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Building Better Teachers: The Constructivist Influence of Cooperative Mentors in Early Childhood Fieldwork

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Abstract

This study explores the role of cooperating mentors in promoting constructivist learning practices among pre-service early childhood education teachers during their field experience. Constructivist learning emphasizes active, self-directed learning, critical thinking, and social interaction. Data were gathered using the Cooperating Mentor Behavior Assessment Tool from 210 pre-service teachers in field education programs at public universities. The findings revealed that cooperating mentors supported practices such as encouraging children to share ideas and connecting lessons to prior knowledge. However, gaps were identified in areas like uncovering children's prior knowledge, facilitating knowledge construction, and using assessments to enhance learning. The study also found no significant relationship between pre-service teachers' evaluations of mentors' roles and factors such as academic performance, teaching experience, or mentor qualifications. The study concludes with recommendations to improve the implementation of constructivist practices in teacher education.

Keywords: *Constructivist Learning Practices, Cooperating Mentors, Pre-Service Teachers, Early Childhood Education, Field Experience.*

Introduction

Teachers are the foundation of any successful educational system. Their role extends far beyond delivering content; they shape students' character, develop essential skills, and influence attitudes toward lifelong learning. An effective teacher not only imparts knowledge but also encourages critical thinking, nurtures creativity, and fosters a love of learning. Numerous studies have confirmed that the quality of education is closely linked to the competence of teachers, making them the most influential factor in improving educational outcomes (Al-Barakat & Al-Hassan, 2009; Bunijevac, 2017; Kelty & Wakabayashi, 2020).

Acknowledging their importance in the context of managing the education system's sophisticated architecture, teacher preparation programs emerged as one of its integral parts. These educational programs include the necessary theoretical knowledge as well as practical and pedagogical skills for teaching at a basic level (Alali & Al-Barakat, 2022; Abdelmalek, 2023).

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They incorporate the theory of education, methods of teaching, and methods of control and management of the class, and there is also necessary practical training or internship or a practicum. The value of such preparation has been escalating because of modern issues like the heterogeneity of the class, the use of technology, and the response to different levels of learners (Al-Halalat et al., 2024; Al-Barakat & AlAli, 2024; Al-Otaibi, 2019; Saarsar, 2018).

As is the case with every profession, teaching also undergoes changes constantly. Hence, the development of the teacher should not stop at pre-service training (; Alali & Al-Barakat, 2024a; Abdelmalek, 2023). Adopting new concepts and ideas makes it relevant to the modern needs of the classroom. Professional learning communities within schools foster a culture of collaboration and shared reflection and problem-solving, which has a cumulative impact on the improvement of teaching. This continuous development enables teachers to meet individual students' needs and actively involve them in their educational process (Abdelmalek, 2023; Al-Otaibi, 2019; ; Bataineh et al., 2013; Saarsar, 2018; Bataineh & Mayyas, 2017; Saimon & Mtenzi, 2021).

Field training, which is a fundamental aspect of these preparatory programs, offers teaching practicum to pre-service teachers with authentic teaching experiences through mentorship. Such experiences tend to have maximum impact when blended with contemporary educational frameworks, especially constructivism, a model that emphasizes hands-on learning, knowledge building, and engagement of learners (Al-Barakat & Bataineh, 2011; Alali & Al-Barakat, 2024b; Khasawneh et al., 2023; Gusango, 2023; Zajda & Zajda, 2021; Hanson & Pugliese, 2020).

Constructivist theory, informed by Jean Piaget's work, defines learning as action, where one creates or constructs meaning through engagement with a certain environment. According to Piaget, learners assimilate and accommodate new information within the framework of existing knowledge, creating cognitive structures capable of problem-solving and creative working (Halid, 2024). Constructivist classrooms have the teacher serving as a guide to the student's learning experiences who actively models inquiry and encourages exploration and critical thinking (Shah, 2019).

Contemporary training for teachers includes the application of constructivist strategies which are known to promote understanding and creativity alongside the autonomy of learners. These approaches include problem-based learning, hands-on activities, and group work that extend beyond the classroom (Al-Hassan et al., 2012; Al-Hassan et al., 2025; Bataineh et al., 2020Khasawneh et al., 2022; Sorour et al., 2021; Le & Nguyen, 2024). In constructivist classrooms, learners and teachers engage in dialogue and reflection, which permits shared authority and responsibility (Ed & Agzagee, 2020).

