their practicum session.

However, teaching about teaching must be conceptualized as giving opportunities to student teachers to practice teaching and reflect on their learning through the integration and interaction of their practical experiences and theoretical notions.As discussed previously, teacher educators must consider how to teach about teaching as enabling student teachers to "think like a teacher," "act like a teacher," and "reflect like a teacher" (Korthagen, 2016), rather than simply telling of the content as well as methods of teaching by the participants' descriptions. Contemporarily, the process of continuously refining one's own teaching insights under the supervision of an expert through the interaction of theoretical concepts and introspection is known as teacher development. Student-teachers can strengthen their inclination to teach as they were taught and cultivate the ability to improve their own practice through deliberate self-reflection and action or practice. As discussed above, equipping student teachers with a knowledge base as well as with teaching procedures requires realistic conception, as it continuously commutes between practice and theory. The interaction between student teachers' reflective experiences of schools and their theoretical notions of becoming a teacher while being supervised byan expert creates a good match between the content of teaching and its practicality.Similarly, one cannot teach people how to teach effectively by telling them to visualize something they have never seen or by acting in a manner that is entirely contrary to how they have observed others perform in the classroom (Darling-Hammond, 2006; Loughran, 2006), as articulated similarly as:

> The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires (William Arthur Ward, as cited in A.E. Allen, 2008).

Thus, equipping the student teachers with their professional skills and identity development is positioned to guide student teachers toward academic and professional identity development by letting student teachers learn from their own practical and reflective experiences, as well as the teacher educators' demonstrations of specific techniques of teaching deliberately, clearly, and explicitly, as well as monitoring while he/she practices the technique. In this way, student teachers explore the particulars or specifics of teaching in focused ways.

Conclusion 2: Teacher educators rarely use their pedagogy in their pedagogical practices

As discussed above, teacher educators conceptualized their pedagogy as merely imparting theories and as a result, they employed transmissionist pedagogical practices; which is not relevant to the level. They assumed that student teachers could learn theories of professional knowledge mostly through lecture or direct instruction on the premise that they may apply them in the classroom since theory informs practice.This type of teaching, as studies have shown, limits learners to merely absorbing information from the knowledgeable expert, the teacher educator, and reporting it back accurately (Azeem & Khalid, 2012). Student teachers may perceive the information provided by the teacher educators as the only information they need to learn (Bonawitz et al., 2011) and be unable to think critically or relate their learning experiences to the school environment. This is like saying that, teacher educators' pedagogical practices are reduced to simply talking about teaching rather than composing a holistic teacher education pedagogy of teaching about teaching and learning to teach (Mekonnen, 2023; Bonawitz et al., 2011).

Subsequently, pedagogy of teacher education must be conceptualized as realistic and practiced from a constructivist perspective that considered a developmental or active engagement and reflective practice to instruction. These educators frequently encourage a wide range of challenging tasks in the teaching-learning processes such as case studies, videoconferencing (VC), approximation of practice, guided practice, modeling, integrating technology, reflection, seminars, micro-teaching, teaching portfolios and etc.(Darling-Hammond & Snyder, 2000; Padkasem et al., 2013). Scholars specializing on pedagogy for teacher educationpedagogy discuss that teacher education pedagogical strategies should base on reflective practices.

Moreover, teaching in teacher education is fundamentally different from those teachings in secondary/primary schools and needs teacher educators' extended pedagogical skills from those of schoolteachers. When teaching others about teaching, teachers' professional identity is developed among the student teachers (Korthagen, 2016; Loughran, 2006), and prospective teachers learn from the reflective practical experiences of both them and the teacher educators. It illustrates the significance of transcending technicalist perspectives on teaching practice and giving explicit and meaningful meaning to the implicit aspects of practice knowledge while learning about teaching.Teacher educators must do practically what they expect their student teachers to do in their learning about to teach as teacher education pedagogy is linked to symbolic meanings associated with the adage "the medium is the message" (Korthagen, 2016; Struyven, Dochy, & Janssens, 2010). Moreover, learning skills are developed faster if students are taught explicitly and meaningfully along with the content (Loughran, 2006; Korthagen et al., 2005; Zeichner, 2006; Feiman-Nemser, 2003, as cited in Dawit, 2008; Wilson, 1990, as cited in Cuenca, 2010).

