

Article

Teaching Is Messy: Using Lesson Study to Reimagine Student-Centered Clinical Experiences

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Abstract: Teacher preparation is dependent on a clinical model of instruction where students apprentice with licensed teachers to gain experience in a classroom. It is not always easy to create these opportunities in schools that are local to the university, especially with a large middle-level program. This qualitative study examines how using lesson study in an early clinical experience can create high-quality experiences and develop innovative thinking around lesson design. This research answers the following questions: (1) What events do the preservice teachers identify as memorable in their interactions with students, peers, and teachers during a clinical experience that uses the lesson study model? (2) How does the lesson study model influence preservice teachers' thinking about teaching? The results from the study suggest that a lesson study model is a viable option for middle-level teacher preparation programs. While it solves some practical issues, such as a lack of quality clinical experiences, it also creates an experience where students feel supported, scaffolded, and engaged.

Keywords: teacher preparation; middle grades; lesson study; teacher candidates; well-remembered events



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1. Introduction

It was the beginning of October, and 19 of our teacher candidates were a month into their first clinical experience. It was not the experience they (or we) had planned for as they met their first classes of middle school students through a screen. However, despite the challenges the pandemic had brought to us, as a whole, our candidates appeared to be on an accelerated path toward understanding lesson design. This was made evident to us by an email we received from our colleague who taught the course that focused on lesson planning and assessment. It began, "I certainly see a difference in the plans compared to previous semesters. They are better articulated, particularly in the rationale and assessments sections". Pleased by this observation, we had to stop and consider the next section of their message:

It is harder for me, however, to ascertain the individuality of the work because many of the lesson plans are so similar in resources used and instructional strategies employed. Particularly with the Jim Crow and media bias lesson plans, I worry there is not quite enough originality in the individual student submissions.

These concerns reflected a shift we had made in clinical structure, a shift that had moved from placing teacher candidates individually with one teacher to placing them in cohorts of from six to seven candidates with one teacher, using the lesson study approach [1]. As we considered this concern, we asked ourselves whether it is one that we or other teacher educators should worry about as teacher candidates begin their apprenticeship as lesson designers.

This question was just one to add to the list of questions we had been wrestling with as we considered the structure of our candidates' first clinical experiences. In its previous iteration, candidates had spent all day, two days a week, placed in a middle school

classroom. As a large teacher education program, finding 18–45 placements for this clinical each semester was challenging, particularly when we were also placing similar numbers in a senior clinical and student teaching. It seemed as if quality was being sacrificed for quantity, and many of our candidates struggled to reconcile the student-centered, research-based practices they were learning in their classes with what they were seeing in schools. These observations led us to investigate ways in which we could provide students with experiences where they would see that that innovative student-centered instruction is possible. We wanted to ensure that all our candidates' first experiences in a classroom were with those relatively few teachers who do innovate and design lessons that center students to engage teacher candidates in a meaningful and student-centered learning experience.

Lesson Study, which focuses on the power of collaborative design, observation, and reflection, offered a possible answer to these questions. It also problematizes the value of originality within individual student submissions. Thus, we began to reconceptualize and redesign this first clinical, a clinical we feel is critical to situating students' success in future teacher education experiences. We used the framework to open conversations with our colleagues about what we value as preparers of teachers. This article provides insights into our first foray into this redesign and poses questions as we continue to move forward in re-imagining authentic and developmentally appropriate clinical experiences.

2. Literature Review

This study examines how Lesson Study can be used as one way to transform traditional clinical models in teacher preparation. We took a multi-layered approach to the literature review, first exploring the design of traditional clinical practices in teacher preparation, as this is the model that most of our clinicals follow. As others in the literature had noted, we had identified gaps in our teacher candidates' experiences. Noting that colleagues in other institutions had used Lesson Study to work with both inservice and preservice teachers, we began to explore the literature around Lesson Study, and we share some of those findings in the next section of the literature review.

2.1. Traditional Clinical Practices in Teacher Education

The clinical model is a widely used approach in teacher education that involves preservice teachers working in classrooms with practicing teachers prior to their full-time student teaching [2,3]. This is a theory to practice model that, in design, gives preservice teachers the opportunity to apply course content into classroom settings [4]. In our program students take their first clinical two semesters before student teaching, and then their second clinical the semester before student teaching. When discussing middle-level teacher preparation, McEwin and Smith [5] explain that these clinical experiences provide “context for learning about young adolescents; middle grades organizational features; and other programs and practices of successful teaching”. They go on to explain that these experiences are typically tiered “and follow a pattern of increasing complexity” [5] (p. 687).