The cooperating mentor's role is vital in this context. Active mentors do not only oversee learning; they guide it by co-teaching alongside student teachers, conducting lessons that incorporate reflection, and assisting learners in employing constructivist strategies in their teaching contexts (Bataineh & Alqatnani, 2019; Bataineh & Bani Amer, 2023; Tsehay et al., 2024). The importance of having pedagogically sound mentors trained for teaching supervision, observations, and giving feedback is documented in studies from around the world (Al-Barakat et al., 2023; Nolan & Molla, 2018).

Indeed, supporting mentorship during fieldwork experiences must be aligned with global shifts in professional development strategies. Such shifts focus on formalized pedagogic training, learning communities, and sustained mentorship that enables the development of educators who are responsive to various learner needs and equipped with creative teaching strategies (Altan &

Sağlamel, 2015; Bani Irshid et al., 2023; Bataineh & Bataineh, 2024; Fraihat et al., 2022; Hawamdeh et al., 2025). Pre-service teachers need to be guided by mentors for them to internalize constructivist practices, but these mentors need to embody such values at the level of philosophy and practice.

There remain noticeable gaps in educational literature surrounding the constructive framework theory regarding how cooperating mentors are supposed to assist in guiding pre-service teachers in adopting these principles during fieldwork amid the growing global focus on integrating constructivist principles into teacher education. It has been documented that mentoring is often marked by poor quality, no basic structure grounded in constructivist pedagogy, and unpreparedness to provide adequate critical commentaries. It is equally challenging to support mentors in fostering an atmosphere of collaborative learning that stimulates inquiry, discussion, and critical thought. All these gaps highlight the existing gap about supporting cooperating mentors in the development of constructivist teaching strategies for use in the foundations of early childhood teacher education.

Study Problem and Its Importance

It is widely accepted that enhancing the practices of early childhood educators improves the learning outcomes of younger children. One of the essential bases in this developmental process is the support that student teachers receive during their practicum from their cooperating mentors. These mentors are supposed to provide guidance and supervision on teaching skills that require proper instructional scaffolding. For this support to be meaningful, mentors need to have a firm grasp of contemporary educational theories, especially constructivism, and know how to apply them in teaching practices. Constructivist teaching emphasizes learning that is dominated by students actively constructing knowledge based on experience, insight, and interaction with society. In this case, cooperating mentors help students to model and practice these strategies during field training.

Although the constructivist paradigm has been incorporated into teacher education systems globally, the cooperating schools reveal a gap between the theory and practice. Many mentors do not apply or demonstrate constructivist strategies at all during the supervision of student teachers. This is in agreement with prior research (Al-Barakat et al., 2022; Apolot et al., 2018; Kell, 2020) on mentoring practices that pointed out an absence of mid-course feedback and guidance anchored on theory, especially one with constructivist elements. Such deficiencies are barriers to the professional growth of student teachers and impede their ability to adopt appropriate frameworks underlying pedagogical practices in contemporary learner-centered classrooms.

The gaps in the literature highlighted above justify the focus of this study on the constructivist learning practices of early childhood education teacher educators, as they are the least documented phenomena in the constructivist paradigm. While many studies have focused on different aspects of field education and teacher education, cooperating mentors' roles in supporting student teachers in developing constructivist learning strategies during the initial practicum are almost nonexistent within the literature. This gap is even more serious considering the attention devoted to the constructivist model of instruction in ongoing global educational reforms.

By addressing this issue, the study aims to contribute to the development of more effective mentoring models in teacher education. Understanding how student teachers perceive their

mentors' role in facilitating constructivist practices will highlight strengths and uncover critical gaps in current mentoring approaches. These insights can inform the creation of professional development programs for cooperating mentors, ensuring they are better equipped to support student teachers in applying modern, evidence-based instructional strategies in real classroom environments. Ultimately, such improvements can foster the development of stronger, more reflective educators who are prepared to meet the demands of 21st-century learners.

In line with the study's focus, the following research questions are proposed:

1. How do student teachers perceive the role of cooperating early childhood mentors in guiding them to implement constructivist learning practices during the field education period?

2. Do student teachers' perceptions of the cooperating mentors' role in fostering constructivist practices vary based on their academic performance (excellent, very good, good, Satisfactory)?