Most importantly, as teacher education pedagogy is also content of learning in teacher education, beyond its role as a means, the student teachers follow such pedagogy in their future career.Studies contends, pedagogy in higher education should be holistic (Baxter-Magolda, 2000), flexible (Taylor, 200), experiential learning (Burnard, 1999), self-directed, and a kind of learning in which students influence the content, activities, materials, and pace of learning (Collins and O'Brien, 2003). In this type of teaching and learning, the classroom is tailored to meet the needs of the learners as a group and as individuals, with students taking an active role in their learning processes.

Conclusion 3: Teacher educators' pedagogical practicesare significantly related to their pedagogical conceptions

From the above findings and discussions of the two concepts (conceptions and practices that characterized the teacher educators' pedagogy), it was analyzed that teacher educators had a predominant conception of application of theory as well as transmissionist pedagogical practices, which is not relevant to the level. Moreover, by the Spearman rho test of correlation, teacher educators' conception of application of theory and their transmissionist pedagogical practice

were significantly correlated (r (234) = .294, p < .000).As the result of the teacher educators' pedagogical practices is concurrent with the results of their conceptions of their pedagogy, it is possible to infer that the change on teacher educators' practice of their pedagogy is shaped by the change on their conception of the pedagogy. Studies show that teachers' beliefs and understandings affect both the theoretical constituents and the teaching behaviors (Wondifraw, Alemayehu, & Asrat, 2018). In other words, the professional changes focused on the teacher educators' practices of teaching about to teach is accompanied by the change on their beliefs and understandings about teaching to teach. Hence, teacher educators' realistic conceptions of pedagogy in teacher education, determined by their philosophiesof instruction, would be resulted by the teacher educators' constructivist pedagogical practices-oriented changes, as they see the world through these lenses. They interpret and behave in accordance with their conceptions of the world and adopted teaching strategies consistent with their beliefs about teaching because they appear to have limited external influences on what and how they teach (academic freedom), internal assessment, self-accreditation of courses, and relatively unobtrusive quality assurance procedures compared to the institution. Teacher educators' pedagogical practices were shaped not only by the sole application of theory conceptions but also by their dichotomized (isolated) theoretical knowledge and practical reasoning—reducing the standards of the teacher educators' profile to that of may be to the lower levels of education.

Conclusion 4: Contextual factors, over which the teacher educators have little control, play a significant role in determining the teacher educators' pedagogy

According to the study's findings, contextual factors considerably challenged the teacher educators' pedagogy more than did the challenges related to the teacher educators themselves.

Conclusion 5: Lacking professional competence, commitment, and motivation, teacher educators stuck to the statuesque of a transmissionist approach rather than searching for more effective methods of teaching in teacher education

Teacher-educator-related challenges that caused teacher educators to stick with conventional ways of teaching were discovered to be a lack of professional competence, a lack of commitment, and a lack of motivation. The reason for these was reported as the teacher educators' low motivation due to contextual constraining factors.

Conclusion 6: College-level challenges of leadership and management exhibited by the problems related to learning environment, professional development, and instructional resources and facilities found hindrances to teacher educators' pedagogy

It was discovered that college-level limitations responsible for challenging teacher educators' pedagogy were found issues related with leadership and administrative, professional development, maintaining a positive learning environment, and problems of providing instructional resources and facilities. Effective pedagogy requires impactful leadership at the college and beyond the college level, with leaders setting directions and keeping track of performance. In the college level, there should be opportunities for professional development for teacher educators based on their needs to foster motivation and commitment. As professional development plays major roles of change the classroom practices of teachers, changing teachers' attitudes and beliefs, and changing the learning outcomes of students (Garet et al., 2001; Darling-Hammond & McLaughlin, 1995; Desimone, 2009), it got status of profound role in teacher educators' quality teaching. It is signified by the position that *"no professional was born a professional but is a result of learning and relearning"* (D. Hammond and N. Richardson, 2009). However, the professional development training programs (HDP), that exist in colleges of the study area should embed sound motivation and should focus on teacher educators' state of moving from the "technical" understandings and implementation approach to teaching that is experiential, reflective, dynamic, and motivating. Moreover, in teacher educators'professional development, there should be a role shift from being a teacher to becoming a learner, which may challenge their identity as a teacher of teachers.It also becomes imperative to work on the admissionquality and preparation by creating a safe and supportive learning environment for both teacher educators and student teachers, since education quality in postmodern society is viewed in terms of a user-friendly environment (Amare et al., 2006). The performance evaluation system in teacher education colleges also has to be updated to emphasize pedagogical methods to teaching rather than labels like tutorial classes, continuous assessment, and active learning.

