

RESEARCH ARTICLE



Engaging Student Teachers in Reflective Practice Through Photovoice

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Abstract: This study explores the use of photovoice as a reflective practice tool for early childhood student teachers in a teacher preparation program. Reflective practice is crucial for professional growth, yet traditional journaling often feels disconnected from real-world experiences for student teachers. Photovoice, which encourages participants to capture and reflect on meaningful classroom moments through photography, offers an engaging alternative. This research investigates the aspects of student teaching that candidates find reflective, how their images express satisfaction and dissatisfaction, and how group discussions develop shared understanding. Using a constructivist framework, seven student teachers participated in a semester-long photovoice project. Data were collected through over 350 images, descriptions, and four group discussions. Findings reveal four key reflective themes: instructional resources, student engagement, classroom environment, and relationships. While photovoice enhanced critical reflection and community building, participants were hesitant to openly discuss negative experiences, reflecting challenges in developing self-assessment. The study concludes that photovoice holds significant promise for enriching reflective practice in teacher education by integrating visual analysis and group dialogue and recommends its inclusion in teacher preparation curricula as a strategy for fostering critical reflection and community building.

Keywords: photovoice, reflective practice, student teachers, early childhood education, teacher preparation

1. Introduction

The ability to reflect critically on one's teaching practices is widely regarded as an essential component of effective instruction and professional growth for educators [1–5]. As Dewey [1] articulated nearly a century ago, reflective thinking enables teachers to transform routine practices into enriching educational experiences by carefully considering the purposes, rationale, and consequences of their pedagogical decisions. Reflective practitioners continuously analyze and learn from their experiences in the classroom, examining their assumptions, beliefs, and actions to refine and improve their craft. However, engaging preservice teachers in meaningful reflective practice can be challenging, particularly as they take on more responsibilities and time demands during student teaching. This issue is significant because reflection is closely tied to the development of instructional decision-making, teacher identity, and emotional resilience—capacities that are essential but often under-supported during the complex and demanding student teaching phase. Suphasri and Chinokul [6] highlight that reflective practice not only enhances instructional strategies but also plays an important role in shaping teacher identity and supporting professional self-awareness. Their work reinforces the idea that structured reflection is vital in teacher education, yet its implementation varies widely, with ongoing discussions about the most effective approaches. Reflective journaling, though commonly assigned in teacher preparation programs, is often seen by student teachers as a burdensome task, disconnected from their real-world classroom experiences [7].

This perception can diminish the depth and authenticity of their reflections, limiting their professional growth. Student teachers may view journaling as an isolated academic task rather than a meaningful part of their evolving professional identity—especially when it lacks timely feedback or feels disconnected from immediate classroom realities.

To address these challenges, this IRB-approved study explores the use of photovoice—a participatory research method—as an alternative tool to enhance reflective practice among early childhood student teachers. Photovoice offers a more engaging and tangible way for student teachers to connect their reflections with their lived experiences in the classroom, potentially overcoming the disconnect felt with traditional journaling by encouraging emotional expression, grounding reflection in concrete visual moments, and fostering deeper peer discussion through shared imagery. Photovoice is a qualitative research method that enables participants to use photography as a tool for documenting and reflecting on their lived experiences [8]. Participants are provided with cameras and guided by prompts to capture meaningful images. These images then serve as the basis for group discussions, where participants collaboratively analyze their photographs and generate insights into the topics or issues under investigation.

Photovoice has been applied in a variety of educational settings to enhance engagement, self-reflection, and student voice. Previous research has demonstrated its efficacy in capturing participants' lived experiences and strengthening deeper connections between learning and personal identity. Foster-Fishman et al. [9] utilize photovoice to explore middle school students' perspectives on community involvement, finding that group discussions facilitated through photovoice helped students recognize broader social

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and contextual influences on their lives. Stroud [10] extends this application into undergraduate science education, demonstrating how photovoice made course content more relevant and engaging for non-science majors. More recently, Prato et al. [11] examine the use of photovoice in online teaching, highlighting how teachers used visual documentation to reflect on the challenges and adaptations required for digital instruction. Their findings reinforce photovoice as a flexible tool that can be applied across multiple teaching contexts, including traditional, hybrid, and online settings.

In teacher education, photovoice has emerged as a powerful tool for reflection. Hoffmann [12] examines how preservice teachers use photovoice to document and analyze their instructional practices, particularly in integrating technology. By capturing images of their teaching environments, they engage in structured reflection on pedagogical effectiveness. Similarly, Presto et al. [13] explore how Generation Z educators use photovoice to reflect on modern teaching strategies, emphasizing its role in advancing dialogue and professional growth. Nurhadi et al. [14] highlight photovoice's value in English as a Foreign Language teacher education, demonstrating how it helps student teachers articulate critical incidents and emotional responses during online thesis examinations. While photovoice shows promise in various educational settings, its potential in supporting reflective practice among student teachers remains under-explored. This study examines its impact on early childhood teacher education and addresses the following research questions:

- 1) What aspects of the student teaching experience do candidates find worthy of reflection?
- 2) How do the images and descriptions reflect satisfaction and dissatisfaction in student teaching?
- 3) How are the images and descriptions related among the group of student teachers?