3. Does the role of cooperating mentors in supporting constructivist learning practices differ based on their teaching experience (short, medium, long) and academic qualifications (community college diploma, bachelor's degree, or higher)?

Method

Participants

The study focused on a sample of 210 pre-service teachers specializing in Early Childhood Education, who were enrolled in field training programs as part of professional development initiatives. These student teachers were actively participating in teacher preparation programs within institutions in Jordan, where they were placed in real classroom environments under the mentorship of cooperating teachers. The selection of this group allowed for an in-depth exploration of the mentoring process, specifically how cooperating mentors supported the integration of constructivist learning practices in early childhood education.

Study Tool

To achieve the objectives of this study, the researchers developed a comprehensive measurement tool aimed at evaluating the role of cooperating mentors in fostering constructivist learning practices among pre-service teachers during their field education. This tool was designed to align with the study's purpose by providing insights into the student teachers' perceptions of their mentors' support in applying constructivist approaches in the classroom. It focused on the mentors' ability to guide and model constructivist practices effectively during the field education period, which is critical for shaping the student teachers' future pedagogical strategies.

The creation of this tool evolved from three core inputs. To start with, feedback was administered through a survey to a purposive sample of 20 cooperating mentors. The survey asked the mentors to specify what constructivist practices they intended and strived to develop in student teachers. This feedback was very useful in telling the mentors about some of the fundamental areas where they engaged in supporting constructivist teaching and learning. In addition, the mentors were helpful in telling the researchers about some of the key areas which were in the literature, which the researchers did not encounter during classroom observations. The researchers have also included some of their practical experience from teacher training and field education with regard to the issues surrounding the mentoring of student teachers. A comprehensive literature review was also prepared based on particular studies done by Robey & Krause, 2024, Al-Barakat et al,

2022, Bedaiwi, 2021, and other scholars relevant to constructivism to inform the theoretical as well as the major practices pertaining to constructivism in early childhood education pedagogy. The cooperatively supervising mentors were evaluated using a five-point Likert scale aimed at measuring how constructivist learning was fostered within the mentorship performed. The scale had a range of 'very high' (5) to 'very low' (1), Furthermore, all mentors received scores above 1, indicating they implemented at least basic constructive practices. This allowed the researchers to discern more precise information about the effect that the cooperating mentors had on the student teachers learning in terms of the implementation of constructivist techniques, and it from certain perspectives, made clear many of the deficiencies and the strengths in the mentoring systems during the field work practice.

Validity and Reliability

In order to validate the measurement tool, it was subjected to an expert review by a panel of nine professionals who have rich experience in curricula, teaching methods, teacher training, early childhood education, and measurement and evaluation. These experts offered constructive comments regarding the draft presented to them explaining how the tool could better be aligned with these constructions such as mentoring and learning practices related to constructivist approaches. From the suggestions, it was possible to refine the tool. The tool was revised to include 39 items that were deemed adequate for measuring the role of mentors in constructivist practices and ensured that the tool was focused and comprehensive.

The tool was subjected to thorough testing in order to achieve reliability, which included confirming its constancy and dependability. A pilot test was conducted with a sample of 29 student teachers who were not part of the actual study population. The tool's stability over time was also evaluated using the test-retest method with an interval of two weeks between measurements. The Pearson correlation coefficient was calculated to be 0.93, demonstrating a high level of correlation which confirms the tool's temporal stability. Furthermore, the internal consistency of the tool was checked using Cronbach's alpha and was found to be 0.94, significantly above the acceptance limit, thereby reinforcing the instrument's reliability. Additional statistical methods were applied to enhance the overall reliability evaluation. Using McDonald's omega, the internal consistency of the tool was calculated at 0.913, with Composite Reliability (CR) values starting at 0.904. All these values surpassed the recommended benchmark of 0.7, indicating the tool's high reliability and internal consistency for the observation checklist.

The validity and reliability of the tool were further analyzed through the Average Variance Extracted (AVE) analysis, averaging at 0.731, exceeding the 0.5 threshold. This indicated that the tool adequately captured the variance of the constructs it sought to measure. Concerning discriminant validity, the square root of the AVE was computed at 0.854, surpassing the factor loading criterion, confirming that all constructs were separable from one another. Taking collectively, these results indicate strong reliability and appropriateness of the instrument for evaluating the role of cooperating mentors in guiding student teachers towards constructivist practices during the student teaching field experience.