It also should give them opportunities to conduct research, to reflect on the curriculum materials, on teaching strategies, etc., starting from their personal knowledge and beliefs, their practice, and their goals for student learning (Borko 2004; Simmie 2007; Voogt 2010; Hollingsworth, 2002).

Conclusion 7: ***External to the college, factors such as curriculum and the program, policy and its implementation, student teachers' profiles, and incentives found constraints on the teacher educators' pedagogy***

The other profound challenges in teacher educators' pedagogy were found regarding the policy and its extension, the criteria for admission. In these regards, motivational aspects of teacher educators, for instance, the issue of balancing their salary with living costs, creating motivational strategies as per the effective experiences of the teacher educators, and providing sustainable and multifaceted supports were found to be the pressing constraints that demotivated the teacher educators to render effective pedagogy. It is persuasive that a motivated teacher regulates behavior and utilizes appropriate strategies to achieve professional objectives (Herzberg's, 1959; Blömeke and Delaney, 2012; Giertz, 2016). The teacher education program's curriculum as well as the facilities was further obstacles that limited the teacher-educator pedagogy outside of the institution.

In general, what makes the picture of teacher education troubling is the deficit of conceptualizing and re-conceptualizing it as a system with coherent and complementary components of recruiting, preparation, inducting, and supporting to develop professionally effective teachers. As asserted by studies, quality education requires organizations' engagement in systems thinking of effective teaching and learning, which allows them to look both within and to the larger system for connections that will help them maximize institutional effectiveness (Scheerens 2013).

6.2 Recommendations

Stemming from the conclusions reached and the findings established, it was centered on what it mean to our knowledge and understanding about teacher educators' pedagogical conceptions, practices, and constraint schemes in the context of teacher education pedagogy in Ethiopia. Because of this, teacher educators view their pedagogy as a theory application and seldom use their own pedagogy; as a result, common sense still rules their pedagogy.Consequently, as this approach to pedagogy rules imparting theoretical knowledge through traditional modes of learning and teaching, reducing the standard of teacher education pedagogy, the professional identity crisis wasinferred as the first major point of recommendation.Developing professional identities for teacher educators based on a change in conceptions of their pedagogy that results in changes to their pedagogical practices becomes imperative. Teacher educators should profoundly

use their pedagogy in their pedagogical practices rather than merely transmitting knowledge to their student teachers, like school teachers' pedagogy. They have to differentiate their role from that of schoolteachers, and teacher educator identity should be created among the teacher educators. This in turn calls for a conceptualization of their pedagogy as a realistic approach that integrates reflective practices (of both the student teachers and that of the teacher educators) with theoretical notions and confirms creating a good learning environment. Furthermore, pedagogy in teacher education should go beyond the technicist perspective of teaching and should make the implicit aspects of the practice of knowledge explicit and meaningful in learning to teach. It should also be experiential in a holistic manner in which student teachers have a say on the content, activities, materials, and pace of learning (J. W. Collins& N.P. O'Brien, 2011).

Failure to conceptualize teacher education as a system and the incapacity to play one's part among the stakeholders belittle institutional efficacy. As there are national goals for ensuring quality education through aspiring change in teacher preparation, which in turn needs grounding in teacher education pedagogy, establishing system thinking and creating social accountability become imperative. It allows all to look both within and to the larger system for connections that will help them foster cultures of effective work at all levels and maximize institutional effectiveness. As studies suggest, producing quality teacher education is ensured, among other things, by the effective articulation of policy and its implementation, which includes increased involvement of various stakeholders, the redesign process, competitive benchmarking, ongoing measurement of the outcomes, long-term vision, team-based problem solving, and closer relationships with the community (Yadav et al., 2011).Though teacher-educator-related challenges, for instance, lack of professional competence as well as a lack of commitment and motivation, constrain teacher educators' pedagogy, it was influenced more significantly by the contextual variables. These were college-level challenges related to leadership and administration, professional development, and instructional resources and facilities, and challenges associated with the peripherals of colleges, such as motivational strategies and sustainable supports.

Therefore, MoE and REBs, as well as colleges and teacher educators in the southern regions of Ethiopia, in collaboration, have to carry out diligent work to develop qualified teachers and to

affect the final goal of raising future students' performance in general education system regarding the above recommendation points.

