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To cite this article: Chanponna Chea (2024) Mentorship's role in shaping professional identity: insights from Cambodian teaching practicums, Cogent Education, 11:1, 2419710, DOI: [10.1080/2331186X.2024.2419710](https://doi.org/10.1080/2331186X.2024.2419710)

To link to this article: <https://doi.org/10.1080/2331186X.2024.2419710>



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Published online: 25 Oct 2024.



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Mentorship's role in shaping professional identity: insights from Cambodian teaching practicums

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ABSTRACT

Extensive literature discusses mentoring in teacher education as a means to advance its professionalization. This study explored mentoring from the perspectives of student teachers, teacher educators, and school mentors. It analyzed four case studies conducted in two teacher-education colleges in Cambodia through observation and listening to stakeholders' voices. Data collection involved pre- and post-classroom observations, mentoring sessions, interviews, and portfolio analysis. Inductive and deductive content analyses were used to analyze the data thematically. The findings revealed that mentoring was highly appreciated by the participants. However, critical issues were identified, including a lack of mentoring structure and limited mentorship skills, need to be addressed. Moreover, the data indicated a broad spectrum of mentoring support, encompassing instruction and emotion. The influence of mentoring on student teachers' professional and personal development was evident, with participants reporting enhanced instructional skills, increased confidence, and improved reflective practices. Furthermore, this study highlights the challenges and limitations encountered in mentoring relationships and suggests strategies for optimizing the effectiveness of mentoring in teacher education in Cambodia. Ultimately, this study contributes to the existing literature on mentoring and provides insights for policy-makers and practitioners emphasizing that more structured and skill-based mentoring programs can strengthen teacher preparation and support systems in Cambodia and similar contexts.

ARTICLE HISTORY

Received 9 June 2024
Revised 23 September 2024
Accepted 17 October 2024

KEYWORDS

Mentoring; professional identity development; student teachers; teacher educator efficiency; teaching practicum

SUBJECTS

Sustainability Education, Training & Leadership; Teachers & Teacher Education; Teaching Assistants; Classroom Practice; Continuing Professional Development; Curriculum Studies; Educational Psychology

1. Introduction

In an era of heightened accountability and growing emphasis on improving teacher quality in Teacher Education Institutions (TEIs), providing ample support to Student Teachers (STs) is crucial. In this regard, mentoring has been introduced to enhance STs' identity development (Beijaard et al., 2004; Korhonen et al., 2017). Several studies on mentoring have demonstrated that mentors can significantly enhance instructional proficiency among STs during their Teaching Practicum (TP). Mentoring holds the promise of diminishing the sense of isolation among STs, boosting their teaching confidence, enhancing problem-solving abilities, and fostering self-reflective practices (Schuck et al., 2018; Tonna et al., 2017), especially in time management and workload to achieve better socialization in the school environment (Hobson et al., 2009).

Given the broad array of benefits associated with mentoring, it is important to examine the extensive body of research and explore its various dimensions. Over the past two decades, interest in mentoring as a tool for developing STs' professional identity has grown (Lawson et al., 2015; Mok & Staub, 2021; Pungur, 2007). Extensive literature on teacher education has explored mentoring, leading to a detailed understanding of the roles, perceptions, characteristics, and structures involved in this complex phenomenon (Aderibigbe et al., 2022; Ewing, 2021; Hobson & Malderez, 2013; Li et al., 2021; Van Ginkel et al.,

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2016). This body of research designates that mentoring issues occur across and within various institutional and cultural contexts (Andreasen et al., 2019). For instance, Pungur (2007) conducted a cross-country analysis of mentoring models from Canada, the United States, and Hong Kong, revealing a hybrid model demonstrates that mentoring relationships among stakeholders are key to a successful STs' TP. A meta-analysis of experimental studies by Mok and Staub (2021) suggested that when creating initial teacher education programs, it is important to integrate the cognitive modeling of lesson planning and teaching methods to enhance STs' instructional abilities. Another systematic literature review on conceptualizing mentoring in higher education by Nuis et al. (2023) argued that measuring the effectiveness of mentoring programs is challenging due to a lack of conceptual clarity and a diverse range of measurement methods employed. Nuis et al. (2023) suggested that five characteristics should be considered when designing a mentoring program: the purpose, the actor fulfilling the mentoring role, the formalized process, the developmental relationship, and functions and behaviors.

In summary, previous studies have exhibited a lack of research on the influence of mentoring on STs' professional identity development (Mok & Staub, 2021; Nuis et al., 2023). However, to advance the professionalization of mentoring, research should focus on the mentoring techniques, structures, and procedures, as well as the outcomes of mentoring, which is the ultimate goal of any mentoring endeavor. Moreover, all the studies above come from the experiences of mentoring programs in high-income countries. There is little evidence, especially in teacher education programs, of mentoring activities to support STs during their practicum in low-income settings, partly because mentoring activities have been taken for granted and often do not exist in such settings. Some systematic literature reviews have revealed that most mentoring studies have been conducted in English-speaking countries. For instance, Nuis et al. (2023) reported that 88 out of 106 studies were conducted in the USA. Kallio et al. (2016) also depicted that the review articles centered on undergraduate and graduate students in the United States. However, it has been claimed that mentoring differs depending on the local context, working environment, economic conditions, and political climate (Hudson & Hudson, 2018), making generalization claims difficult. Corcoran, Walker, and Wals (2004) noted that no educational institutions are the same, particularly when considering cultural impacts. Therefore, there is a need to broaden the scope of mentoring research to other contexts to provide empirical proof regarding the knowledge and traits of mentoring, as well as its impact on various outcomes such as instructional skills, competence enhancement, student achievement, self-reflection, and feedback (Nuis et al., 2023).

Cambodia presents a particularly important case for mentoring research due to several specific challenges and conditions. The country's historical context, marked by the devastating impact of the Khmer Rouge regime, resulted in the loss of a generation of educated professionals and the decimation of educational infrastructure, leaving a lasting impact on current educational practices and policies (Dy, 2015). Additionally, cultural factors, such as Cambodian society's hierarchical nature, influence mentoring relationships' dynamics. In Cambodia, the economic constraints further exacerbate the situation, as schools often struggle with inadequate facilities, insufficient teaching materials, and limited opportunities for professional development due to financial limitations (Hill & Menon, 2013). The quality of teacher education varies widely, with many teachers having minimal practical experience and limited access to ongoing professional support (Sot et al., 2019). Additionally, the government has been implementing educational reforms to improve teacher education and professional development, but these efforts require further empirical evaluation to determine their effectiveness and areas for improvement (Heng & Sol, 2022). Addressing these challenges through targeted mentoring research can provide valuable insights and contribute to the broader understanding of effective mentoring practices in low-income and post-conflict settings.

This study goes beyond the one-size-fits-all mentoring models and examines cases gathering critical evidence to modify the program (Khan & VanWynsberghe, 2008). Moreover, Nuis et al. (2023) observed that studies that employ multiple data collection techniques, including pre-and post-classroom observations, observation of mentoring sessions, one-on-one semi-structured interviews, and document analysis to advocate for in-depth investigations, are rare. Therefore, this study is unique in employing all the above-mentioned techniques. Therefore, the present study aims to explore a broader view of key TP players, including STs, TEI-mentors, and school-mentors, across four case studies conducted in two Teacher Education Colleges in Cambodia by reporting the influence of mentoring through observation

and listening to stakeholders' voices in the debate on how to organize high-quality mentoring activities to support STs during their practicum. Specifically, this study aimed to answer the research question of how mentoring fosters student teachers' professional identity development. Three research questions were formulated to shape the direction of this study.

1. How do different stakeholders perceive mentoring?
2. What specific forms of mentoring support are most beneficial for the development of STs' professional identity?
3. What specific professional and personal accomplishments do student teachers achieve through the mentoring they receive during their teaching practicum?

2. Literature review

2.1. Mentoring in teacher education

Mentoring encompasses various dimensions and intricacies and is often intertwined with other relational dynamics such as coaching, supervising, and counseling (Ambrosetti et al., 2014; Landsberg, 2015). Teacher education has implemented mentoring to enrich the STs' professional journey and offer continuous support during their TP (Darling-Hammond et al., 2017). It is a strategy used to assist STs in professional practice, whereby an ST is placed with a classroom teacher working collaboratively with a teacher educator to create links between theory and practice (Mena et al., 2016).

The significance of mentoring in teacher education is well-supported in the literature, yet perceptions of its effectiveness often differ among stakeholders. STs see mentoring as a crucial support system, aiding in the development of teaching confidence and assisting with challenges such as classroom management, lesson planning, and student engagement, as highlighted by various studies (Landsberg, 2015; Schuck et al., 2018). Research by Ulvik et al. (2018) emphasizes the importance of personalized feedback, noting that STs find mentor feedback invaluable for identifying areas of improvement and refining teaching strategies. However, as Aderibigbe et al. (2022) point out, the effectiveness of mentoring is not without its challenges. Some STs feel that feedback lacks constructiveness or that mentors focus too much on formal evaluations rather than offering developmental support. Moreover, time constraints and workload pressures can limit the quality of mentoring interactions, a challenge that both mentors and STs face (Mok & Staub, 2021).