Data Collection and Analysis

The study was carried out with a sample of 210 pre-service students enrolled in early childhood education teacher courses from different colleges and universities for a Professional Development Course. A questionnaire was administered to collect student teachers' perceptions

on the role of cooperating mentors in constructivist learning practices during field training. The data gathered were processed with the Statistical Package for the Social Sciences (SPSS) program, calculating means and standard deviations for more accurate data interpretation.

In order to explore the findings further, a one-way ANOVA was used to study the effect of student teachers perceiving mentoring on their academic performance. A two-way ANOVA was used to examine the effect of the mentors' academic qualifications and teaching experience on their ability to mentor the student teachers in constructivist practices. The results were calculated from the performance scale and for the purpose of this study were deemed to be low, medium, or high based on the mean obtained.

What is the perception of student teachers towards cooperating early childhood mentors on their role in guiding the implementation of constructivist learning for them during the field education practice?

Study Results

The results were presented according to the research questions as follows:

Results for the First Question

The first research question sought to determine: "*How do student teachers perceive the role of cooperating early childhood mentors in guiding them to implement constructivist learning practices during the field education period?"* To address this question, the means and standard deviations of the study sample's responses to the tool's items were calculated. The results, presented in **Table 1**, provide a detailed summary of the arithmetic means and standard deviations for each item, arranged in descending order based on the highest arithmetic mean.

Rank	**Items** **To become a constructivist teacher, my cooperating mentor provides guidance and/or assistance to:**	**Mean**	**SD**	**Practice Rating**
1	Motivate children to generate multiple answers to classroom questions.	4.18	0.65	High
2	Encourage persistence in completing tasks and activities.	4.04	0.74	High
3	Address individual differences in children's abilities and interests.	3.98	0.74	High
4	Connect learning experiences to real-life contexts for children.	3.94	0.60	High
5	Facilitate opportunities for children to work collaboratively in small groups.	3.92	0.72	High
6	Motivate children to generate multiple answers to classroom questions.	3.90	0.83	High
7	Express admiration when children present innovative ideas.	3.89	0.83	High
8	Encourage children to share and develop new ideas.	3.88	0.74	High
9	Relate learning experiences to children's prior knowledge.	3.77	0.73	High
10	Use diverse methods to inspire children's motivation for	3.65	0.82	medium

	learning.			
11	Create educational environments that nurture children's experiential growth.	3.64	0.73	medium
12	Align learning experiences with the classroom environment.	3.61	0.94	medium
13	Enhance children's communication and interpersonal skills.	3.57	0.88	medium
14	Integrate the local environment into learning situations.	3.54	0.88	medium
15	Prioritize fostering children's self-esteem and confidence.	3.51	0.89	medium
16	Develop children's ability to explain and interpret what they observe.	3.49	0.86	medium
17	Accept routine and conventional ideas from children.	3.43	0.89	medium
18	Guide children in using their imagination during brainstorming sessions.	3.40	0.87	medium
19	Encourage children to diversify their thinking and ideas.	3.39	0.78	medium
20	Direct children toward activities that enhance their learning and growth.	3.34	0.87	medium
21	Foster children's ability to critically observe and analyze their surroundings.	3.28	0.84	medium
22	Use varied questions to stimulate children's critical and creative thinking.	3.21	0.88	medium
23	Implement diverse teaching strategies to cultivate higher-order thinking skills.	3.19	0.88	medium
24	Help children engage in activities that address their weaknesses constructively.	3.13	0.79	medium
25	Emphasize organizing the learning environment for hands-on and practical activities.	3.10	0.79	medium
26	Focus on activities that promote social interaction among children and with their teacher.	3.01	0.91	medium
27	Use various methods to uncover children's prior knowledge and experiences.	2.95	1.00	medium
28	Offer children multiple opportunities to acquire new knowledge.	2.81	1.19	medium
29	Provide opportunities for children to apply learned experiences in practical contexts.	2.74	1.19	medium
30	Encourage children to self-correct and independently address their mistakes.	2.65	0.82	medium
31	Foster curiosity and practical initiative in children's learning processes.	2.61	0.82	medium
32	Use diverse assessment tools, including observation, interviews, and oral questioning.	2.54	1.12	medium
33	Inspire children to construct their knowledge independently.	2.50	1.12	medium
34	Apply varied evaluative techniques, such as asking	2.48	0.98	medium