More specifically, strengthening the institutional capacity of the colleges by fostering strong leadership and administration, professional development, and creating a facilitated classroom environment with instructional resources becomes imperative to bring proper reform in the teacher educationpedagogy. Particularly, colleges have to establish strong and sustainable culture of professional development aimed to bring change in conceptions and in their pedagogical practices among the teacher educators. Teacher educators' professional development programs focusing on moving them away and to loosening their adherence to the "technical" conceptions and practices towards research based, continually evolving, reflexive, experiential, and inspirational teaching becomes imperative. Capacitating teacher educators with their professional competence, commitment, and motivation by organizing practice-oriented pedagogical trainings also help them develop pedagogically. Adopting realistic conceptions tailored with experience of successful implementation practically guide the teacher educators’ processing of the professional knowledge and skills to teach in teacher education colleges and effect genuine changes in the conceptions and practices of the teacher educators. Thus, they have to work to ensure teaching about teaching to thoughtfully engaging with practice beyond the technical and to give a genuine focus on conceptualizing and altering the implicit nature of practice that is explicit and meaningful, developing a shared language of teaching and learning.

Policy, plan directives, and programs need to foster a firm relationship between effective teaching in teacher preparation at the levels ofinstitutional (colleges, regional education bureaus, and the ministry of education) and individual. These need to be re-conceptualized regarding with the standards of effective teacher education pedagogy. Among the tactics or conditions to inspire teacher educators to their effective conceptions on learning to teach and practice accordingly includes promotingthe teacher educators' professional development programs, making the teaching profession a competent profession by recruiting the best-performing and motivated student teachers, and addressing other related problems at various organizational levels in the education sector.

Finally, based on the varied opportunities as a result of the nexus of teacher changes in conception and practices described in this thesis, it seems worthwhile to further investigate the related issues regarding the teacher educators' conceptions and practices.

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List of Publications

Publication 1: Teacher educators' views vis-à-vis their practices on facilitating learning to teach

Publication 2: The relationship between pedagogical views and practices among pre-service teacher educators

Appendices

Appendix A: Teacher Educators Questionnaires

Teacher Educators Questionnaires

Addis Ababa UniversitySchool of Graduate Studies

College of Education and Behavioral Studies Curriculum and Instruction Department

Teacher Educators' Questionnaire

This questionnaire seeks information about***Teacher Educators' Conceptions, Practicesand Challenges of Preparing Primary School Teachers in Southern Regions of Ethiopia.*** Please fill this questionnaire to the best of your knowledge honestly and accurately by**putting atick**/√/**mark**and give your suggestion where appropriate. Your information will be treated confidentially and will only be used for research purposes.When you have completed this questionnaire, please return it to the researcher or to his agent. If you would like more

information about it, you can reach the researcher by phone at the following numbers: 0926991081. I thank you in advance for your cooperation.

I. General Information:

1. Sex: Female☐ Male☐
2. College:_____
3. Educational qualification: Bachelor's degree (s) ☐ Master's degree (s) ☐ Doctorate degree (s) ☐ Other (specify) _____
4. What was your major and minor field of study? Major_____ Minor _____
5. Do you teach classes in other fields other than in your major and minor field of study at the college? Yes☐ No ☐
6. Do you have experience in teaching in primary or secondary schools? Yes☐ No ☐
7. If yes (to the question No. 6), how many years have you taught in schools?
   1-5 ☐ 5.1 – 10 ☐ 10.1 – 20 ☐ More than 20 years☐
8. How long have you ever been working as a teacher educator in colleges of teacher education?
   1-5 ☐ 5.1 – 10 ☐ 10.1 – 20 ☐ More than 20 years☐

II. Below, are statements that ask four types of questions. You are kindly requested to attempt each in the provided spaces.

1. Please indicate how stronglyyou agree or disagreewith each of the following statements (Strongly Disagree=1, Disagree=2, Not Decided=3, Agree=4, Strongly Agree=5).

No	**Pre-service teachers learn best when:**	1(SD)	2(D)	3(ND)	4(A)	5(SA)
1	Methods of teaching and also the subject matter are deliberately demonstrated by the teacher educators.					
2	They are told merely to follow theories of teaching.					
3	They are given opportunities to learn in and from practice of teaching.					