By engaging in the photovoice process, student teachers have the opportunity to capture and visually represent the significant moments, challenges, and successes they encounter during this capstone residency. Through group discussions and collective analysis of these visual representations, they can deepen their reflective capacities, gain new perspectives on their practices, and develop a sense of community and shared understanding with their peers.

To support implementation, teacher preparation programs might integrate photovoice into existing reflective structures such as student teaching seminars or fieldwork assignments. For example, photovoice could replace or supplement traditional journaling by encouraging candidates to submit weekly photo-based reflections aligned with prompts related to instructional practice, classroom environment, and professional identity. These submissions could then be discussed in seminar meetings or peer groups to promote deeper analysis and collaborative learning. Embedding photovoice in coursework can cultivate a consistent culture of reflection and provide candidates with a more authentic and engaging method for processing their experiences.

2. Theoretical Framework

The theoretical framework for this study is grounded in the principles of constructivism and reflective practice, two complementary perspectives that inform the design and implementation of this photovoice project.

2.1. Constructivism in reflective practice

Constructivism, as a learning theory, posits that learners actively construct knowledge through personal experiences and

social interactions [15, 16]. In this view, learning involves integrating new information with existing beliefs to create meaning. Key principles of constructivism include learning in authentic environments, social negotiation, relevance to prior knowledge, and encouraging self-regulation and awareness [17, 18].

Recent research further reinforces the effectiveness of constructivist approaches in teacher preparation. Sarnoko et al. [19] demonstrate how problem-based constructivist learning models enhance higher-order thinking skills by requiring learners to actively engage in real-world scenarios. Their findings support the notion that teacher candidates benefit from participatory learning experiences that challenge them to thoughtfully assess their professional practices.

Similarly, photovoice aligns with this constructivist perspective, serving as an active, participatory reflection tool that enables student teachers to document, analyze, and discuss classroom experiences in meaningful ways. By capturing visual representations of their student teaching experiences and engaging in collaborative analysis, student teachers have the opportunity to become active agents in their own learning, fostering a sense of ownership and investment in the reflective process. Furthermore, the group discussions facilitated through photovoice can promote critical dialogue and community building among student teachers, creating a supportive environment for sharing perspectives, offering feedback, and collectively identifying areas for growth and improvement.

2.2. The role of reflective practice in teacher development

The concept of reflective practice, as theorized by Dewey [1] and later expanded upon by Schön [5], refers to the process of examining one's own professional actions and the context in which they occur. Reflective practice is a key component of effective teaching, as it enables educators to continuously learn from their experiences and improve their practice. Recent work by Machost and Stains [4] reinforces the importance of reflection as an ongoing, intentional process that enhances educators' adaptability and professional decision-making. They argue that reflective practice is not just a means of assessing past actions but a strategy for proactively navigating the complexities of contemporary classrooms.

Dewey [1] emphasizes the importance of reflective thinking in transforming routine practices into enriching educational experiences. He contended that teachers should treat their professional actions as experimental, carefully considering the purposes, rationale, and consequences of their pedagogical decisions. Building on Dewey's pioneering work, Schön [5] identifies two key types of reflective practice:

- 1) Reflection-in-action: Thinking and doing simultaneously, modifying practice in the moment.
- 2) Reflection-on-action: Retrospective analysis and thoughtful consideration of past performance.

The present study focuses primarily on reflection-on-action, as student teachers engage in retrospective analysis of their classroom experiences through the photovoice process.

Ross [20] further elaborates on the components of reflective thinking, identifying five key steps:

- 1) Recognizing an educational dilemma.
- 2) Responding to the dilemma by recognizing similarities and unique qualities.
- 3) Framing and reframing the dilemma.
- 4) Experimenting to discover the consequences of solutions.

- 5) Examining intended and unintended consequences of implemented solutions.

The photovoice project in this study facilitates the first three steps of Ross's reflective thinking model. By capturing photographs and writing descriptions of their student teaching experiences, student teachers engage in recognizing significant moments or dilemmas worthy of reflection. Through group discussions, they respond to these dilemmas by sharing perspectives and recognizing similarities and differences in their experiences. Finally, the collective analysis and theme identification process allow student teachers to frame and reframe their understanding of the dilemmas they have encountered.

3. Methodology

3.1. Participants

The participants in this study were seven student teachers, aged 22–28, enrolled in an early childhood teacher preparation program at a midwestern public university. The university is located in a suburban area of the Midwest United States, with student teaching placements spanning both nearby urban centers and surrounding suburban communities. Six participants were pursuing Bachelor of Arts degrees in Early Childhood Education, while one was working toward an initial-licensure Master of Arts degree in the same field. The cohort was racially and ethnically diverse: two participants identified as Hispanic, two as White, two as Black, and one as mixed race. Additionally, four of the seven participants were first-generation students, meaning neither parent had completed a four-year degree. The student teachers were placed in public school kindergarten, first, and second grade classrooms across the region.