	"What do you think?", "Give examples," or "Why does this happen?"			
35	Promote self-assessment among children to evaluate their own learning.	2.43	0.98	medium
36	Encourage children to engage in scientific inquiry and exploration.	2.40	1.05	medium
37	Pose open-ended and branched questions to foster deeper thinking.	2.38	0.97	medium
38	Support peer evaluation among children to enhance collaborative learning.	2.38	1.05	medium
39	Assign activities involving community interviews to integrate real-world learning experiences.	2.36	0.95	Low
Overall arithmetic mean		**3.66**	**0.88**	**Medium**

Table 1: Means and Standard Deviations of Student teachers' Perceptions

Table 1 provides a comprehensive overview of how student teachers perceive the role of cooperating mentors in supporting the implementation of constructivist learning practices during their field education. The overall mean score of 3.66 reflects a moderate level of effectiveness, suggesting that while cooperating mentors demonstrate a general awareness of constructivist principles, their application of these strategies is inconsistent.

The highest-rated practices—such as motivating children to provide multiple answers to questions (M = 4.18), encouraging persistence (M = 4.04), and addressing individual differences (M = 3.98)—indicate that mentors are most effective in areas related to learner engagement, differentiation, and fostering creativity. These findings reflect positively on the mentors' ability to support foundational constructivist skills, especially those related to flexible thinking and learner-centered instruction.

However, a gradual decline in the mean scores across the table points to notable gaps in more complex and reflective teaching strategies. Lower-rated items include encouraging children's scientific inquiry (M = 2.40), promoting peer evaluation (M = 2.38), and posing open-ended questions (M = 2.38), all of which are essential components of advanced constructivist pedagogy. The lowest mean score was assigned to the item concerning the integration of real-world learning through community interviews (M = 2.36), highlighting a lack of experiential and context-based learning opportunities.

These patterns suggest that while cooperating mentors succeed in modeling basic constructivist behaviors, they may lack the training or confidence to incorporate more sophisticated practices—such as formative assessment, higher-order questioning, and real-world application. The findings call attention to the need for ongoing professional development that equips mentors with deeper pedagogical knowledge and practical tools to model a full range of constructivist teaching strategies. Strengthening these areas is crucial to ensuring that pre-service teachers are prepared to facilitate active, inquiry-based learning environments in their future classrooms.

Results of the Second Question

The second research question stated: *"Do student teachers' perceptions of the cooperating mentors' role in fostering constructivist practices vary based on their academic performance (excellent, very good, good, satisfactory)?"* To address this question, arithmetic means and standard deviations were calculated for the study sample's assessments of the cooperating

mentors' roles in guiding student teachers, categorized by the academic evaluation variable. Table 2 presents these results.

Category	**No.**	**Mean**	***SD***
Excellent	19	3.54	0.37
Very Good	64	3.42	0.20
Good	104	3.32	0.46
Satisfactory	23	3.20	0.25
Total	**210**	3.33	**0.33**

Table 2 Arithmetic Means and Standard Deviations of Students' Assessments of the Role of Cooperating Mentors Based on Academic Evaluation

Table 2 reveals a noticeable variation in the arithmetic means and standard deviations of student teachers' assessments regarding the role of cooperating mentors in guiding them to employ constructive learning practices during the field education period. This variation is attributed to differences in the academic evaluation variable of the student teachers at the university (excellent, very good, good, Satisfactory). To determine the statistical significance of these apparent differences, a one-way analysis of variance (ANOVA) was conducted to examine the impact of the academic evaluation variable on the overall tool. The results of this analysis are presented in Table 3.

Source	**Sum of Squares**	**Degrees of Freedom**	**Mean Squares**	**F Value**	**Statistical Significance**
Between Groups	1.471	2	1.135	1.328	0.137
Within Groups	2.019	106	1.010		

Table 3: One-Way Analysis of Variance for the Effect of Academic Evaluation on Student Teachers' Responses to the Study Tool

Table 3 demonstrates that while there are observable differences in the arithmetic means across the academic evaluation categories of student teachers in their perceptions of the cooperating mentor's role in guiding them to employ constructive learning practices during the field education period, the results of the one-way ANOVA test indicate that these differences are not statistically significant. This finding suggests that the academic evaluation of student teachers at the university does not significantly influence their assessment of the cooperating mentor's role in fostering constructive learning practices during the field education period.