4	They primarily learn theories and then proceed to practice those theories.					
5	They are helped to create their own techniques and insight of teaching.					
6	They practice similar tasks in classroom to have equal understanding about the content of practice					
7	They get opportunity to learn in groups so that they can identify their learning gaps.					
8	They are allowed to think of solutions to practical problems themselves before the teacher shows them.					
9	Parallel tasks of varied levels of complexity are offered with various degree of scaffolding (support).					
10	Instructional experiences are adjusted parallel to the ongoing assessments basis.					

11. In your own understanding, please suggest how pre-service teachers learn best to teach.

_____

_____

2. How would you characterize each of the following teacher educators' pedagogical strategies?Please decide on the scales provided by marking a "√" (Very low = 1, Low = 2, Medium = 3, High = 4, Very high = 5).

No	**Teacher educators' pedagogy is characterized by the: -**	1(VL)	2(L)	3(M)	4(H)	5(VH)
1	Teachers' academic and professional competence					
2	Teachers' performance of his/her professional practices					
3	Teacher educator's effect, which is not necessarily related with the pre-service teachers effectiveness					
4	Demonstrating skills of teaching practically by both teacher educators and pre-service teachers					
5	Creating learning experiences that inform pre-service teachers to practice from theories					

6	Belief in that knowledge of subject matter is more important than knowledge of the general methods of teaching					
7	Engaging in teacher education researches that examine and inform the pedagogy of teacher education					
8	Reflective practices with the kind of envisioned, research-based proven effective teaching strategies					
9	Integrating technology in teaching and learning					
10	A purposeful commitment to the teacher education profession					

11.In your own understanding, please state the main characteristics of effective teacher educators' pedagogy (strategies, methods and techniques).

_____

_____

3. How often do you use the following teacher education pedagogical strategies (methods and techniques)?Please decide on the scales provided by marking a "√" (Never = 1, Sometimes = 2, Average = 3, Often = 4, Very often = 5).

No	**You use: -**	1(N)	2(S)	3(A)	4(O)	5(VO)
1	**Case Studies** (teaching pre-service teachers systematically both from particular contexts (case) and from more generalized theory about teaching).					
2	**Field work** (giving opportunity to the pre-service teachers to go into their field to collect and correlate data on a specific topic).					
3	**Microteaching** (giving pre-service teachers opportunities to teach a small portion of a lesson to a small group).					
4	**Lecture** (presenting abstract information all at once, which pre-service teachers have to fit into their existing schemata).					

5	**Modeling** (teacher educators' deliberate showing of specific teaching strategy).					
6	**Seminar** (to bring together groups of pre-service teachers to conduct debates, discussions, experience sharing etc. on a particular subject).					
7	**Presentation** (learning that exist in a didactic format where the lecturer is seen as the expert disseminating the knowledge).					
8	**Cooperative Learning** (a form of learning in a small groups so that pre-service teachers work together to maximize their own and each other's learning**).**					
9	**Guided Practice** (helping pre-service teachers to construct their own meaning about teaching through practice).					
10	**Direct instruction** (any instruction that is led by the teacher educator regardless of quality).					

11. List some of the most often used teacher education pedagogical strategies (methods and techniques) in your teaching-learning practices.

_____

_____

4. The following are statements that show challenges in employing quality teacher education pedagogy. Please indicate the extent of their effect by putting a tick/√/ in relation to the situation in your college (Strongly Disagree=1, Disagree=2, Not Decided=3, Agree=4, Strongly Agree=5).

No	**Teacher education pedagogy is challenged by: -**	1(SD)	2(D)	3(ND)	4 (A)	5(SA)
1	Lack of facilities of instructional resources such as computers, projectors, facilitated classrooms, etc., by the college.					
2	Lack of professional development opportunities.					

3	Lack of motivational aspects or incentives such as increased career levels to pursue, salary and status that discourage teacher educators.					
4	Lack of teacher educators' commitment to employ effective teacher education pedagogical practices.					
5	Teacher educators' lack of knowledge/ understanding to practice effective teacher education pedagogical practices.					
6	Dominance of teacher educators' traditional teaching practices and attitudes.					
7	Teacher educators' lack of willingness to learn from one another and to share experiences.					
8	Presence of poor performing pre-service teachers.					
9	Presence of unmotivated pre-service teachers.					
10	Pre-service teachers' inability to show any observable commitment to improving their academic skills.					