Teacher educators and school-based mentors similarly acknowledge the value of mentoring, viewing it as an essential tool for preparing future teachers (Li et al., 2021). However, as Hudson and Hudson (2018) discusses, the dual role of mentors—acting as both evaluators and supporters of STs' growth—can create tensions, with feedback sometimes perceived as evaluative rather than developmental. In line with this, Parker et al. (2021) comments that school-based mentors often struggle to provide adequate mentoring due to the competing demands of their own teaching responsibilities. This aligns with broader concerns in the literature regarding how systemic constraints, such as workload and time limitations, can affect the quality of mentoring (Moulding et al., 2014).

2.2. Types of mentoring support

Gold (1996) delineated support in teacher education into two key types: instructional and emotional support. These supports are essential for the holistic development of STs as they transition from the theoretical aspects of their training into the practical realities of classroom teaching. Each type of support addresses different aspects of the ST's experience, helping them build the necessary skills and resilience required to succeed in the teaching profession.

Instructional support plays a critical role in the pedagogical development of STs by equipping them with the necessary teaching skills and knowledge for effective classroom performance. Several studies highlight the significance of this support in enhancing teaching competencies. For instance, Tas et al. (2018) emphasize that regular classroom observations, feedback on lesson plans, and discussions on teaching strategies are foundational to fostering STs' growth. Izadinia (2016), notes that mentors also

play a pivotal role in improving assessment practices, which helps STs refine their methods to engage students and meet curriculum standards. Furthermore, Darling-Hammond et al. (2017) points out that mentors bridge the gap between theoretical knowledge and practical application, enabling STs to connect educational theory with classroom realities. The reflective feedback process, as discussed by Tonna et al. (2017), allows STs to critically evaluate their teaching practices, leading to improved self-awareness and confidence in their instructional abilities.

In addition to instructional support, emotional support is increasingly recognized as a pivotal element in the mentoring process. Research highlights the emotionally demanding nature of teaching, particularly for STs who are new to the classroom and may feel overwhelmed by their responsibilities (Schuck et al., 2018). Studies emphasize that mentors play a crucial role in helping STs manage stress, anxiety, and self-doubt—common challenges in the early stages of their teaching careers. This safe, trusting relationship mirrors what Van Ginkel et al. (2016) describe as essential for effective mentoring, where mentors not only address instructional skills but also offer emotional reassurance during challenging moments. Izadinia (2017) also suggests that by sharing personal experiences and offering practical advice, mentors help STs overcome these obstacles, thereby fostering resilience and self-efficacy, key components of professional growth.

2.3. Outcome of mentoring

The outcomes of mentoring are multifaceted, impacting both the instructional capabilities and the emotional resilience of STs. Research consistently emphasizes that mentoring helps STs build confidence in their teaching abilities, refine their pedagogical skills, and foster a stronger sense of professional identity (Moulding et al., 2014). Mentoring plays a crucial role in improving communication skills as STs learn how to interact effectively with both students and colleagues, which is critical for classroom management and professional collaboration. These outcomes are shaped through ongoing interactions with mentors, who provide feedback, guidance, and emotional support in various capacities.

The relationship between mentors and STs is central to these developmental outcomes (Izadinia, 2016). Effective mentoring fosters a reflective practice where STs engage in self-assessment, critically analyze their teaching methods, and develop a deeper understanding of their role as educators. This reflective process is key to professional growth, as it encourages STs to integrate theoretical knowledge with the practical experiences. Studies show that STs who receive meaningful feedback from their mentors are more likely to develop confidence and self-efficacy, enabling them to handle classroom dynamics more effectively (Moulding et al., 2014).

Teacher educators, who often serve as mentors, play a crucial role in evaluating STs' performance based on established pedagogical standards. These evaluations focus on the ability of STs to plan and deliver lessons effectively, manage classrooms, and adapt to the diverse needs of learners (Ulvik et al., 2018). Additionally, mentors help STs navigate the emotional challenges of teaching, providing support that enhances their resilience and capacity to cope with the stresses of the profession (Goegan et al., 2017). This mentoring often leads to positive behavioral changes as STs develop greater control over classroom management, demonstrate professional conduct, and exhibit an ability to adapt their approaches based on reflective feedback (Kemmis, 2021).

School-based mentors also involve in this evaluation process with the focus on the context of everyday classroom practice. These mentors provide insight into the practical application of teaching strategies, classroom management, and professional conduct, offering real-time feedback on the day-to-day challenges STs face (Andreasen et al., 2019). Their observations are often focused on how STs establish rapport with students, maintain discipline, and engage learners in meaningful ways. This practical evaluation complements the assessments provided by teacher educators and contributes to a comprehensive understanding of the STs' readiness to enter the teaching profession. The dual role of mentors as both evaluators and supporters ensure that STs receive constructive feedback while also being encouraged to experiment, take risks, and reflect on their practices in a safe and supportive environment (Lammert et al., 2020).

Regarding the evaluation, several studies have emphasized the need for clear and measurable indicators to assess the STs (Asfahani et al., 2024). Without these benchmarks, it becomes challenging for TEs

to evaluate the influence of mentoring on STs' professional development and instructional competence. Asfahani et al. (2024) highlight the importance of developing robust benchmarks, including measurable improvements in teaching practice, students engagement, and professional growth, to ensure that mentoring programs yield meaningful outcomes. Krishna et al. (2023) recommend using specific tools to evaluate lesson planning, classroom management, and student engagement both before and after the mentoring period. Additionally, structured assessments of professional identity development, including self-efficacy and teaching philosophy, could be implemented, as suggested by Asfahani et al. (2024). Emotional support remains a critical component of effective mentoring, with recent studies linking it to enhanced job satisfaction and reduced stress levels (Hudson & Hudson, 2018). Benchmarks for evaluating emotional support might include tracking changes in stress management and emotional well-being through mentor-mentee feedback or validated instruments like the Teacher Self-Efficacy Scale (Goegan et al., 2017). Integrating these indicators can significantly enhance the consistency, accountability, and visibility of mentoring programs.

2.4. The influence of mentoring on STs' professional identity

The professional identity development of STs is a multifaceted process shaped by a range of factors such as personal experiences, educational background, mentorship, and real-world exposure to teaching environments (Beijaard et al., 2004). Throughout their training, STs undergo significant professional and personal growth (Goodson & Cole, 1994; Lortie, 2020). This development involves not only gaining pedagogical knowledge—such as classroom management, curriculum development, and assessment techniques—but also acquiring deeper insights into educational theories and philosophies that guide teaching practices. STs observe experienced mentors, reflect on their own teaching, and apply these learnings in practical teaching placements (Mena et al., 2017). During these placements, mentorship plays a pivotal role in shaping their professional identity by offering guidance, feedback, and support, helping STs navigate the complexities of teaching (Izadinia, 2017).

Mentoring significantly influences the professional development of STs, both positively and negatively (Izadinia, 2017). Effective mentoring help STs refine their teaching skills, gain self-awareness, and develop interpersonal skills essential for working with students, colleagues, and mentors (Baeten & Simons, 2016). Constructive feedback from mentors helps STs better manage classroom challenges and refine their teaching styles (Ulvik et al., 2018). Although, the quality of mentoring is crucial; poor mentoring—marked by a lack of support, constructive feedback, or mentor engagement—can hinder STs' progress, leaving them feeling demotivated and anxious (Yuan, 2016). Despite the significant role of mentoring in shaping STs' professional identity, research indicates challenges in its implementation across various contexts. A lack of clarity around mentoring roles, insufficient mentor training, and inadequate stakeholder collaboration often hinder effective mentoring (Allen & Wright, 2014).

To conclude, mentoring plays important role in shaping STs' professional identity and development. To make mentoring effective, the mentoring process and features go beyond not just only providing instructional support but also addressing emotional and psychological requirement, establishing a comprehensive learning condition and situation. The dynamic interconnection between mentoring and STs' professional identity development emphasizes the necessity of well-structured mentoring programs that are relevant to and support the TEIs goals and personal growth of STs. The success of mentoring, however, can be limited by issues including ambiguous roles and poor stakeholder collaboration. Therefore, it is essential to consider how STs receive support during their TP and how mentoring meaningfully contribute to their professional growth and learning outcomes in the diverse educational context.

3. Materials and methods

3.1. Research context

Teacher Education Colleges (TECs) were established with the support of the Japan International Cooperation Agency (JICA) project in 2017 (JICA, 2017). There are two TECs across the country: Phnom Penh Teacher Education College (PTEC) and Battambang Teacher Education College (BTEC). These TECs

provide bachelor's degrees (12 + 4) in primary and lower-secondary education teaching. TECs are four-year programs with four TP phases: school experience, teaching assistantship, practicum I, and practicum II. The school experience is in the first year of the program. This 2-week attachment allows STs to observe the school environment and reflect on the teaching and learning processes. A teaching assistantship is implemented in the second year of the program. During this 5-week attachment, the STs observe and assist in teaching activities. This allows STs to expose themselves to real classroom teaching. In year three, practicum I is a 5-week attachment period in which STs start to teach with the support of TEI and school mentors. In year four, practicum II is the final training. During this 10-week attachment, STs start teaching independently.