Results of the Third Question

The second research question stated: "*Does the role of cooperating mentors in supporting constructivist learning practices differ based on their teaching experience (short, medium, long) and academic qualifications (community college diploma, bachelor's degree, or higher)?". To a*address this question, the arithmetic means and standard deviations for each category of these variables were calculated. Table 4 presents the results.

Variables	Categories	No.	Mean	*SD*
Academic Qualification	Community college diploma	41	2.51	0.37
	Bachelor's degree	143	3.32	0.45
	Higher diploma or more	26	4.43	0.49
Teaching Experience	Short (1-5 years)	76	3.27	0.47
	Medium (6-10 years)	60	2.29	0.48
	Long (11 years or more)	74	2.08	0.50

Table 4: Arithmetic Means and Standard Deviations for Academic Qualifications and Teaching Experience of Cooperating Mentors

These results illustrate the variations in arithmetic means and standard deviations based on both academic qualifications and teaching experience categories, providing an initial descriptive understanding of the data before further statistical analysis.

Table 4 reveals noticeable variations in the arithmetic means and standard deviations of the responses from the study sample, based on differences in the categories of academic qualifications (community college diploma, bachelor's degree, higher diploma or more) and teaching experience (short, medium, long) of the cooperating mentors. To examine whether these apparent differences are statistically significant, a two-way analysis of variance was conducted, as shown in Table 5.

Source	Sum of Squares	*df*	Mean Squares	F Value	Sig.
Academic Qualification	0.146	2	0.125	0.381	0.326
Teaching Experience	0.137	2	2.23	1.935	0.217
Error	0.238	205	0.458		

Table 5: Two-Way Analysis of Variance for the Effect of Academic Qualification and Teaching Experience of Cooperating mentors on Guiding Student teachers to Employ Constructive Learning Practices

The data in Table 5 indicate that there are no statistically significant differences in the responses of the study sample members related to the effects of the academic qualification and teaching experience of the cooperating mentors. Specifically, the calculated F value for academic qualification was 0.381 (with a significance level of 0.326), and for teaching experience, the calculated F value was 1.935 (with a significance level of 0.217). These results suggest that variations in academic qualifications and teaching experience among cooperating mentors do not influence their ability to guide student teachers in employing constructive learning practices.

Discussion of the Results

In the conduct of this investigation, the preliminary nine items of Table 1 portraying the cooperating mentors many assists with guiding the student teachers towards implementing constructive learning practices received a “high” rating. These practices range from helping children to learn to motivation, applying different motivational techniques, and recognition and praise when children offered new ideas or answers. This corresponds to the first level of the constructionist model which is to periodically encourage the learners and to build on what they have done (Alghamdi, 2020; Al-Barakat et al., 2022; Farrell, 2020; Richardson et al., 2020, Izadinia, 2015). The mentors’ supporting action towards the students on this area is very critical

since the motivation of children drives them to learn and therefore have a great impact on their engagement with learning activities.

Another area where cooperating mentors showed strength was in integrating new information with children's experiences and in fostering persistence on tasks. The mentors also supported the student teachers in adapting the learning processes to meet the needs and interests of the children. These results could be explained by the recent training sessions offered by the Jordanian Ministry of Education, which stressed the use of motivational techniques, cooperative strategies, and individual difference approaches—central themes of current reforms in education. This reasoning aligns with the findings of Al-Barakat et al. (2022) who reported similar results as a consequence of these interventions.

On the other hand, the study revealed new issues to be addressed. Twenty-nine items in the study tool were assigned an average rating, indicating a lack of consistency among cooperating mentors' instructional support practices within key areas of constructivist practice. Specifically, most student teachers did not receive adequate guidance in relation to linking learning to the world, employing different teaching methods, and inspiring children to work together. These shortcomings compromise fundamental components of constructivist pedagogy that promote active participation, social interaction, and authentic relevance for learning (Farrell, 2020; Matsko et al., 2020; Clarke et al., 2014).