11. From your own practices, list any challenge you are facing that negatively affects your pedagogical practices (methods and techniques)

_____

_____

_____

This is the end of the questionnaire

Thank you very much for your cooperation!

Appendix B: Interviews Schedules to teacher educators

Interview Questions to selected stream/department heads or teacher educators

1. In your view, how do student teachers learn to teach?
2. What major approaches of pedagogical strategies (methods and techniques)do teacher educators (including yourself) use in your college?
3. How doyou conceptualize teacher education pedagogy? As a teacher educator, how do you help your student teachers learn to teach? What methods do you use in your courses?
4. In your college, consider the instructor(s) whom you describe as an effective teacher educator. What are his/her personal and professional qualities and practices?

5. If you think that the teacher educators need to be more effective than that they are now, what would you recommend to be done to address the problems in colleges of teacher educations?
6. What challenges do teacher educators confront in their implementation of quality teacher education pedagogy?
7. Is there anything else you think I should know?

Appendix C: Interview Questions to student teacher

1. In your view, how do you observe the impact of teacher educators' pedagogy to learn teaching?
2. Discuss with me your experiences of learning to teach while you were in the pedagogy of teacher education.
3. What major approaches of pedagogical strategies (methods and techniques)do your teacher educators use in your college?

4. In your stay of college, consider the teacher educator(s) whom you describe as an effective teacher educator. What are his/her personal and professional qualities and practices?

Appendix D: Observation Checklist of Teacher Educators Pedagogy

Subject: _____

Classroom: _____

Topic of the day: _____

Planned class duration in minutes: _____

Actual lesson time in minutes: _____

Date: _____

Checklist

1. STrs major activities from the beginning to the end of the lesson (How STs learn?)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. TErs instructional activities using the following criteria (How TErs teach?)

Brief description of the Teacher's activities	Duration in minutes	Students' activities	Techniques (Q&A, …)
Case Studies			
Field work			
Micro teaching			
Lecture			

Demonstration			
Modelling			
Seminar			
Cooperative learning			
Guided practice			
Research			
Other activity			
Write one or two sample questions asked by teacher		Write one or two sample questions asked students	
1.		1.	
2.		2.	

3. How did student teachers learn the contents or skills:

a. Listening to a lecture: Describe the lecture briefly by referring to the materials used during the lecture, questions asked and how much interactive (two way communication if it involved).

_____

_____

b. Working in groups

i. How engaged were the group members during the group work in a scale of 1 (Not Engaged) to 5 (Highly Engaged)? Can you explain why you say so?

ii. Describe in detail how the students and the teacher educator spend the time for group discussion.

_____

_____

c. Presenting individual/ group work: Describe what happened here

_____

_____

d. Modeling/ demonstration: Describe what happened during modeling

_____

_____

e. Individual work: Describe what happened during individual work

_____

_____

f. Asking and answering questions: Describe what happened

_____

_____

g. Classroom Physical environment suitability to implement QTE

_____

_____

h. What visible challenges do the TErs confront while teaching

_____

_____

i. Others issues to note

_____

_____

Appendix E: Pilot Study

Pilot study is an important tool for research since it allows the researcher to refine and improve procedures, instruments, his or her responsibilities and define which activities are to be carried out (Tenenbaum and Driscoll, 2005).

Before the actual data collection, an initial version of questionnaire was designed and applied to a sample of sixty - one teacher educators selected fromDilla CTE. The referred CTE was selected for pilot study because it was oneof the colleges of teacher education in the study area, which was not

involved as a sample in the final study.Thus, the researcher considered this number of respondent to be adequate for the exercise.

The responses from this questionnaire allowed the researcher not only to check the clarity of the questionnaire items, but also to adjust the sequence of the questions.Beyond familiarizingthe researcher with administration of the instrument, this process also permitted to refine the final version of the questionnaire by rewriting some questions and also eliminating some others.