While this model is still commonplace, researchers have noted some important limitations and drawbacks. One of the criticisms is that clinical experiences often fail to provide preservice teachers with sufficient opportunities to reflect on their teaching practice. As apprenticing professionals, preservice teachers sometimes lack the experience to engage in reflection around teaching and learning on their own. Derwent explains that, in their study, participants who developed a critical point of view were those that “were open to cooperating with other participants and researching during reflective thinking practices” [6] (p. 270). Traditional clinical experiences are typically solo, making this practice difficult to enact.

Another limitation is related to what teacher candidates are doing in their clinical work. Scholars have emphasized that mere classroom observation is inadequate for fostering clinical expertise [3,7,8]. Scholars also criticized the clinical experience as focusing on practical skills and immediate problem-solving, which can result in a lack of attention being paid to broader theoretical and pedagogical issues. The gap between theory and practice in teacher education is most evident in the traditional segregation of university-based

coursework and fieldwork in local schools [9–12]. This separation is based on the implicit belief that the theoretical aspect is covered in university coursework while the practical side is covered during school-based placements [13]. This can lead to frustration with preservice teachers who are seeing one thing in the school buildings but learning another in their university classrooms.

The clinical experience model relies heavily on the availability and quality of mentor teachers. Turner and Green emphatically state, “In a clinical experience, mentor teachers are the most powerful people in the classroom” [14] (p. 3). Some mentor teachers may not have the necessary training or experience to take on this important role and to provide effective guidance to preservice teachers, leading to negative experiences and inadequate preparation [11,15]. The current configuration of the mentor teacher role often fails to acknowledge the significant responsibilities they undertake in guiding teacher candidates. Consequently, mentoring duties are frequently added to an already demanding teaching workload, with minimal preparation, support, and inadequate compensation [15]. Moreover, in numerous programs, mentors lack a deep understanding of the curriculum and coursework, and their involvement in comprehensive discussions about the overall teacher education program is rare. School districts generally do not provide incentives or recognition to teachers who excel in their mentoring efforts [15].

2.2. Lesson Study

Lesson study is a teacher-led professional development approach that involves collaborative planning, observation, and reflection on classroom instruction [1,16]. The approach has been used in various contexts, first with practicing teachers [16–19], and increasingly with preservice teachers [20–22], as a means of enhancing their teaching skills and knowledge.

Several studies have reported positive outcomes of lesson study with preservice teachers. Sims and Walsh [21] found that lesson study enhanced preservice teachers’ understanding of students’ learning and prepared preservice teachers to use “behind-the-scenes thinking” in their planning and lesson implementation. Lewis [23] points out that lesson study allowed for preservice teachers to connect concerns about classroom management to their learning goals and activities. Similarly, Leavy and Hourigan [24] show that preservice teachers who participated in lesson study have a deeper pedagogical understanding of how to design and implement effective lessons, even beyond the context of the original lesson study. The authors also go on to say that “the experience of engaging in [lesson study] helped move pre-service teachers towards taking a more critically reflective stance on their teaching and developing a clear understanding of their students’ thinking and the pedagogical content reasoning that influenced that thinking” [24] (p. 174).

3. Research Design

The information in this article is obtained from an in-depth study conducted over the course of a semester, investigating the experiences preservice teachers found meaningful during a clinical experience redesign that centered lesson study. As constructivist teacher educators, we were particularly interested in how preservice teachers internalized and interpreted events that occurred during their first clinical experience. Further, we were interested in how a collaborative approach to lesson design influenced their disposition toward teaching. To accomplish this, we focused our content analysis on teacher candidates’ blog posts on well-remembered events. Developed by Kathy Carter, the concept of “well-remembered events” refers to an occurrence in a school setting that a teacher or preservice teacher finds noteworthy and memorable [25,26]. In recalling this event, the teacher assigns meaning to the event by describing why it stands out to them and reflecting on the event as a whole [26,27]. Carter argues that through examining how novices perceive memorable events, we can better understand their knowledge and how it evolves with more experience in teaching and observation [25].