In the context of TEIs in Cambodia, mentoring is conducted during the TP, whereby a group of STs is placed under the supervision of a classroom teacher (school mentor) and a teacher educator (TEI mentor). Both mentors take responsibility for mentoring STs' teaching and evaluating their professional practices. The mentors had diverse teaching backgrounds, ranging from five to over 20 years of experience. None of the participants had undergone formal training to assume mentoring roles; instead, they relied primarily on their practical mentoring experiences.

3.2. Design

This study employed a qualitative research design to observe STs' mentoring experiences and investigate STs' professional identity development. The qualitative case study approach is well-suited for this study because it allows the collection of triangulations of multiple sources to cross-check interpretations and provides a rich arrangement of information with which to authenticate claims (Creswell & Poth, 2016; Yin, 2009).

3.3. Participants

Data were collected during the third year of the practicum placement, which lasted for 5 weeks. There were three placement schools for each TEC, each teaching four subjects: math, physics, chemistry, and biology. First, the researcher randomly selected two TEC participants from different placement schools. The STs were then purposively selected according to the first teaching schedule (i.e., the ST responsible for teaching first was selected) (Etikan et al., 2016). After the TP ended, the STs were invited to an interview, and their portfolios were collected. Finally, the TEI and school mentors responsible for mentoring STs were invited for one-on-one interviews. Four STs, four TEI mentors, and four school mentors participated in the study. Table 1 depicts the participants of this study.

3.4. Data collection

First, the researcher attended the TP orientation at TECs to listen to an overview of the TP, how it is organized and to understand the entire TP implementation procedure. Subsequently, a preliminary meeting was conducted with TEI mentors, school mentors, and STs after the TP orientation at the target placement schools to introduce the purpose of the study, discuss the data collection process, and obtain

Table 1. Participants' demographic information.

Case	Subject	Pseudonym	Gender	Mentoring experiences
Case 1	Math	TEI-mentor#1	Female	4 years
		school-mentor#1	Male	1 year
		ST#1	Male	Year 3 student
Case 2	Physics	TEI-mentor#2	Male	4 years
		school-mentor#2	Male	1 year
		ST#2	Female	Year 3 student
Case 3	Chemistry	TEI-mentor#3	Female	4 years
		school-mentor#3	Male	2 years
		ST#3	Female	Year 3 student
Case 4	Biology	TEI-mentor#4	Female	2 years
		school-mentor#4	Male	2 years
		ST#4	Male	Year 3 student

informed consent from participants. Next, the researcher was invited to the telegram group for each case to report and share information.

The data collection process started with observing the ST's first classroom teaching without any intervention from either mentor (pre-classroom observation). Next, the mentoring sessions involving the TEI mentor, school mentor, and STs were investigated (mentoring session). After the mentoring session, the ST prepared a lesson plan and other teaching materials according to the comments and suggestions. They could also drop their materials to the Telegram group during preparation for the next lesson and ask for comments and feedback for further improvement before their next teaching schedule (post-classroom observation). All classroom observations and mentoring sessions were video recorded, ranging from 40 to 50 min. After the TP was completed, the participants were invited to participate in a one-on-one interview. All interviews were conducted separately based on the time allocated by the interviewees. The interviews were conducted in Khmer and were transcribed and translated into English for illustration. Each interview lasted approximately 30–40 min. This interview aimed to report the perceived effect of mentoring on STs' professional development. After interviewing each ST, interviews with TEI mentors and school mentors were conducted to confirm or contradict the perceptions and evidence gathered from them. The multiple perspectives provided by the key players during the TP reflect relevant opinions regarding the types of support and mentoring activities required to enhance the STs' professional practices.

Finally, STs' portfolios, including lesson plans, feedback, and reflection reports on teaching performance, were collected. The collection of triangulations of multiple data sources allows the researcher to crosscheck interpretations and provide a rich array of information to substantiate claims. [Table 2](#) summarizes the data sources used in this study.

3.5. Research instrument

The researcher used the institution's observation protocol to ensure a standardized approach to evaluation. This protocol aligns with the institution's criteria, ensuring consistency between observations and coherence with the mentoring activities. This consistency increases the accuracy of the assessment of teaching performance and provides insight into strengths and areas needing growth within the institution's standards.

The interview protocols were developed by selecting overarching inquiries to steer the interview process. Sub-questions were created based on the objectives of the study. The interview questions were sent to experienced researchers in the field to ensure their validity and variability. Feedback and input were discussed with fellow researchers in a 120-min seminar. Finally, interviews were conducted with two teacher educators from two TECs.

3.6. Data analysis

The data analysis for this study was designed to address each research question systematically, using a three-stage process to ensure comprehensive coverage and robustness of results.

Research Question 1: How do different stakeholders perceive mentoring?

In the initial stage of the analysis, field notes, classroom observations, and mentoring sessions were examined to explore participants' perceptions of mentoring. The real-time insights from the field notes and observations captured participants' reactions and feedback, while the mentoring sessions provided an understanding of participants' attitudes and viewpoints. To analyze the data, the researcher first

Table 2. Data sources from each case.

Sources/instruments	Case1	Case 2	Case 3	Case 4	Total
Researcher's diary and observation	4	4	4	4	16
STs' lesson plans	2	2	2	2	8
STs' reflection report	2	2	2	2	8
Video-recorded teachings	2	2	2	2	8
Video-recorded mentoring sessions	2	1	2	2	7
Online video-recorded mentoring session		1			1
Interview with STs	1	1	1	1	4
Interview with TEI-mentors	1	1	1	1	4
Interview with school-mentors	1	1	1	1	4

Table 3. Themes and sub-themes for data analysis.

Themes	Sub-themes
Theme 1: Mentoring perceptions	1. Appreciation 2. Challenges
Theme 2: Mentoring supports	3. Instructional support 4. Emotional support
Them 3: Mentoring outcomes	5. Mentoring outcomes evaluated by the STs 6. Mentoring outcomes evaluated by school-mentors 7. Mentoring outcomes evaluated by TEI-mentors

transcribed all video recordings. Then, manual coding was used to identify recurring themes and patterns. The content was annotated and sorted into subthemes, with observations revisited before and after the lessons to align and triangulate the data.

Research Question 2: What specific forms of mentoring support are most useful for the development of STs' professional identity?

In the second phase of the analysis, the interview data and the STs' portfolios were examined to assess the nature and effectiveness of the mentoring support offered. The interviews with participants provided detailed qualitative insights into their experiences of mentoring support, including the type of support received and its influences. The portfolios provided concrete examples of how the mentoring support was implemented and influenced the participants' work. The interviews were subjected to thematic analysis to identify key themes related to mentoring support, while content analysis of the portfolios highlighted specific instances of support (Creswell & Poth, 2016). The data were carefully transcribed, coded and categorized, with emergent themes identified to provide a comprehensive overview of the support mechanisms and their effectiveness in supporting participants.

Research Question 3: What specific professional and personal accomplishments do student teachers achieve through the mentoring they receive during their teaching practicum?

Integrating field notes, observations, interview data, and portfolios enabled a holistic analysis of the mentoring results. Cross-case analyses were used to compare and contrast the results from the different data sources, focusing on the overall impact of mentoring on the participants' development and performance. This comprehensive analysis aimed to draw conclusions about the mentoring process's effectiveness and outcomes and provide a comprehensive understanding of the results achieved.

Triangulation was crucial throughout the analysis to enhance the reliability and validity of the findings by integrating data from various sources and stages. Codebooks for data analysis were reviewed to compare themes. Subsequently, thematically ordered conceptual displays were identified within and across cases. Table 3 displays the codebook used for data analysis.

3.7. Trustworthiness of the study

Korstjens and Moser (2018) states that trustworthiness in qualitative research is achieved through four key criteria: credibility, transferability, dependability, and confirmability. Similarly and Nowell et al. (2017) affirm that these criteria enhance the reliability of the findings and ensure their applicability across various contexts, thereby reinforcing the rigor of qualitative research. To ensure the credibility of this study, a participant review was conducted by sharing the preliminary findings with the participants to ensure that the interpretations accurately reflected their experiences and perspectives. Additionally, multiple data sources, such as documents, interview transcripts, field notes, and reflective diaries, were used as part of the triangulation process to verify the emerging themes. The researcher documented all decisions made during data collection and analysis to make the research process transparent and traceable. Next, transferability was addressed through detailed descriptions of the research context, participants, and findings. This "thick description" enables readers to judge the relevance of the results to other settings, extending the study's applicability beyond this study context. Dependability was ensured by keeping an audit trail and through peer debriefing to check the consistency of the research process. Confirmability was strengthened through reflexivity and an audit trail to ensure that the findings were based on the data and not influenced by the researcher's bias. Furthermore, to ensure confirmability,

the researcher engaged in peer debriefing by discussing the coding and analysis with colleagues to enhance the credibility of the findings.