3.2. Photovoice procedure

The photovoice project was integrated into the student teachers' experience. Photovoice was selected for this study because it offers a participant-driven, visual approach to reflection that aligns with the emotional and practical realities of student teaching. Traditional journals can feel disconnected or overly academic, while photovoice encourages immediacy and authenticity by grounding reflection in lived classroom experiences. It allows participants to express complex observations that may be difficult to capture in writing and promotes collaborative meaning-making through image-based dialogue. By supporting both individual insight and peer discussion, photovoice strengthens reflective practice and professional identity development. This method aligns with the study's constructivist framework, offering a concrete, engaging way for student teachers to examine their growth and challenges during this pivotal phase of preparation. Over the course of the semester, the student teachers engaged in the following steps:

- 1) Photo Journaling: The student teachers used their own phone cameras and were asked to take photographs that represented significant aspects of their student teaching experience. They were instructed to capture both positive and negative experiences. The following prompts were provided to help guide student teachers in their photography:
 - a. What makes you feel good/happy at school/in the classroom?
 - b. What makes you feel frustrated/dissatisfied at school/in the classroom?
 - c. What are your roadblocks to satisfaction at school/in the classroom? [21]

Student teachers were asked to submit at least three photos during each school week.

- 1) Photo Descriptions: After taking the photographs, the student teachers were asked to write brief descriptions of each image, explaining the significance and meaning behind the photograph. These images and descriptions were sent via text message to a Google Voice phone number that was managed by the researcher.
- 2) Theme Identification: The student teachers were asked to individually identify and describe overarching themes that emerged from the photographs and descriptions. These themes were then shared and discussed as a group.
- 3) Identification of Positive and Negative Experiences: The student teachers were asked to select one photograph that represented a positive aspect of their student teaching experience and one that represented a negative or challenging aspect. They provided written descriptions of these photographs and shared them with the group.
- 4) Group Discussions: The student teachers participated in four in-person group discussions during their regularly scheduled monthly student teaching seminar meetings. During these discussions, they shared their photographs and descriptions and engaged in collective analysis and reflection.

3.3. Data collection and analysis

The photovoice process unfolded over time and involved three interconnected phases of reflection and data generation:

- 1) *Part 1*: 353 Photos printed each with an individual photo description of varying length. This data was collected throughout the week as each student teacher sent their photos and description messages. (Discussion 1: 72 photos, Discussion 2: 104 photos, Discussion 3: 77 photos, Discussion 4: 100 photos)
- 2) *Part 2*: Student teachers identified overall themes of the photos and descriptions. The following directions were provided on recording pages for participants:
 - a. *Take 10–15 minutes to silently record categories and commonalities (or themes) you observe between the photos.*
 - b. *Descriptions can be found on the backs of photos.*
 - c. *Consider the prompts given for this assignment, how do these photos relate in terms of happiness, frustration, dreams/desires, stress, or satisfaction?*

Written data was collected from each student teacher, and ensuing discussions were audio recorded and transcribed for analysis. This data was collected during the four in-person meeting discussions.
- 1) *Part 3*: Student teachers reviewed their photos submitted during the previous month to determine one positive photo and one negative photo they would like to reflect more deeply upon and share with the group. The following descriptions were provided on two-sided recording pages to guide participants' written reflections:
 - a. *Positive/Celebratory/Success*
 - i. *Why did you take this image?*
 - ii. *Why did you choose this image to share with us?*
 - iii. *Reflect*
 - iv. *What did you learn from this moment that you captured?*
 - b. *Negative/Challenge/Stressor*
 - i. *S... What do you SEE here?*
 - ii. *H... What's really HAPPENING here?*
 - iii. *O... How does this relate to OUR lives?*

- iv. *W... WHY does this problem or situation exist?*
 - v. *E... How could this image EDUCATE others (the community, policy makers, etc.)?*
 - vi. *D... What can we DO about the problem or situation?*
- [8]

Each of these phases contributed to a larger reflective framework, with Parts 1 and 2 setting the stage for deeper critical reflection in Part 3. This data included the student teachers' two photos and descriptions, a written reflection, and an audio-recorded shared verbal description and discussion. This data was collected during the four in-person meeting discussions.

Participants independently prioritized data by identifying themes from their photographs and descriptions. This analysis was further refined during monthly group meetings, where participants collectively discussed and confirmed the key themes. The researcher participated in each of the group discussions by prompting students with clarifying questions, helping ensure equal participation, and supporting interpretation without suggesting specific conclusions. While the participants took the lead in identifying and confirming themes, the researcher facilitated the reflective dialogue as part of the constructivist approach underpinning the study. Prior to these meetings, the researcher printed 4x6 prints of every photo submitted. The researcher printed, matched, and glued photo descriptions to the back of each photo. Using a qualitative, thematic approach [22], student teachers examined the photos and descriptions during each session to determine overarching themes.

After data collection, the researcher first coded the group-identified themes and the individual photographs and descriptions to identify the key aspects of the student teaching experience that the student teachers found worthy of reflection. Next, the researcher analyzed the photographs and descriptions to determine how the student teachers reflected satisfaction and dissatisfaction with their experiences. Finally, the researcher examined the relationships and connections among the student teachers' images and descriptions to identify common subthemes and shared experiences.

4. Findings

4.1. Research question 1: What aspects of the student teaching experience do candidates find worthy of reflection?

Overall, most student teachers individually listed more than three times as many common themes as were shared during group discussions (see Figure 1). The most common themes among student teachers that were shared in discussion include students actively engaged, technology, hands-on activities, phonics instruction, and seasonal/holiday themes.