3.7.2 Reliability of the Instruments

Pilot test was used for validating the employed content in the questionnaire (Orodho, 2005). The survey was piloted on a subset of the intended population, Dila CTE. Based on the pilot study, the researcher pointed out which questions were weak or irrelevant. In this line, internal consistency of items, i.e., how closely related the set of items are as a group in the dimension of the questionnaire, was computed usingCronbach's Alpha. Accordingly, the coefficient of reliability of the first dimension of teacher educators' view of learning to teach was 0.863.This was resulted by omitting item number 2, as its tolerance to item (Corrected Item-Total Correlation) is lower than .25 (0.059). With the similar analysis, the coefficient of reliability of the second dimension of teacher educators' conceptions of their pedagogy is 0.902. Here also item number 6 has been omitted, as its tolerance to item (Corrected Item-Total Correlation) is about .25 (0.254). Omitting item number 4, as its item tolerance (Corrected Item-Total Correlation) is lower than .25 (0.188), the coefficient of reliability of the third dimension of teacher educators pedagogical practices is 0.821. In the fourth dimension of challenges that teacher educators face, the coefficient of reliability is 0.833. As the amount coefficient of reliability of each of the dimensions is greater than .70 (Streiner, 2003) and the corrected item-total correlation of each items is greater than .25 (Azwar, 2017), it was quite high enough to judge the instrument as reliable for the study (George and Mallery, 2003; Orodho, 2005).

A reliability analysis for the sub-scales was also conducted. Accordingly, in the first dimension, for the traditional teacher-led views (3 items), $\alpha = 0.668$, and for the learner-centered views (6 items), $\alpha = 0.85$.In the second dimension, for traditional transmissionist conceptions (4 items), $\alpha = 0.748$),and for the transformationist conceptions (5 items), $\alpha = 0.895$. Similarly, in the third dimension, for the traditional teacher-ledpractices (3 items), $\alpha = 0.621$and for the learner-

centered practices (6 items), α = 0.795. And in the fourth dimension, forteacher educators related constraints (3 items), α = 0.758 and for the context related constraints (7 items), α = 0.773. Except for items of teacher-led views in first dimension and for items of teacher-led conceptions in the second dimension, α = 0.668 and α = 0.621 respectively, with moderate validity, all others are high enough to judge the scales as reliable.

Validity of the Instruments

Validity addresses the question, "how close is the measured value to the true value?" and is a measure of how well a test measures what it is supposed to measure (Kombo and Tromp, 2006). Along this line, due emphasis has given for validity issues of the instruments of this research. As it is a non-statistical method of validating the employed content in the questionnaire (Orodho, 2005), content validity in this study was established by seeking judgments from a panel of three judges competent in the area of study. These included advisors who assisted in developing and revising the research instruments as well as pedagogical experts from one of the colleges of the study area. The supervisors provided feedback and their recommendations were incorporated in the final questionnaire. Particularly, the supervisors read the draft instruments and made their recommendations on how the content and construct validities were to be ensured. Based on the suggestions of the supervisors, the researcher made the final instruments which were used in the final data collection. The questionnaires were addressed to teacher educators through the researcher himself giving explanation about how to respond to the questions in the questionnaire. The dean of the college also made a follow-up to request returns.

Appendix F: Sampling

Subjects were selected from each department (strata) by the proportionally allocating sample size formula, determined by the Lovin's formula of n = $\frac{N}{1+Ne^2}$, where, n = Number of samples, N = Total population and e = Error tolerance (level)(Kothari, 2004).

In our case, N = 588 (the total TErs of the selected colleges), e = 0.05 and the total sample size n = $\frac{N}{1+Ne^2} = \frac{588}{1+588\times(0.05)^2} = \frac{588}{1+1.47} = \frac{588}{2.47} = 238.$

Since, population number and its sample size are directly proportional, i.e., N~n with constant of proportionality p = $\frac{n}{N}$, where P represents the proportion, n represents the sample size, and N represents the population. In our case, p = $\frac{n}{N}$= $\frac{238}{588}$ = 0.405. Hence sample of a specific stratum becomes the product of p and the population of that stratum, i.e., $n_i = p*N_i$.

Hence, for strata of size N_{Hossana} = 178, N_{Bonga} = 189 and N_{Hawassa} = 221, adopting proportional allocation, the sample sizes found:

n_{Hossana}= p*N_{Hossana} = 0.405×178 = 72

n_{Bonga}= p*N_{Bong} = 0.405×189 = 76

n_{Hawassa}= p*N_{Hawassa} = 0.405×221= 89

Thus, using proportional allocation, the sample sizes for the strata Hossana, Bonga and Hawassa are 72, 76 and 89 respectively which is in proportion to the sizes of the strata viz., 178: 189: 221.

In general;

	Hawassa CTE	Bonga CTE	Hossana CTE	Total
Population	221	189	178	588
Sample	89	76	72	237

This proportional allocation further used to select subjects from departments of the selected colleges.