For the interview protocol, participants were randomly selected, with a focus on those who had direct experience related to the research question. The semi-structured interviews allowed for in-depth exploration of specific topics while allowing participants to share additional insights. The researcher followed a systematic, manual approach to manage and organize the data for the coding protocol. This process began with initial coding to capture key concepts, followed by developing categories and themes through iterative analysis. Manual data coding ensured a deep, nuanced understanding of the material. In short, specific strategies were used in this study to fulfill each criterion and improve the results' overall reliability and validity.

3.8. Ethical approval and informed consent

The research title, data collection method, and participant sampling were presented to and approved by the Graduate School Ethics Committee before data collection. Regarding confidentiality and anonymity, identity coding was conducted for each interviewee (i.e., ST#1, ST#2, TEI-mentor#1, TEI-mentor#2, school-mentor #1, and school-mentor#2). Informed consent was obtained from each participant. The form indicated the purpose of the study and requested permission to record and use the data. The participants were asked to choose a convenient time for the interview. The respondents had the right to skip any question during the interviews.

4. Results

This section synthesizes the findings around the central theme of mentoring's influence on STs' professional identity development. Through a comprehensive exploration of multiple data collection techniques, this study highlights the various dimensions through which mentoring facilitates learning, growth, and skill development among STs. The findings were organized into the following themes: mentoring perceptions, mentoring support, and mentoring outcomes.

4.1. Perception of mentoring: everyone's voices

Numerous studies have documented the efforts that STs try to fit into their TP and the challenges they face while collaborating with their mentors, and the STs examined in this study are no exception. Nonetheless, it is important to note that it was not just the STs who grappled with this adjustment process; the TEI-mentors and school-mentors also had to navigate this dynamic. All participants were asked to articulate their perspectives regarding the influence of mentoring on STs' professional identity development, and each member brought their own viewpoints and individual experiences.

4.1.1. Appreciation

The interview and observational data revealed that the participants highlighted the importance of mentoring in supporting STs' professional growth. All STs expressed gratitude for their mentors' personalized guidance and support. They view mentoring as instrumental to their professional growth, noting its role in enhancing teaching skills, confidence, and a sense of efficacy. For instance, ST#3 mentioned,

My school-mentor is caring and approachable, consistently observing our teaching and providing immediate feedback. She responds quickly to our questions in our Telegram group. (ST#3)

STs also showed a strong commitment to incorporating their mentors' feedback into their teaching practice. This effort was consistently reflected in their classroom performance, where noticeable improvements in teaching quality were observed. The fact that the STs actively implemented the feedback and showed significant progress in their teaching techniques shows that they recognized and appreciated their mentors' advice. For instance,

I am satisfied with my mentors' support. They observed my teaching, provided feedback on my strengths and weaknesses, and suggested improvements. Without their support, I would not have improved much. (ST#1)

In addition, ST#2 emphasized the important role mentoring played in shaping her identity, noting its enduring impression of her development as a teacher:

He always remained calm and explained that all novice teachers face such challenges. At first, I felt that teaching job was not fit for me, but after listening to him I was relieved, and renewed my energy. He is truly my inspiration. (ST#2)

Receiving personalized feedback allows STs to learn from positive role models, helping them develop their teaching styles and philosophies. The mentors also shared these views. They stated that encouraging STs to try, establishing rapport, and communicating could ease their emotional burden. For instance,

I valued their effort and dedication during this TP. I knew they wanted to be good teachers and help students learn, but it was too hard for them to get everything right at this time. They were there to learn and make mistakes, and our role is to support them. (School-mentor#1)

Some mentors create a safe environment for the STs to express their feelings and share their thoughts:

I always asked them whether they had any difficulties or something I could help. Sometimes I propose they try whatever they feel is easier and they do not need to follow all my suggestions (School mentor#2)

The personal guidance and support provided by mentors was crucial for the professional development and confidence of STs. This was reflected in the mentees' consistent efforts to implement the feedback given, which led to noticeable improvements in their teaching practice. These positive results reflect the mentoring relationship's effectiveness and are a strong indicator of the STs' appreciation and gratitude. By actively implementing the mentors' advice and striving for continuous improvement, the STs demonstrated their deep respect and appreciation for the invaluable mentorship they received.

4.1.2. Challenges

4.1.2.1. Feedback inconsistency. Although mentoring received considerable appreciation and satisfaction from all STs, some critical issues must be addressed. For instance, some STs stated that, although mentoring activities were essential, feedback from both mentors was challenging. As evidenced by the video observations, both mentors conducted classroom observations to identify the ST's improvement, but both saw the same thing differently. The STs from two cases explained similarly:

My school-mentor suggested I lecture more and provide extra practice because students in that class progressing slowly. On the other hand, my TEI-mentor commented I reduce TTT and let students have more opportunities to do exercise by themselves or in group. (ST#3, ST#1)

Regarding this mentoring issue, TEI-mentor#1 responded,

Sometimes we had different suggestions because we had different perspectives. For me, I would love to see my STs apply the teaching pedagogy correctly and bridge the theory-practice gaps. (TEI-mentor#1)

From the school-mentor's perspective,

I was their teacher, and I knew their ability. The students in that class were slow learners. They need more lectures and more guiding practice. (School-mentor#1)

This is interesting but perhaps not surprising because it is common for people from different working environments to have different perspectives and principles. To address this challenge, establishing clear and standardized guidelines for mentoring is essential.

4.1.2.2. Lack of communication and time constraint. When communication is insufficient or unclear, it led to misunderstandings, reduced trust, and missed opportunities for learning and development. This issue can be seen in case#1. For instance,

I did not want my STs to lose face that is why I did not talk much and just let them receive feedback from the school-mentor. However, during our weekly reflection, I did not save their face anymore. (TEI-mentor#3)

Regarding this issue, one TEI-mentor suggested that it depended on the initial discussion before working together. He explained:

We always discuss and mentor STs together. Mostly he followed me and helped add something new. I think building good relationships is the key. (TEI-mentor#2)

ST#3 mentioned a similar opinion to TEI-mentor#2 that building good relationships and well-planned mentoring process should be considered,

I think they should discuss how they operate mentoring. The problem was that they did the mentoring session separately and that is why they did not understand each other. (ST#3)

ST#1 expressed a similar dilemma,

After the lesson ended, my TEI-mentor sent a voice message through Telegram to ask: How far the teaching had gone? Did you have any problems? What were the school-mentor's suggestions? (ST#1)

Overall, addressing the challenges of communication and time constraints is vital. As highlighted by the participants, building strong relationships, pre-planning mentoring, and commitment are key strategies that can enhance the effectiveness of mentoring.

4.1.2.3. Inadequate mentoring skills and lack of trust. Next, along the continuum, the mentors' ability, mentoring skills, and mentoring concept led to whether it helped promote the STs' potential or prevented them from trying. STs from two cases described how their school-mentors were deeply concerned about students' achievement, prioritized adherence to the mandated curriculum, and met the requirements outlined by the school. According to the researcher's diary, similar situations were noted: school-mentors seemed to have prepared everything. The STs' roles were writing lesson plans, following school-mentors' suggestions, and teaching. They focused more on specific classroom routines and administration rules and ensured students' achievements were as high as usual. ST#4 explained,

She treated me as a colleague student and explained everything. (ST#4)

ST#3, who encountered a similar situation, commented,

I understand that the student's achievement is the priority, but I wish my school-mentor would trust me and allow me to try. I also wanted students to reach high achievement. I also wanted to be a good teacher and I was willing to try my best. (ST#3)

These utterances imply that while mentoring involves guiding and supporting STs in their teaching journey and might be beneficial in certain cases, excessive interference can restrict opportunities for them to cultivate genuine professional identities.

The school-mentors' response to this challenge was to navigate their school's system regarding teaching methods and classroom discipline while figuring out the opportunities available for STs' learning.

[...] although it was during the STs' TP, I was still the one responsible for my class. I tried to balance between the STs' learning and my students' learning. (School-mentor#3)

4.1.2.4. Lack of supports. Another dilemma raised by ST#2 was that his school-mentor took a less conceptual approach to guidance and depended mainly on the TEI-mentors' suggestions. She commented that,

My school-mentor was passive and too encouraging. He always agreed with my TEI-mentor and even though I made many mistakes, he said it was ok. If he had been more direct, I might have learnt better. (ST#2)

In this instance, the school-mentor presented during the lesson but offered little to no feedback to the intern. STs have the freedom to experiment, as observed in the next section, the lack of assistance and feedback from the school-mentors limited the STs' ability to glean knowledge from their experiences.