The researcher coded the group-identified themes along with the individual photographs and descriptions, which subsequently revealed four overarching themes that the student teachers found worthy of reflection: (1) instructional resources and materials, (2) student engagement and learning, (3) classroom environment and management, and (4) relationships and communication.

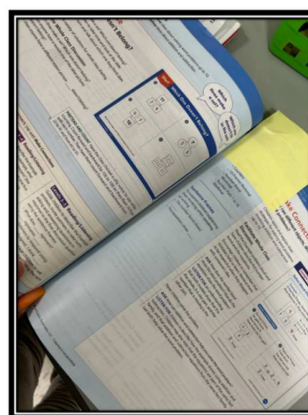
4.1.1. Instructional resources and materials

A significant portion of the student teachers' reflections, 30% of the total photo submissions, focused on instructional resources and materials. This emphasis highlights the significant role materials and resources play in their teaching practices, as they often discussed how access, use, and adaptability of quality materials

Figure 1
Average number of listed themes = $(x+x+x+x)/4$ seminars = N
and average number of shared themes = $(x+x+x+x)/4$ seminars = N

| Student Teacher | Average Number of Themes Listed | Average Number of Shared Themes |
|--------------------------------------|---------------------------------|---------------------------------|
| A | 3.5 | 0.75 |
| B | 6.25 | 1.75 |
| C | 2 | .5 |
| D* only present for 3 discussions | 8 | 3 |
| E | 5.75 | 1.75 |
| F | 5 | 1.5 |
| G | 4.25 | 1.75 |

Figure 2
Theme 1: instructional resources and materials



ST identified negative photo, description submitted:

- *The math curriculum is kickin' my butt. This is my 3rd day doing math which means I have completed taken over the subjects. Math is a sore spot for me so I'm trying to understand the math processes with the students*

directly impacted their ability to engage students and facilitate learning. In a photo description, one student teacher wrote, "In math we are working on 1 more than a given number. We've been focusing on this topic and decided to learn using the life size number line which helped as a visual"¹. This thematic category included photographs of lesson plans, student work samples, educational technology, and various manipulatives and hands-on learning materials. To see a student teacher photo and description example of this theme, see Figure 2.

4.1.2. Student engagement and learning

A significant portion of the student teachers' photographs and reflections, 27% of the total submissions, focused on student engagement and learning. These images depicted students actively participating in lessons, demonstrating their understanding, and engaging in collaborative work. For example, during a thematic discussion, one student teacher noted, "You can see that the students are actively engaged. A lot of pictures show students doing something, whether it's looking at the Smartboard or playing with manipulatives—they're actively engaged in something"². This

¹"Photo description from one student teacher, October 2023, personal communication."

²"Student teacher, group discussion, September 1, 2023, personal communication."

Figure 3
Theme 2: student engagement and learning

ST identified positive photo, description submitted:



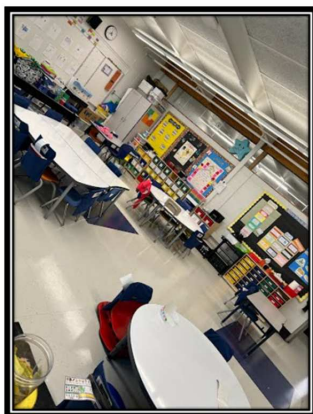
- Today, students went outside for recess and noticed the water sprinklers on. The students began to splash in the water with their shoes due to being curious as they have never seen the water sprinklers outside on. When the students began to splash, some students did not like their friends splashing them with water. My MT and I recommended that the students explore the water by making different patterns, creating new shapes, etc. on the ground with their hands. The students had so much fun making handprints and some even began testing the flow of the water by putting small and large wood chips in the water to test if the water can carry it down the small stream made. It was absolutely delightful to see students act so curious and try to explore something so simple!

thematic category underscores the challenge of maintaining student interest and motivation, as well as the satisfaction they felt when they were able to effectively support student learning. To see a student teacher photo and description example of this theme, see Figure 3.

4.1.3. Classroom environment and management

The student teachers also reflected on the physical and social aspects of their classroom environments; 18% of the photo submissions included classroom organization, seating arrangements, and behavior management strategies. They captured images of their classroom displays, bulletin boards, and other elements that contributed to the overall learning environment. As one student teacher explained in a photo description, “Today I did the board outside our classroom. It made me feel included since my name is on the door. I feel like I belong”³. This thematic category illustrates the importance of creating a positive, welcoming, and well-managed classroom. To see a student teacher photo and description example of this theme, see Figure 4.

Figure 4
Classroom environment and management



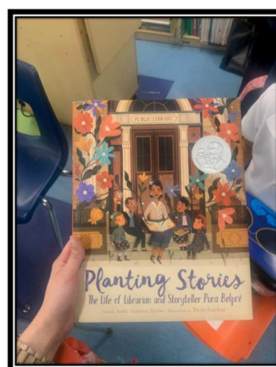
ST identified negative photo, description submitted:

My mentor teacher had me create a new seating chart for this month! I was super excited and realized quickly that seating charts are hard because certain kids can't sit next to each other. 😬 But at the end of the first day they did awesome and the new seating charts seemed to help decrease some unwanted behaviors!