The investigation also noted gaps in the advancement of learning environments that require the practical application of skills such as critical observation, communication, and scientific explanation; all of which are important for nurturing scientific thinking. Inhibiting support of this kind may restrict the student teachers' capacity to cultivate scientific dispositions within young learners such as curiosity, initiative, and inquiry (Salahova, 2023; Sujatmika et al., 2023; Raslan, 2023). Additionally, there was a striking lack of focus on student teachers guiding their students to uncover prior knowledge, which serves as an essential starting point within a constructivist teaching framework. Al-Hakami and Al-Mubarik (2023) and Shah et al. (2021) highlight that meaningful learning is unlikely to occur without linking to cognitive structures children already possess.

In addition, cooperating mentors did not prioritize creating opportunities for children to apply knowledge through hands-on, real-life experiences. This limited focus often led student teachers to default to traditional, teacher-centered methods, contradicting global standards for teacher preparation, which promote active, student-centered learning (Al-Barakat et al. 2025). The absence of emphasis on investigative learning and curiosity development restricts student teachers' ability to encourage independent thought and self-directed learning among children (Gusango et al., 2021a; Ramsook & Thomas, 2016).

Another critical shortcoming lies in the underuse of assessment as a tool to enhance learning. Cooperating mentors provided minimal guidance on using diverse and formative assessment strategies, such as observation, open-ended questioning, and peer evaluation. This contradicts constructivist principles, which view assessment as a means to support reflection, improve instruction, and empower learners (Gusango et al., 2021b; O'Mahony, 2017). Instead, assessments were largely limited to measuring knowledge retention, reflecting misconceptions about the capabilities of young children to evaluate their own learning (AlAli et al., 2025; Kumar, 2024).

Considering other aspects of individual differences, the analysis noted that the academic

achievement levels of student teachers had no effect on their assessment of the mentors' roles. In the same vein, the cooperating mentors' teaching experience and their academic qualifications did not significantly impact the effectiveness of constructivist practices in their teaching. These findings propose that, regardless of experience or qualification, cooperating mentors had the same deficiencies in applying a constructivist model. It was observed during the practical phase that a considerable number of mentors appeared to be unfamiliar with constructivist approaches and the need for sustained professional training (Sebald et al., 2023; Bjørndal, 2020).

To conclude, while the cooperating mentors exhibited positive attributes in motivating learners as well as in offering support to the early phases of constructivist teaching, they failed to address important foundational aspects necessary for integrating meaningful learning—like bridging prior knowledge, fostering inquiry, collaboration, and assessment. These shortcomings highlight the need to reconsider the preparation and training provided to cooperating mentors if they are to train future teachers competently.

Conclusions and Recommendations

It has been established that the cooperating mentor has a vital yet under-exploited function in aiding the development of constructive learning approaches among pre-service early childhood educators during field education. It was discovered that cooperating mentors did assist the apprentice teachers in the early phases of the constructive teaching approach, especially in helping the children to learn and relating new learning to past experiences. However, there was insufficient depth and breadth in the mentoring support. They were not able to assist the student teachers with many ways of probing the children's prior knowledge, and even more profoundly, they neglected the child as the focal point of learning which is central in constructivist teaching. These gaps, coupled with a lack of multi-dimensional mentor training, hinder the effective realization of constructive learning principles.

The main contribution of this study lies in its illumination of the disconnect between theoretical frameworks and field-based practices in teacher preparation programs. It underscores the necessity of equipping cooperating mentors with both the knowledge and tools to model and foster constructivist practices effectively. The implications extend to program designers and policy makers, urging them to integrate targeted training, resources, and clear selection criteria to enhance the mentors' supervisory roles. Better preparation of mentors is essential for promoting reflective and adaptive teaching approaches in early childhood education.

However, the study has certain limitations. The sample size was relatively small, consisting of 210 pre-service teachers, which may limit the generalizability of the findings. Additionally, the reliance on a single research instrument—a structured questionnaire—restricted the depth of the data collected. Future research could benefit from incorporating semi-structured interviews and classroom observations to gain richer insights into mentor-student teacher interactions and classroom practices.

Based on these findings, several directions for future research are recommended. Studies should explore the perceptions of cooperating mentors regarding their roles in implementing constructive learning, as well as examine actual classroom practices using mixed-method approaches. Further research could also assess the impact of mentor training programs on student teachers' ability to implement constructivist strategies. Moreover, longitudinal studies could track how the support received during field education influences teaching practices in the early years of professional work. These future investigations will provide a more comprehensive

understanding of how to strengthen the bridge between teacher preparation and classroom practice, ultimately improving educational outcomes for young learners.

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