All individuals in this study viewed mentoring as highly important. Nevertheless, based on the data presented, it appears plausible to infer that mentoring could positively and negatively impact STs' professional identities, depending on their attitudes, experiences, and beliefs about mentoring. For instance, mentors in the first case advocated rigid standards of teaching excellence, while those in the second believed in a trial-and-error approach to learning to teach. Mentors in the third case prioritized dialogue

and encouraged experimentation in teaching methods, whereas those in the fourth group endorsed a more authoritarian approach toward STs. Overall, the perceptions and experiences of participants regarding mentoring pointed out the lack of mentoring structure and limited mentorship skills, which affected the quality of supporting STs' professional practice. There are no established formal mentoring practices in place, and there are no clear structures or guidelines for the mentoring process. Moreover, almost all mentors responded that they had never received formal mentoring training.

4.2. Types of mentoring support for STs

This section examines the second major theme to investigate the mentoring support STs gained during their TP. Drawing from interviews, and portfolios prepared and written by STs, the researcher classified mentoring support into two categories: instructional and emotional support.

4.2.1. Instructional support

Learning during practicum placements is distinct from learning within academic institutions. Numerous factors complicate the situation beyond what happens on campus. Facing real-world obstacles may have led some STs to view the theory as overly abstract. ST#3 explained,

The teaching methods I learned from the institution were very abstract and I was just stuck—not sure how to start. (ST#3)

During TP, instructional support plays a pivotal role in enhancing the professional development of STs. By leveraging instructional support, STs learn basic skills such as lesson planning, classroom management, assessment making, ICT use, and appropriate pedagogical decision-making. Mentors utilize various strategies and resources to help STs improve teaching and foster growth.

4.2.1.1. Modeling effective teaching practices. Mentors often demonstrate specific instructional techniques, such as differentiated instruction, classroom management strategies, or technology integration into instruction. By observing these practices in real-time, mentees gain practical insights into implementing them in their classrooms. For instance,

The activities I experienced working with my mentors were classroom observation, preparing lesson plan and teaching. Both mentors checked my lesson plan and gave comments. I then revised and taught. (ST#1)

STs are typically urged to employ various teaching techniques tailored to accommodate individual students' diverse learning styles. However, the implementation of these methods is challenging. Some STs learned to make pedagogical decisions while teaching, which usually required flexibility and patience. ST#3 commented,

I have learned different teaching methods and strategies, but I am always unsure of which method is suitable for which lesson. My mentors help me to decide. (ST#2)

4.2.1.2. Providing constructive feedback. After observing STs' lessons, mentors provide feedback highlighting strengths and improvement areas. This feedback is evaluative and guide STs how to refine their teaching techniques. Mentors use reflective questions to encourage STs to think critically about their teaching decisions and thus develop a deeper understanding of pedagogical principles. Some STs commented that with the feedback of their mentors, they learned to reflect on their experiences and choose the right teaching method to practice.

I tried a game called 'hot potato' to engage students, but they did not seem to involve. The class became chaotic, and I immediately lost control. My school-mentor advised me to focus on clear instruction and active engagement to maintain control. (ST#2)

STs may encounter challenges or setbacks when they attempt new approaches. However, with the support of mentors, they can reflect on their experiences and receive constructive feedback to improve their teaching.

4.2.1.3. Peer observation and collaboration. STs were instructed to observe the teaching practices of their peers to adopt different perspectives and learn new strategies that they can later discuss with their mentors. Shared reflection sessions can further enhance this learning experience and promote a deeper understanding of teaching methods. Classroom management, for example, is a challenge for STs as it sets the tone for a positive and productive learning environment. Balancing effective classroom management with the delivery of quality instruction often seems nearly impossible. As novice teachers, STs need support from their colleagues and mentors who share their expertise, guidance, and strategies. ST#1 explained,

My group member helps me to control the class when students were noisy. (ST#1)

ST#3 added,

They help me placed the poster on the whiteboard while I was giving instruction. (ST#3)

ST#2 shared her experience.

My voice was too soft, and I seemed to be shy. My school-mentor told me to speak louder and make eye contact with students. (ST#2)

ST#4 also had problem with classroom management and shared his experiences

My school-mentor told me to try to remember the students' names and set classroom rules before the lesson started. (ST#4)

For some STs, the opportunity to practice teaching was valuable, providing them with hands-on experience and the opportunity to apply theoretical knowledge to real-world settings. However, for others, the quality of their learning experiences may have been hindered by challenges in the educational environment. What they learned from the institution fluctuated significantly depending on the instructional organization, curriculum materials, classroom culture, and classroom site.

4.2.2. Emotional support

The STs expressed a shared desire for mentors to offer emotional support. This support entailed engaging in warm, empathetic conversations beyond teaching techniques, touching on aspects such as building student relationships, and being available when needed. As commented by ST#3, for example,

I feel more confident to handle challenges during my teaching because I can turn to my school mentor for support and guidance if things go awry. (ST#3)

Some STs commented that the mentoring support they received was sufficient to improve their teaching skills. For instance, one ST commented that she was grateful for the support of her mentors.

My TEI-mentor paid attention and helped correct us every time. For example: my intonation was too serious. He told me to soften my voice, so I followed him. I think all his suggestions are good. (ST#2)

Other STs stated that they had difficulties in various domains, and the mentors help them deal with those difficulties.

Mentoring is very helpful for me. On my first day of teaching, I was nervous and made many mistakes. My mentors encouraged and made me feel more confident in teaching. (ST#1)

Another ST added that:

My school-mentor was helpful and encouraging. She calmly explained teaching methods like IBL, PBL, and LS, which I did not fully understand before. Her guidance made me more flexible in applying those methods. (ST#4)

To improve the consistency and effectiveness of the mentorship program, it is necessary for educational institutions to address these disparities and provide adequate support and resources to mentors and STs alike. This could involve standardizing mentorship practices, ensuring access to curriculum materials, fostering supportive classroom cultures, and offering diverse teaching experiences across classrooms.

4.3. Mentoring outcomes

Empathy in mentoring relationships influences how STs perceive and reflect on their experiences. By comparing pre- and post-classroom observations, analyzing interview data, and examining records such as lesson plans, evaluation reports, and reflection journals, the researcher gained a deeper understanding of how STs perceive progress and develop their professional identity over time. The evaluation considers the perspectives of three key sources: the STs, TEI-mentors, and school-mentors. Specific indicators of success are highlighted, such as improved teaching strategies, greater confidence in classroom management, and the ability to reflect on their teaching practice critically. These results demonstrate the mentoring's effectiveness and emphasize the importance of empathy for the meaningful development of STs.

4.3.1. Learning outcome evaluated by STs

After completing the five-week practicum, all STs agreed that mentoring activities supported by their mentors were helpful and contributed to developing their professional competency. In the interview questions, STs were prompted to reflect on and compare their first and subsequent teaching days before and after receiving support from their mentors. All participants responded that they observed significant improvements.

4.3.1.1. Improved communication. STs noted significant improvements in their ability to communicate effectively. For example, ST#1 reported feeling more comfortable discussing and communicating with others:

I used to feel hesitate giving feedback to my peer, but now I actively participate. (SM#1)

This enhanced communication is linked to the mentor's empathetic listening and constructive feedback.

4.3.1.2. Enhanced confidence and self-efficacy. Evaluations revealed a noticeable boost in confidence among STs. They reported feeling more capable in managing classroom and making instructional decisions. For instance, ST#3 commented the following:

On my first day, I was nervous and forgot my plans. My school-mentors reassured me that it is normal and offered tips for managing anxiety. I noticed an improvement in my performance the next day. (ST#3)

This growth in self-efficacy is attributed to the supportive and encouraging feedback received from mentors.

4.3.1.3. Development of professional skills. STs indicated improvements in several professional skills. For instance, many highlighted better lesson planning and classroom management.

My mentor's detailed feedback helped me refine my lesson plans and manage my classroom more effectively. (ST#2)

Another ST also shared her experiences regarding classroom management,

I am left feeling like I can handle a class now, which is something I have never felt before. (ST#4)

The mentoring process provided targeted guidance that facilitated these skill enhancements.

4.3.1.4. Positive behavioral changes. Behavioral changes observed included greater engagement and a more proactive approach to teaching challenges. While some STs highlighted the achievements of practical knowledge and skill acquisition, others found that mentoring allowed them to perceive themselves from a fresh perspective. ST#4 explained:

The accomplishment and challenges I faced during TP allowed me to gain a deeper understanding of my strengths and areas for improvement. (ST#4)

Another ST added,

I've become more proactive in seeking feedback and solving problems independently. (ST#1)

All these improvements are evident in their portfolios. STs reported meeting their anticipated goals. Their development involves improving performance in classroom management, lesson planning, and teaching methodology. Moreover, interpersonal skills such as increased teaching confidence, improved observation and reflection skills, enhanced socialization, and building good relationships with everyone were also mentioned.