4.1.4. Relationships and communication

The final theme that emerged from the data was the significance of relationships and communication in the student teaching experience, which represented 20% of the photo submissions. The student teachers photographed and reflected on their interactions with mentor teachers, school administrators, families, and other members of the school community. For example, a student teacher illustrated this theme in a photo description, “During transitions, I kept close to the one student who was seen as problematic in order to guarantee Mrs. X’s lesson proceeded smoothly. I asked him to draw his best friend, and to my surprise, he drew me”⁴. This thematic category emphasizes the importance of building strong relationships and effective communication to support student learning and their own professional development. To see a student teacher photo and description example of this theme, see Figure 5.

Figure 5
Relationships and communication



ST identified positive photo, description submitted:

- Today was a really emotional day. As we were reading *Planting Stories, The Life of Librarian and Storyteller Pura Belpré* to the students, we came upon a triggering part of the story. Pura Belpré's spouse died. Mrs. X (mentor teacher) expressed that we sometimes do not have the opportunity to see the people we care about due to certain circumstances, such as death or separation. One of the students raised their hand and mentioned that they had not seen their mother in quite some time. He began to weep and expressed how much he missed her. This inspired the other students to share their own experiences. Several students were able to relate to one another's experiences. A significant percentage of the students lost parents to illnesses, drug addictions, or separations. It seems that the students were never given a chance to express their emotions since nearly the whole class burst into tears after sharing. This taught me how crucial it is to ensure that every child has someone to talk to when coping with intense feelings and life-changing occurrences. Even the best-behaved and happiest students may be suppressing their feelings and negative thoughts. I ended my twentieth day of student teaching, hugging almost every one of my students and wiping their tears. This was an unforgettable moment for me and reinforced the idea that I had chosen a career path that is just right for me.

4.2. Research question 2: How do the images and descriptions reflect satisfaction and dissatisfaction in student teaching?

The student teachers’ submissions and subsequent group discussions revealed distinct themes of satisfaction and dissatisfaction.

³“Photo description from one student teacher, August 24, 2023, personal communication.”

⁴“Photo description from one student teacher, August 2023, personal communication.”

Figure 6

Student teacher photo of a “spider STEM challenge” activity integrating science and problem-solving



The analysis of the photos that the student teachers identified for discussion revealed “Student Engagement and Learning” as the most prominent theme. This theme emerged both in positive and negative contexts, reflecting the centrality of student interaction and learning activities in the student teaching experience.

The most positive representations in the photos were centered around “Student Engagement and Learning,” constituting 47% of the images discussed. These photos depicted students actively participating in learning activities, engaged in lessons, and completing projects created by the student teachers. For example, a student teacher submitted the following photo (Figure 6) and description:

Today, during Science, the students had a spider stem challenge where they had to come up with a strategy to have all the spiders stay on without falling. I thought this was fun and engaging for the students because during the day, they are doing a lot of math and English Language Arts that there is barely any free time. I chose this activity because it is integrating science and problem-solving skills while being fun⁵.

This high percentage indicates that student teachers find significant satisfaction in witnessing and facilitating active student engagement and successful learning outcomes. Conversely, the theme “Classroom Environment and Management” accounted for 33% of the negative representations. Photos in this category often highlighted challenges such as classroom management, handling difficult student behaviors, managing classroom talking, and dealing with ineffective substitute teachers. For example, during a group discussion, one student teacher shared the following photo (Figure 7) as a negative representation she wanted to reflect upon further:

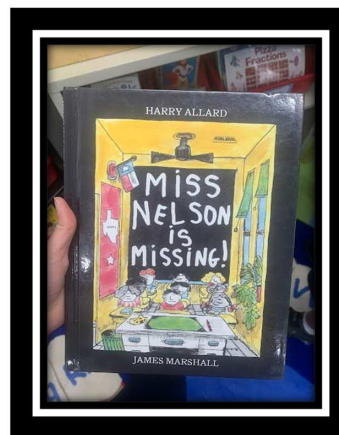
This was the first book I read to the class the first week. And, um, what’s happening during story time is that I’m getting, like, I’m having trouble managing them when it’s time to read. They kept, like, whispering, and even if I told them, like, “Hey, y’know, completely stop,” they stop for a little bit, but then they start whispering again or shouting out answers. And, um, it just kind of shows, like, teachers struggle with management, and it’s not always easy reading a book to a bunch of kids⁶.

⁵“Photo description from one student teacher, October 12, 2023, personal communication.”

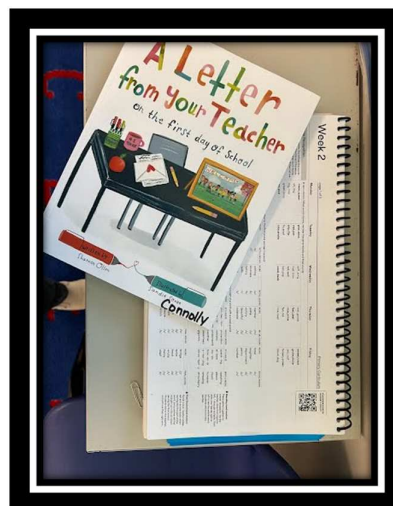
⁶“Student teacher, group discussion, September 1, 2023, personal communication.”