3.1. Participants

Teacher candidates participating in this field experience were middle-level education majors enrolled in their first clinical experience along with two other courses: an introductory course with an emphasis on lesson design and classroom management and a special education course. Students in this block of courses were generally considered juniors in the program. This was their first sustained clinical experience, with another semester-long clinical experience and student teaching to follow in subsequent semesters. The participants in this study were drawn from the 19 teacher candidates—11 women and 8 men. Table 1, the participant table, has more information about the candidates and their placements.

Table 1. Participant table.

| Preservice Teacher | Mentor Teacher | Grade Level | Subject Area | School Modality |
|--------------------|----------------|-------------|----------------|--|
| Alex | Ben | 8th Grade | Social Studies | 1 h, started entirely online and shifted to hybrid |
| Aaron | Phil | 8th Grade | Math | 45 min, online with Mondays as asynchronous and Wednesday as synchronous |
| Callie | Shelbie | 8th Grade | ELA | 45 min, face-to-face classes |
| Carrie | Ben | 8th Grade | Social Studies | 1 h, started entirely online and shifted to hybrid |
| Kate | Phil | 8th Grade | Math | 45 min, online with Mondays as asynchronous and Wednesday as synchronous |
| Evan | Shelbie | 8th Grade | ELA | 45 min, face-to-face classes |
| Hilary | Ben | 8th Grade | Social Studies | 1 h, started entirely online and shifted to hybrid |
| Joshua | Shelbie | 8th Grade | ELA | 45 min, face-to-face classes |
| Jonathan | Phil | 8th Grade | Math | 45 min, online with Mondays as asynchronous and Wednesday as synchronous |
| Jenny | Shelbie | 8th Grade | ELA | 45 min, face-to-face classes |
| Cassidy | Ben | 8th Grade | Social Studies | 1 h, started entirely online and shifted to hybrid |
| Jackie | Phil | 8th Grade | Math | 45 min, online with Mondays as asynchronous and Wednesday as synchronous |
| Angie | Phil | 8th Grade | Math | 45 min, online with Mondays as asynchronous and Wednesday as synchronous |
| Matthew | Phil | 8th Grade | Math | 45 min, online with Mondays as asynchronous and Wednesday as synchronous |
| Maria | Shelbie | 8th Grade | ELA | 45 min, face-to-face classes |
| Nathan | Phil | 8th Grade | Math | 45 min, online with Mondays as asynchronous and Wednesday as synchronous |
| Steve | Ben | 8th Grade | Social Studies | 1 h, started entirely online and shifted to hybrid |
| Elizabeth | Ben | 8th Grade | Social Studies | 1 h, started entirely online and shifted to hybrid |
| Stacie | Shelbie | 8th Grade | ELA | 45 min, face-to-face classes |

Although not participants in this study, it is important to note that there were three mentor teachers who worked alongside our candidates. Each teacher was selected because of their reputation for teaching effectively and differently from many of their colleagues and their willingness to innovate alongside us and teacher candidates. Two of the three teachers had a long-standing relationship with Robyn and the third was introduced to us through a principal who had also had a long-standing relationship with Robyn. Shelbie Plato had more than 15 years of teaching experience and taught 8th grade English Language Arts in a nearby rural school that has approximately 400 students enrolled across grades 7–12. Approximately 91% of students attending this school are white, with about 4% Hispanic and 4% mixed race. A doctoral student of Robyn's, they worked closely together, designing and researching instructions over the past 8 years. With 8 years of teaching experience at the nearby lab school, Ben Dean taught 7th and 8th grade social studies. The lab school has approximately 400 students enrolled across PK through 8th. Students in this school are approximately 75% white, 10% Hispanic, 8.5% mixed race, 3.5% Black, and 3.5% Asian. Robyn taught Ben as both an undergraduate and a graduate student, and they have collaborated together on other projects. Phil Tripp has been teaching math for over 10 years and, at the time of the study, taught 6th and 8th grade math in a town about an hour away from the university. The most diverse of the three schools, Phil's school is made up of approximately 450 PK through 8th students whose backgrounds are approximately 62% white and 35% Black.