Overall, the evaluation of STs' perspectives on mentoring was largely favorable. Despite the challenges encountered, their teaching skills were generally enhanced with the support of their mentors. Moreover, investigating the STs' performance through videos of classroom observation, audio-recorded mentoring sessions, portfolios, and their responses to the interview questions revealed that with the support of their mentors, they could improve their competency, including professional and personal development. However, it is notable that experience and learning outcomes differed among the STs. Factors such as instructional organization, curriculum materials, classroom culture, and specific classroom sites significantly shape their learning experiences. This variability suggests that the effectiveness of a mentorship program can be influenced by the context in which it operates.

4.3.2. Learning outcome evaluated by school-mentors

School-mentors noticed a marked improvement in the STs' communication skills and how effectively they delivered instructions and engaged with students in a supportive way. One school-mentor explained,

Their instructions have become clearer now, and the students respond well because they understand what is expected of them. (School-mentor#3)

This statement is consistent with the data from the lesson observations, which also emphasized that the STs communicated more clearly and confidently with the students. In addition, reflections in the STs' portfolios showed that they consciously focused on improving communication, with several entries describing strategies they used to improve this skill. Moreover, STs' confidence in handling classroom tasks increased significantly. One school-mentor noticed,

They have grown more confident in managing the classroom, and the students seem to respect their instructions. (School-mentor#4)

Data from the mentoring sessions confirmed that STs talked about their growing confidence and the support they received in managing classroom dynamics. This alignment is also evident in the STs' portfolios, in which they reported their growing ability to manage the student behavior. In addition, the improvements in specific pedagogical skills such as lesson planning were also noted.

The ST's lesson plans have become more detailed, leading to smoother lessons that keep students engaged. (School-mentor#1)

This observation is consistent with the content of STs' portfolios, which contain increasingly comprehensive lesson plans that reflect their growth in this area. In addition, classroom observations have confirmed that these well-organized plans lead to more effective and engaging lessons, demonstrating the impact of mentoring on their pedagogical skills. Finally, changes in STs' behavior, such as taking more initiative and adapting to challenges, have not gone unnoticed. One School-mentor observed,

The ST has started taking more initiative by introducing new activities that engage students and address their learning needs. (School-mentor#2)

This proactive approach is reflected in the mentor discussions in which the STs explored innovative teaching strategies and reflected on their application in the classroom. The STs' portfolios also contain concrete examples of new activities and approaches they have tried, demonstrating their growing creativity and confidence—a clear indicator of successful mentoring.

4.3.3. Learning outcomes evaluated by TEI-mentors

The TEI-mentors were likely to assess the STs' ability to articulate their ideas. This improvement was particularly evident in the mentoring session, where they had to present and defend their pedagogical approaches, reflecting a deeper understanding of their teaching practice. STs who initially found it

difficult to articulate their teaching philosophy was later credited with the ability to communicate ideas more clearly and confidently. One TEI-mentor commented,

The STs have shown marked improvement in articulating his idea during seminars. They now engages more actively in the discussions. (TEI-mentor#1)

This observation emphasizes the importance of STs' development in communicating complex ideas clearly in academic settings, which is vital for their future careers as teachers in professional and educational contexts.

Other TEI-mentors also highlighted that STs' confidence in applying theoretical knowledge to practical lessons had increased. One notable example was the change in the STs' lesson planning approach, where they independently integrated educational theories into practice. TEI-mentor#3 explained,

They become more confident in applying theories and demonstrating a deeper understanding of practical application into teaching. (TEI-mentor#3)

This explanation reflects STs' ability to confidently translate educational theories into effective teaching practices, a key marker of professional growth. In terms of professional skill development, some TEI-mentors noted considerable progress in the STs' ability to design and implement effective instructional plans. For instance,

They demonstrated significant improvement in creating lesson plans, and the assessment strategies are now more aligned with learning objectives. (TEI-mentor#2)

This feedback shows that TEI-mentors focused on the ST's ability to develop and refine professional skills essential for effective teaching. The emphasis on differentiated instruction and alignment with learning objectives underscores the importance of these skills in promoting student success.

Regarding the behavioral changes in the STs, some TEI-mentors observed in terms of their academic and professional habits, such as their approach to reflective practice, openness to feedback, and willingness to take on leadership roles in the classroom.

They have shown increased initiative in seeking feedback and become more reflective in their practice, regularly incorporating feedback into their teaching and make meaningful adjustments. (TEI-mentor#4)

This feedback highlights the role of TEI-mentors in encouraging a reflective and proactive mindset in STs. Focusing on seeking and adjusting feedback shows that STs are growing in their self-awareness and professional development, which is crucial for continuous improvement.

In short, the mentoring evaluation conducted by key stakeholders during the 5-week TP revealed insightful results that underline the effectiveness of mentoring. The findings show that STs have grown significantly in key areas such as communication, confidence, professional skills, and behavioral changes. They reported notable improvements in their ability to formulate ideas, manage classroom dynamics and apply theoretical knowledge practically. TEI-mentors observed progress in integrating of theory, reflecting on practice, and developing professional skills. School-mentors highlighted greater engagement, initiative, and effective classroom communication. These comprehensive evaluations illustrate the influence of mentoring program and provide a solid foundation for understanding how targeted support significantly advance STs professional identity development.

5. Discussion

The influence of mentoring in shaping the identity development and success of STs cannot be overstated. Effective mentoring enhances the learning outcomes for STs and helps create a more reflective and adaptive teaching practice (Darling-Hammond et al., 2017). Accordingly, the primary aim of this study was to deepen the understanding of the influence of mentoring on STs' learning outcomes during their TP. This discussion focuses on the main research question: How does mentoring foster the professional identity development of STs?

This study revealed that most participants viewed mentoring as a valuable opportunity to shape STs' identities in many professional and personal development aspects. This finding resonates with those of previous studies on mentoring perceptions such as boosting STs' teaching confidence (Schuck et al.,

2018), fostering self-reflective practice (Tonna et al., 2017), and diminishing the sense of isolation to achieve better socialization in school (Hobson et al., 2009).

The findings of this study indicate that while key stakeholders shared positive perceptions of mentoring, they also highlighted many challenges along the lines of previous literature. For instance, the main issue highlighted was the inconsistency in providing feedback from mentors, which became the subject of extensive discussion. According to Allen and Wright (2014), the lack of clarity among mentors regarding their mentoring perceptions, responsibilities, and beliefs creates many challenges that hinder the effective implementation of mentoring. To address this, it is essential to establish standardized feedback protocols and provide mentors with specific training focused on effective feedback delivery (Ulvik et al., 2018). Moreover, the lack of cooperation among stakeholders poses another challenge (Andreasen et al., 2019; Hobson & Malderez, 2013). Chea (2024) suggests that creating a practicum office within teacher education institutions, which is dedicated to organizing and supporting the practicum procedure, could enhance stakeholders' collaboration by offering a robust follow-up system throughout the implementation process. Other challenges have also been identified, such as mentors' lack of mentoring skills and their inability to provide effective guidance. In this regard, developing a comprehensive mentoring framework that clearly outlines roles, responsibilities, and mentorship approaches can mitigate these challenges (Chea, 2024). Nuis et al. (2023) proposed that a mentoring framework should be designed considering five characteristics: mentoring purpose, mentoring actors, mentoring process, mentoring relationship, and the specific functions and behaviors. This process helps build a shared understanding and encourages collaborative progress. Targeted professional development workshops focusing on essential mentoring skills can significantly enhance mentors' capabilities (Chea, 2024). Furthermore, establishing a structured peer mentoring system can provide ongoing support and continuous learning opportunities for both mentors and mentees, ultimately leading to more effective mentoring outcomes (Nguyen & Ngo, 2018).

Another important finding of this study concerns the mentoring support provided by mentors. The data suggested that mentoring might influence STs' professional identities to some extent, depending on the mentors' attitudes, experiences, and beliefs about mentoring. In general, findings demonstrated that most mentors were supportive and provided sufficient guidance. Consistent with previous literature, the STs in this study generally viewed mentoring as a crucial component of their identity development, emphasizing the importance of receiving instructional and emotional support (Izadinia, 2017; Korhonen et al., 2017; Lortie, 2020). They appreciated mentors who provided practical advice and shared their teaching experiences, which helped bridge the gap between theoretical knowledge and classroom practices. However, as exemplified in this study, mentors' inconsistent fulfillment of their mentoring duties leads to inconsistent learning outcomes for student teachers. Some mentors perceived their role as facilitators of STs' learning, focusing on fostering reflective practices and encouraging STs to analyze their teaching methods critically. Moreover, they highlighted the value of regular observations and reflective discussions for enhancing STs' teaching skills. However, other mentors expressed concerns about the limited time available for in-depth mentoring owing to their professional responsibilities. On the other hand, school mentors viewed mentoring as a collaborative process in which experienced teachers guide STs in adapting to the school environment and managing classroom dynamics. They stressed the importance of building trust and creating a supportive atmosphere where the STs felt comfortable seeking advice and sharing challenges. These findings align with existing research emphasizing the multifaceted nature of mentoring and the need for tailored approaches to address the specific needs at different stages of their practicum (Ambrosetti & Dekkers, 2010; Hobson et al., 2009).