Figure 7

Student teacher photo illustrating challenges in classroom management during story time

**Figure 8**

Student teacher photo of a phonics activity showing both the struggles and successes of instructional adaptation



These aspects of classroom environment and management were frequently cited as stressors and challenges in the student teaching experience, highlighting the difficulties student teachers face in maintaining a conducive learning environment.

An interesting observation from the group discussions was the tendency of student teachers to qualify their negative experiences with ambivalence. During the discussions, there were ten occurrences (37% of the time) where student teachers shared their challenges or stressors with caveats, such as, “I don’t have a challenge or negative,” “This is a positive and a negative,” “This started negative and turned into a positive,” or “Not really a negative.” Additionally, one student teacher was unable to identify a negative or challenging photo at all during one of the group discussions. This reluctance to openly acknowledge and reflect on the difficulties of student teaching raises questions about the factors that may be influencing the student teachers’ perceptions and self-representation. For example, during a group discussion, one student teacher shared the following photo (Figure 8) and description:

And then this one, um, there's like a positive and a negative to it in a way or a struggle. So, I read a "Letter from Your Teacher" on the first day of school to them, and then I also took over phonics. That was kind of a struggle in a way, mostly because I had to remember the hand signals, I had to do the opposite—right to left instead of left to right, so that was hard to make sure I was trying to do it that way and then also keep them engaged in it at the same time and not having to read and take my time. So, the first day was a struggle. But yesterday and today, they actually got the hang of it, so now we're all in a groove. So, it was a lot better, but yeah, it was hard starting phonics⁷.

This reflection illustrates the duality of experiences, where initial challenges and struggles in teaching eventually led to a more positive outcome as both the teacher and students adapted.

4.3. Research question 3: How are the images and descriptions related among the group of student teachers?

Despite the individual differences in the student teachers' experiences, the analysis revealed several commonalities and shared themes among the group. These commonalities emerged mainly from the student teachers' group discussions and are not limited to any one of the four broad thematic categories identified earlier. They include:

- 1) Shared experiences
- 2) Collaboration and support
- 3) Professional growth
- 4) Concern for student well-being
- 5) Importance of engagement
- 6) Focus on relationship building

Shared experiences: The student teachers' photographs and descriptions frequently reflected similar experiences related to student behavior, classroom management, implementing instructional activities, and navigating the demands of student teaching. For instance, two student teachers, Brynn and Tiana (pseudonyms), both discussed the challenges of conducting diagnostic testing in their classrooms. Brynn explained how managing 62 kindergarten students during long, computer-based assessments required adjustments in classroom routines, adding that the testing process disrupted student engagement and efficiency. Tiana echoed these concerns, noting that diagnostic testing posed similar issues in the first grade at her school, with both student teachers highlighting how the process interfered with instructional activities and classroom management. Their shared frustrations underscore the broader challenges student teachers face in balancing assessment requirements with maintaining a productive and engaging learning environment⁸.

Collaboration and support: Many of the images and reflections highlighted the importance of collaboration and support, whether from mentor teachers, colleagues, or peers within the group. In a photo description, one student teacher described working alongside her mentor teacher to reorganize and prepare the classroom. This collaborative experience not only helped build a personal bond between the two but also extended to the mentor teacher's family, who assisted in the process. The student teacher reflected on

how the teamwork and guidance from her mentor teacher made her feel more prepared and supported for the start of the school year. This experience illustrates the significance of building relationships with colleagues, which can lead to greater support, guidance, and a positive environment that ultimately benefits both teachers and students⁹.

Professional growth: A common theme was the student teachers' focus on seeking feedback, learning from their experiences, and reflecting on areas for improvement to enhance their teaching practices. For instance, one student teacher reflected on an experience where she was assisting learners in completing an unfinished worksheet. The student teacher faced challenges with behavioral issues, as many students did not listen initially. However, by adapting her approach, using humor, and making the students feel heard, the student teacher was able to regain their attention and successfully complete the assignment with each student. This experience led the student teacher to realize the importance of providing one-on-one attention, noting that "these children perform best" when given individualized support. The student teacher's goal then became to "pay extra attention to these children when they are assigned a task so that they may accomplish their work at the same pace as the rest of their class," demonstrating a commitment to professional growth through reflection and adapting teaching strategies¹⁰.

Concern for student well-being: The student teachers shared a desire to create a positive, nurturing classroom environment and ensure the progress of all students, regardless of their backgrounds or abilities. For example, one student teacher observed an age-appropriate SEL survey and noted how it effectively assessed students' emotional well-being, emphasizing that "if the children are struggling emotionally, it will reflect in their behavior and success." This experience reinforced the importance of "constant check-ins with the students to make sure they are doing okay," emphasizing the need to support students' emotional health alongside their academic progress¹¹.

Importance of engagement: The student teachers emphasized the significance of planning and implementing engaging lessons and activities to keep students excited and involved in the learning process. For instance, one student teacher described how, "During phonics today, one kid mentioned that they wanted to use the whiteboards to mark up the words of the day. When I asked the children if this was what they all wanted, they all agreed. The students appeared cheerful that they could choose how they worked on the words." This choice "encouraged more children to participate since they all agreed they wanted the whiteboards, and it provided them with a sense of ownership in their learning." Reflecting on this experience, the student teacher noted, "My goal is to provide the learners with additional options in their learning in order to give them greater autonomy," signifying how student engagement cultivates a dynamic and student-centered learning environment¹².

Focus on relationship building: The student teachers recognized the crucial role of building strong relationships with students to support their learning and development. During a group discussion on the emerging themes of photos, one student teacher noted,

⁹"Photo description from one student teacher, August 2023, personal communication."

¹⁰"Photo description from one student teacher, August 2023, personal communication."

¹¹"Photo description from one student teacher, September 2023, personal communication."

¹²"Photo description from one student teacher, October 2023, personal communication."

⁷"Photo description from one student teacher, September 1, 2023, personal communication."

⁸"Group discussion with Brynn and Tiana (pseudonyms), September 28, 2023, personal communication."

"I feel like most of them [photographs] has some type of... connects to some type of rapport, if that makes sense. Because for students to want to learn from you, you have to build a connection with them." This understanding illustrates how building rapport helps create a classroom environment where students feel comfortable, valued, and more motivated to engage with their learning.

These shared experiences and common themes suggest that the photovoice process facilitated a sense of community and collective reflection among the student teachers, helping them contextualize their experiences within a broader professional framework. This aligns with findings from *Capturing Effective Teaching: A Photovoice Exploration Through the Eyes of Gen Z Educators* [13], which similarly highlighted the role of photovoice in deepening reflections on student engagement, instructional strategies, and classroom environments. The parallels between these studies suggest that photovoice is a valuable tool across different stages of teacher development, reinforcing its potential to enhance self-reflection and collaborative learning.

5. Discussion and Implications

5.1. Photovoice as a tool for reflective practice

This study's findings indicate the potential of photovoice as a tool for supporting reflective practice among student teachers. By engaging in the process of capturing, describing, and discussing their experiences through photographs, the student teachers were able to examine various aspects of their student teaching, including instructional resources, student engagement, classroom management, and relationship building. Schön [5] emphasizes the significance of reflective practice in teaching, noting that engaging in reflection before, during, and after practical experiences, especially when coupled with constructive feedback, can significantly enhance professional development. In this context, photovoice can seamlessly integrate into a broader reflective practice framework for educator preparation programs. This method allows student teachers to regularly identify and discuss visual representations of their experiences, supported by guided reflection prompts and feedback from university supervisors. By doing so, photovoice enriches the reflective process, making it more dynamic and grounded in real-world teaching contexts.

Muller's [23] work on sustainable education further supports this notion, finding that photovoice methodology is more than a data collection method; it is also an effective reflective tool. As Muller [23] states, "The photovoice skills and skills in reflexive practice gained by the preservice teachers demonstrate that reflecting on visual images can be a powerful tool to negotiate learning and advance critical thinking in real-life learning contexts." This suggests that the act of visually documenting classroom experiences not only facilitates reflection but also strengthens preservice teachers' ability to analyze their teaching practices and develop a deeper understanding of their role in the classroom.

5.2. Barriers to reflection and the role of identity

The reluctance of some student teachers to openly acknowledge and reflect on the challenges and stressors of their experiences raises important questions about the factors that may be influencing their self-representation. This reluctance can be understood through emotional and developmental lenses, including imposter syndrome and the ongoing formation of professional identity. This hesitancy to engage with negative experiences may be rooted in the broader challenges of developing reflective practice among

preservice teachers. According to LaPalme et al. [24], novice educators often struggle with "imposter syndrome," with many feeling that their successes are due to luck and fearing that others will eventually discover their perceived incompetence. This fear can lead to a reluctance to openly discuss challenges, as doing so might reinforce their imposter feelings.

Preservice teachers may avoid critical self-reflection to protect their emerging professional identities, which are still fragile and under development. Richter et al. [25] demonstrate that the development of a professional identity is heavily influenced by the teaching internship experience, where self-efficacy and learning engagement play crucial roles. Student teachers may shy away from discussing difficulties because it conflicts with their ongoing effort to construct a positive professional identity. The pressure to build a strong, positive identity as a teacher might cause student teachers to focus more on positive aspects of their experience, avoiding negatives that could undermine their emerging self-concept.

This particular finding has implications for the use of photovoice as a participatory action research methodology, which typically emphasizes the role of the participant in identifying and advocating for change regarding important issues. The student teachers' hesitance to document and discuss the negative aspects of their experiences may limit the potential for the photovoice process to contribute to meaningful action and transformation.

5.3. Emotional support and shared reflection

This collective reflection and sharing of experiences can be particularly beneficial for student teachers, who often feel isolated and overwhelmed during the student teaching process. Research by Chen et al. [26] indicates that the emotional experiences of student teachers significantly impact their learning process and professional identity development, and supportive environments can help manage these emotions effectively. By providing a structured and supportive environment for reflection and dialogue, the photovoice project can help to alleviate feelings of isolation and support the development of a professional learning community. To ensure successful implementation, faculty should be provided with training on how to facilitate photovoice projects effectively. This training could include workshops on guiding students through the process, analyzing visual data, and fostering a supportive environment for discussing both positive and challenging teaching experiences.