The analysis also revealed a key shortcoming: no formal or consistent indicators or benchmarks have been established for evaluating the outcomes of mentoring programs. This significant discovery underscores a broader issue identified in recent research by Asfahani et al. (2024). Stakeholders discussed various aspects of mentoring—ranging from instructional support to emotional guidance and professional identity development—yet a glaring absence of standardized criteria for assessing the outcomes. For instance, while improvements in classroom management and professional confidence were frequently mentioned, these were reported without any clear, institutionalized methods for measurement. This lack of rigor resonates with finding from Krishna et al. (2023), which indicates that the absence of specific evaluation tools hinders TEIs' ability to systematically evaluate mentoring outcomes. As noted by

Asfahani et al. (2024) standardized benchmarks not only improve program effectiveness but also facilitate cross-institutional comparisons, leading to a more comprehensive evaluation of mentoring practices. By implementing these standardized measures, mentoring can be transformed from an anecdotal practice into a rigorously evaluated component of TEIs, ultimately benefiting STs and mentors alike.

The key takeaway from the findings of this study is that despite the unavoidable challenges and difficulties STs faced, they greatly valued the mentorship experience for its numerous benefits in their development into skilled and confident teachers. The results evaluated by STs, TEI-mentors, and school-mentors regarding STs' achievement indicated that STs met their expected learning outcomes by the end of the TP. The findings illustrate that STs' professional development improved over time and provide evidence of an ongoing mentoring process, such as providing guidance, support, and practical knowledge that bridges the gap between theoretical learning and real-world teaching experiences. Moreover, the STs' personal development was gradually enhanced through consistent self-reflection, peer feedback, and regular mentoring. This discovery may not be entirely surprising but is unique to the literature. While numerous studies claim that negative mentoring experiences affect the STs' professional growth (Hobson & Malderez, 2013; Izadinia, 2017; Prabjandee, 2022; Yuan, 2016), this study pointed out that setbacks or challenges in mentoring may not hinder the improvement as much. A well-structured mentoring framework and constructive mentorship can greatly enhance STs' professional identity development. This perception emphasizes that the context of Cambodian culture, moral practices, and religion creates a unique environment in which mentoring is considered highly respectful and valued (O'Leary & Nee, 2001; Peang-Meth, 2017). This cultural backdrop shapes how mentoring positively influences STs' perceptions of their professional identity development.

5.1. Limitations

While analyzing the data, some concepts and limitations should be considered. First, the portfolios created by the STs were assignments that will be assessed at the end of the TP. This could have influenced their responses and potentially contributed to the low level of criticism in their written reflections. This could be one of the reasons why the participants in this study were involved in active discussions about the challenges they encountered during mentoring, but all had positive responses in their written reports. Second, conducting this study at TECs provides important localized insights, but the small sample size (four subjects) limits the generalizability of the research. Extending further studies to other teacher education institutions, such as the National Institute of Education, is crucial for achieving a comprehensive understanding of the influence of mentoring on STs' professional identity development.

6. Conclusions and implications

This study underscores the critical role of mentoring in shaping professional identities and enhancing STs' learning outcomes during the TP. This research highlights the multifaceted nature of mentoring, which encompasses not only instructional and emotional support but also fostering reflective practices and bridging theoretical knowledge with real-world teaching experiences. Despite the identified challenges, such as inconsistencies in feedback, lack of communication, time constraint, lack of support and limited mentorship skills, the overall perception of mentoring among STs, TEI-mentors, and school-mentors remains overwhelmingly positive. Mentoring has been shown to boost teaching confidence, encourage self-reflective practices, and facilitate better socialization within the school environment. These benefits collectively contribute to STs' professional and personal development, ultimately helping them become proficient and confident teachers. In addition, this study's findings revealed that mentoring's success largely depends on mentors' attitudes, experiences, and beliefs, emphasizing the need for tailored approaches to meet the specific needs of STs. Moreover, the importance of collaboration among all stakeholders in the mentoring process is evident as it enhances the quality and consistency of the support provided.

Overall, this study provides valuable insights into the mentoring dynamics in TEIs. This affirms that, despite inevitable challenges, effective mentoring is indispensable in nurturing competent and reflective teachers who are well-prepared to navigate the complexities of the teaching profession. Specific and

actionable recommendations are essential to address the identified challenges and further strengthen the influence of mentoring on STs' professional identity development. First, implementing training programs for mentors can ensure they are well-equipped with the skills and knowledge necessary for effective mentorship. Second, establishing standardized mechanisms can provide consistent, constructive evaluations, helping STs to improve continuously. Developing a comprehensive mentoring framework that clearly outlines roles, responsibilities, and mentorship approach can mitigate these challenges. Third, to enhance the evaluation of mentoring outcome, specific indicator and benchmarks should be developed. These criteria will provide a more rigorous and consistent framework for evaluating mentoring outcome, ultimately leading to more informed enhancement of mentoring program. Finally, creating a practicum office within teacher education institutions dedicated to organizing and supporting the practicum procedure could enhance stakeholder collaboration by offering a robust follow-up system throughout the implementation process.

Disclosure statement

The author reports there are no competing interests to declare.

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References

- Aderibigbe, S. A., Holland, E., Marusic, I., & Shanks, R. (2022). A comparative study of barriers to mentoring student and new teachers. *Mentoring & Tutoring: Partnership in Learning*, 30(3), 355–376. <https://doi.org/10.1080/13611267.2022.2070995>
- Allen, J. M., Wright, S. E. (2014). Integrating theory and practice in the pre-service teacher education practicum. *Teachers and Teaching*, 20(2), 136–151. <https://doi.org/10.1080/13540602.2013.848568>
- Ambrosetti, A., Knight, B. A., & Dekkers, J. (2014). Maximizing the potential of mentoring: A framework for pre-service teacher education. *Mentoring & Tutoring: Partnership in Learning*, 22(3), 224–239. <https://doi.org/10.1080/13611267.2014.926662>
- Ambrosetti, A., & Dekkers, J. (2010). The interconnectedness of the roles of mentors and mentees in pre-service teacher education mentoring relationships. *Australian Journal of Teacher Education (Online)*, 35(6), 42–55.
- Andreasen, J. K., Bjørndal, C. R., & Kovač, V. (2019). Being a teacher and teacher educator: The antecedents of teacher educator identity among mentor teachers. *Teaching and Teacher Education*, 85, 281–291. <https://doi.org/10.1016/j.tate.2019.05.011>
- Asfahani, A., El-Farra, S. A., & Iqbal, K. (2024). International benchmarking of teacher training programs: Lessons learned from diverse education systems. *EDUJAVARE: International Journal of Educational Research*, 2(1), 1–12.
- Baeten, M., & Simons, M. (2016). Innovative field experiences in teacher education: Student-teachers and mentors as partners in teaching. *International Journal of Teaching and Learning in Higher Education*, 28(1), 38–51.
- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education*, 20(2), 107–128. <https://doi.org/10.1016/j.tate.2003.07.001>
- Chea, C. (2024). Teaching practicum in the teacher education institutions in Cambodia: A cross-case analysis. *Journal of Teacher Education and Educators*, 13(1), 49–69.
- Corcoran, P. B., Walker, K. E., & Wals, A. E. (2004). Case studies, make-yourcase studies, and case stories: a critique of case-study methodology in sustainability in higher education. *Environmental Education Research*, 10(1), 7–21.

- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development. *Learning Policy Institute*. <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report>
- Dy, K. (2015). *Genocide education in Cambodia: Local initiatives, global connections*. Rutgers University-Graduate School-Newark.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Ewing, L.-A. (2021). Mentoring novice teachers. *Mentoring & Tutoring: Partnership in Learning*, 29(1), 50–69. <https://doi.org/10.1080/13611267.2021.1899585>
- Goegan, L. D., Wagner, A. K., & Daniels, L. M. (2017). Pre-service and practicing teachers' commitment to and comfort with social emotional learning. *Alberta Journal of Educational Research*, 63(3), 267–285. <https://doi.org/10.55016/ojs/ajer.v63i3.56284>
- Gold, Y. (1996). Beginning teacher support: Attrition, mentoring, and induction. *Handbook of Research on Teacher Education*, 2, 548–594.
- Goodson, I. F., & Cole, A. L. (1994). Exploring the teacher's professional knowledge: Constructing identity and community. *Teacher Education Quarterly*, 85–105.
- Heng, K., & Sol, K. (2022). Education: Key to making Cambodia great again. *Cambodia Development Center*, 4(3), 1–18.
- Hill, H., & Menon, J. (2013). Cambodia: rapid growth with institutional constraints. *Asian Development Bank Economics Working Paper Series*(331).
- Hobson, A. J., Ashby, P., Malderez, A., & Tomlinson, P. D. (2009). Mentoring beginning teachers: What we know and what we don't. *Teaching and Teacher Education*, 25(1), 207–216. <https://doi.org/10.1016/j.tate.2008.09.001>
- Hobson, A. J., & Malderez, A. (2013). Judgementoring and other threats to realizing the potential of school-based mentoring in teacher education. *International Journal of Mentoring and Coaching in Education*, 2(2), 89–108. <https://doi.org/10.1108/IJMCE-03-2013-0019>
- Hudson, P., & Hudson, S. (2018). Mentoring preservice teachers: Identifying tensions and possible resolutions. *Teacher Development*, 22(1), 16–30. <https://doi.org/10.1080/13664530.2017.1298535>
- Izadinia, M. (2016). Preservice teachers' professional identity development and the role of mentor teachers. *International Journal of Mentoring and Coaching in Education*, 5(2), 127–143. <https://doi.org/10.1108/IJMCE-01-2016-0004>
- Izadinia, M. (2017). From swan to ugly duckling?: Mentoring dynamics and preservice teachers' readiness to teach. *Australian Journal of Teacher Education*, 42(7), 66–83. <https://doi.org/10.14221/ajte.2017v42n7.5>
- JICA. (2017). Preparatory survey report for the project for the construction of Teacher Education Colleges. https://openjicareport.jica.go.jp/pdf/12301396_01.pdf
- Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), 2954–2965. <https://doi.org/10.1111/jan.13031>
- Kemmis, S. (2021). A practice theory perspective on learning: Beyond a 'standard'view. *Studies in Continuing Education*, 43(3), 280–295. <https://doi.org/10.1080/0158037X.2021.1920384>
- Khan, S., & VanWynsberghe, R. (2008). *Cultivating the under-mined: Cross-case analysis as knowledge mobilization*. Paper presented at the Forum: qualitative social research.
- Korhonen, H., Heikkinen, H. L., Kiviniemi, U., & Tynjälä, P. (2017). Student teachers' experiences of participating in mixed peer mentoring groups of in-service and pre-service teachers in Finland. *Teaching and Teacher Education*, 61, 153–163. <https://doi.org/10.1016/j.tate.2016.10.011>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *The European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>
- Krishna, L. K. R., Pisupati, A., Ong, Y. T., Teo, K. J. H., Teo, M. Y. K., Venktaramana, V., Quek, C. W. N., Chua, K. Z. Y., Raveendran, V., Singh, H., Wong, S. L. C. H., Ng, V. W. W., Loh, E. K. Y., Yeoh, T. T., Owyong, J. L. J., Chiam, M., Ong, E. K., Phua, G. L. G., Hill, R., Mason, S., & Ong, S. Y. K. (2023). Assessing the effects of a mentoring program on professional identity formation. *BMC Medical Education*, 23(1), 799. <https://doi.org/10.1186/s12909-023-04748-6>
- Krishna, L. K. R., Pisupati, A., Teo, K. J. H., Teo, M. Y. K., Quek, C. W. N., Chua, K. Z. Y., Venktaramana, V., Raveendran, V., Singh, H., Hui, S. L. W. C., Ng, V. W. W., Ting, O. Y., Loh, E. K. Y., Yeoh, T. T., Owyong, J. L. J., Ong, E. K., Phua, G. L. G., Hill, R., Mason, S., & Ong, S. Y. K. (2023). Professional identity formation amongst peer-mentors in a research-based mentoring programme. *BMC Medical Education*, 23(1), 787. <https://doi.org/10.1186/s12909-023-04718-y>
- Lammert, C., DeWalt, L. M., & Wetzal, M. M. (2020). "Becoming" a mentor between reflective and evaluative discourses: A case study of identity development. *Teaching and Teacher Education*, 96, 103179.
- Landsberg, M. (2015). *The Tao of coaching: Boost your effectiveness at work by inspiring and developing those around you*. : Profile Books.
- Lawson, T., Çakmak, M., Gündüz, M., & Busher, H. (2015). Research on teaching practicum—a systematic review. *European Journal of Teacher Education*, 38(3), 392–407. <https://doi.org/10.1080/02619768.2014.994060>

- Li, P. B., Sani, B. B., & Azmin, N. A. B. M. (2021). Identifying mentor teachers' roles and perceptions in pre-service teachers' teaching practicum: The use of a mentoring model. *International Journal of Education and Practice*, 9(2), 365–378.
- Lortie, D. C. (2020). *Schoolteacher: A sociological study*. University of Chicago press.
- Mena, J., García, M., Clarke, A., & Barkatsas, A. (2016). An analysis of three different approaches to student teacher mentoring and their impact on knowledge generation in practicum settings. *European Journal of Teacher Education*, 39(1), 53–76. <https://doi.org/10.1080/02619768.2015.1011269>
- Mena, J., Hennissen, P., & Loughran, J. (2017). Developing pre-service teachers' professional knowledge of teaching: The influence of mentoring. *Teaching and Teacher Education*, 66, 47–59. <https://doi.org/10.1016/j.tate.2017.03.024>
- Mok, S. Y., & Staub, F. C. (2021). Does coaching, mentoring, and supervision matter for pre-service teachers' planning skills and clarity of instruction? A meta-analysis of (quasi-) experimental studies. *Teaching and Teacher Education*, 107, 103484. <https://doi.org/10.1016/j.tate.2021.103484>
- Moulding, L. R., Stewart, P. W., & Dunmeyer, M. L. (2014). Pre-service teachers' sense of efficacy: Relationship to academic ability, student teaching placement characteristics, and mentor support. *Teaching and Teacher Education*, 41, 60–66. <https://doi.org/10.1016/j.tate.2014.03.007>
- Nguyen, H. T. M., & Ngo, N. T. H. (2018). Learning to reflect through peer mentoring in a TESOL practicum. *ELT Journal*, 72(2), 187–198. <https://doi.org/10.1093/elt/ccx053>
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1609406917733847. <https://doi.org/10.1177/1609406917733847>
- Nuis, W., Segers, M., & Beausaert, S. (2023). Conceptualizing mentoring in higher education: A systematic literature review. *Educational Research Review*, 41, 100565. <https://doi.org/10.1016/j.edurev.2023.100565>
- O'Leary, M., & Nee, M. (2001). *Learning for transformation: A study of the relationship between culture, values, experience and development practice in Cambodia*. Krom Akphiwat Phum.
- Parker, A. K., Zenkov, K., & Glaser, H. (2021). Preparing school-based teacher educators: Mentor teachers' perceptions of mentoring and mentor training. *Peabody Journal of Education*, 96(1), 65–75. <https://doi.org/10.1080/0161956X.2021.1877027>
- Peang-Meth, A. (2017). Understanding the Khmer: Sociological-cultural observations. In *Cambodia* (pp. 67–80): Routledge.
- Prabjandee, D. (2022). *Inconvenient truth? How different mentoring approaches impact student-teacher identity development*. Paper presented at the Frontiers in Education. <https://doi.org/10.3389/feduc.2022.916749>
- Pungur, L. (2007). Mentoring as the key to a successful student teaching practicum: A comparative analysis. In *Handbook of teacher education* (pp. 267–282): Springer.
- Schuck, S., Aubusson, P., Buchanan, J., Varadharajan, M., & Burke, P. F. (2018). The experiences of early career teachers: New initiatives and old problems. *Professional Development in Education*, 44(2), 209–221. <https://doi.org/10.1080/19415257.2016.1274268>
- Sot, V., Sok, S., & Dickinson, G. (2019). Four decades of teacher development: Teacher preparation and teacher upgrading programs in Cambodia from 1979 to 2018. *Cambodia Education Review*, 3(1), 115–139.
- Tas, T., Houtveen, T., van de Grift, W., & Willemsen, M. (2018). Learning to teach: Effects of classroom observation, assignment of appropriate lesson preparation templates and stage focused feedback. *Studies in Educational Evaluation*, 58, 8–16. <https://doi.org/10.1016/j.stueduc.2018.05.005>
- Tonna, M. A., Bjerkholt, E., & Holland, E. (2017). Teacher mentoring and the reflective practitioner approach. *International Journal of Mentoring and Coaching in Education*, 6(3), 210–227. <https://doi.org/10.1108/IJMCE-04-2017-0032>
- Ulvik, M., Helleve, I., & Smith, K. (2018). What and how student teachers learn during their practicum as a foundation for further professional development. *Professional Development in Education*, 44(5), 638–649. <https://doi.org/10.1080/19415257.2017.1388271>
- Van Ginkel, G., Verloop, N., & Denessen, E. (2016). Why mentor? Linking mentor teachers' motivations to their mentoring conceptions. *Teachers and Teaching*, 22(1), 101–116. <https://doi.org/10.1080/13540602.2015.1023031>
- Yin, R. K. (2009). *Case study research: Design and methods* (vol. 5): Sage.
- Yuan, E. R. (2016). The dark side of mentoring on pre-service language teachers' identity formation. *Teaching and Teacher Education*, 55, 188–197. <https://doi.org/10.1016/j.tate.2016.01.012>