5.4. Practical applications in teacher preparation programs

Despite this challenge, the overall findings suggest that the photovoice process can provide valuable opportunities for student teachers to engage in reflective practice and develop a sense of community and shared understanding with their peers. The student teachers' photographs and descriptions revealed common themes and shared experiences, allowing them to situate their individual challenges and successes within a broader context. Teacher education programs can integrate photovoice into their curricula by incorporating it into existing reflective practice assignments. For instance, instead of traditional reflective journals, programs could ask students to submit weekly photovoice entries where they capture images representing key teaching moments. These images could then serve as focal points for group discussions, encouraging deeper reflection and peer learning.

Beyond pedagogical reflection, photovoice also appeared to support student teachers' emotional processing and confidence-

building. The structured process of documenting and sharing visual representations of their experiences helped participants reframe challenges, recognize growth, and feel less isolated. Engaging in dialogue around their images allowed them to receive affirmation from peers and develop a sense of shared experience. These findings suggest that photovoice not only facilitates critical thinking but also offers emotional scaffolding by normalizing vulnerability and making space for authentic reflection.

Furthermore, the photovoice process aligns with constructivist principles of learning, which emphasize the importance of authentic, real-world experiences, social negotiation, and the active construction of knowledge. By engaging student teachers in the process of capturing, describing, and discussing their experiences through photographs, the photovoice project encourages them to be self-regulatory, self-aware, and actively involved in their own professional development. This entire process facilitated critically examining practices, which is an integral part of teacher development [27].

However, successful implementation requires carefully considering the specific teacher education program context. Student teachers' hesitance raises questions about whether teacher preparation adequately emphasizes critical analysis and advocacy. Programs should focus on creating a reflective culture that values honest discussions of both successes and challenges. This could be achieved by establishing norms that encourage vulnerability and self-reflection, possibly through the inclusion of reflection workshops or seminars that explicitly address the emotional aspects of teaching. Including this type of professional development can help student teachers process their experiences, gain insights into their professional identities, and develop coping strategies, ultimately supporting their growth as reflective practitioners. Program faculty may need to provide clearer structures and support for thoughtful, solutions-oriented reflection on both positive and negative classroom experiences.

While this study focused on early childhood teacher candidates, the photovoice process may also be applicable in other teacher preparation contexts, particularly those that emphasize reflective practice, identity development, and clinical fieldwork.

6. Limitations and Future Research

While offering promising insights, this study has several limitations that must be acknowledged. First, the sample was drawn from a single teacher preparation program at one university, which limits the generalizability of the findings. To assess photovoice's transferability as a reflective methodology for student teachers, future studies should replicate this work across multiple programs in different geographic regions and institutional contexts. Initial evidence of broader applicability comes from a university supervisor at another institution in the same state where this study was conducted. After attending a regional conference presentation on this photovoice study, she implemented a modified version of the method in her program. She reported increased student engagement and reflection, further suggesting photovoice's potential to spark meaningful dialogue among student teachers. While promising, formal research is needed to rigorously evaluate its impact across diverse educational settings. Additionally, all participants identified as women, which may have influenced their engagement with reflection; future studies should explore how gender and other identity factors shape photovoice participation.

Additionally, the design of this study did not allow for longitudinal tracking of how engagement in the photovoice process during student teaching influences participants' reflective practices once

they transition into in-service teaching roles. Future research should examine whether repeated experiences with photovoice cultivate habits of critical reflection that continue to evolve throughout teachers' professional careers. Longitudinal studies could provide insight into how these reflective practices contribute to teacher resilience, adaptability, and professional growth over time.

A key finding from this study was student teachers' hesitancy to openly discuss classroom challenges, raising important questions for future research. Understanding the factors underlying this reluctance is essential, as transformative teacher education relies on developing future educators' capacity for authentic self-assessment, problem identification, and advocacy for continuous improvement. Potential explanations for this hesitation could include insecurity about critiquing the status quo, socialization into norms of persevering through difficulties without complaint, or institutional pressures discouraging these types of reflective conversations. Investigating these dynamics through a critical pedagogy lens could uncover strategies to create safer spaces where student teachers feel empowered to engage in deep reflection and vulnerability, which are necessary for meaningful professional growth.

Future research could also expand the participatory ethos of photovoice by involving student teachers as co-researchers throughout the analysis and interpretation process. This inductive, dialogic approach aligns with photovoice's philosophical roots in community advocacy and constructivist learning theory [8]. Incorporating participants' voices more deeply into the research process could provide more nuanced insights grounded in their lived experiences and support a more collaborative reflective practice.

7. Conclusion

This study demonstrates that photovoice is a valuable tool for fostering meaningful reflection and professional growth among early childhood student teachers. By capturing and analyzing classroom experiences, participants deepened their understanding of key aspects of teaching, including instructional strategies, student engagement, classroom management, and relationship building. The process also promoted a sense of connection and peer support during the often isolating student teaching experience.

Photovoice offered a more authentic, engaging alternative to traditional journaling and aligned well with constructivist principles. Its implementation encouraged participants to document real-world challenges and successes, supporting reflective habits essential to professional development. These findings suggest that photovoice can enhance teacher preparation programs by cultivating critical reflection, emotional insight, and collaborative learning among preservice educators.

Conflicts of Interest

The author declares that she has no conflicts of interest to this work.

Data Availability Statement

The data that support this work are available upon reasonable request to the corresponding author.

Author Contribution Statement

Amy Kelly: Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft, Writing – review & editing, Supervision, Project administration.

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