3.2. Field Experience Structure

The field experience course was listed as meeting between 8 a.m. and 3 p.m. on Mondays and Wednesdays. However, candidates only spent from three to four hours working with their mentor teachers on these days. The rest of the time was used to either meet with us (middle-level faculty serving as university supervisors) in their small groups to plan and reflect on their lessons or with their group to plan for upcoming lessons.

With the pandemic raging in the background, we were forced to shift what was originally planned as a face-to-face clinical to an entirely online clinical. This online context did not necessarily mirror the context of the candidates' partner schools. Each of the three mentor teachers we partnered with worked in schools that approached teaching during the pandemic in different ways.

For most of the semester, Shelbie met with her young adolescent students entirely face-to-face, with very minor adjustments to their daily schedule. The primary adjustment was that students were dismissed 30 min early to give teachers time to communicate with the few students in the district who were learning online via a third-party learning platform. The teacher candidates assigned to Shelbie met virtually with her students via Zoom, often in small breakout rooms. Because Shelbie was in the same physical space as her students, she was able to troubleshoot technology and other issues while candidates worked with her students. Class periods were approximately 45 min long. In the last couple of weeks of the semester, her school went entirely online due to an increase in COVID cases. At this time, Shelbie, the preservice teachers, and students all met on Mondays and Wednesdays in Zoom for periods shortened to 30 min.

Ben's students started their semester entirely online before transitioning to a hybrid schedule where half the class met in person and half the class participated synchronously via Zoom. Like Shelbie's class, they eventually transitioned back to entirely online at the end of the semester due to COVID spikes. Preservice teachers working with Ben's students met regularly with the class through Zoom, using whole group and breakout rooms throughout the semester. During the hybrid schedule, teacher candidates either met with the students who were online, or the entire class would join the Zoom call, regardless of whether they were at home or in the classroom. Class periods were an hour long.

Phil's schedule provided the most challenges for the field experience. Designed to be entirely online for the first semester, students worked asynchronously on Mondays and synchronously via Google Hangouts on Wednesday mornings. Preservice teachers

met with Phil on Mondays to plan the week and to create flipped classroom videos for students. They then interacted with students in whole and small groups on Wednesdays. Class periods were 45 min long.

The field experience was organized in approximately three-week cycles, using the lesson study framework Collet, 2019 [1], laid out as follows: Study, Plan, Observe, Reflect, ReVision, Reteach (p. 5). In the first week, teacher candidates met with their mentor teachers to identify an upcoming lesson topic and to explore important factors to consider when designing their instruction, including students' assets and interests, possible misconceptions, and available resources. In week two, teacher candidates worked together to plan the upcoming lesson. During this time, they met with their mentors, their groups, and us to brainstorm ideas, develop sequencing and pacing, and predict areas where students might need more support. This was a collaborative effort involving all of us. In the third week, one candidate would teach the co-planned lesson with the rest of the candidates, their mentor teacher, and at least one of us observing and noting the strengths and challenges of the lesson. Once the lesson was taught, we met with the candidates to talk through their observations, prompting them to point to specific evidence that supported the instances of success and the instances of struggle. Then, as a group, we worked to address the challenges that arose in the lesson, making slight adjustments where needed. After this whole-group reflection, a different teacher candidate would teach the revised lesson to the next group of students.

Following this teaching cycle, preservice teachers would reflect using the well-remembered events format. Through the course of the semester, teacher candidates were able to work through this cycle four times. In addition to participating in the lesson study cycle, candidates also supported their mentor teachers in the various ways that are typical of a traditional field experience, including working with small groups, conferencing with students, and providing feedback on their work.

3.3. Data Sources

As part of their assignments for the clinical course, students submitted four well-remembered events blog posts, at three-week intervals. The three-week intervals aligned with the teaching cycles they were engaging in, with Week 1 focusing on brainstorming and collaboration with mentor teachers, Week 2 focusing on predictive planning [1], and Week 3 on teaching. This cycle aligns with the six-step Lesson Study cycle presented in Collet 2019 [1]. Blog posts for the well-remembered events were due at the end of each three-week cycle and could cover anything in that time frame. We modeled the blog posts assignment after Carter's [25,26] Well-Remembered Framework. Preservice teachers were asked to respond to the following prompts:

Describe each of the events in detail (one is fine, but more are welcomed). Then, answer the following questions in connection to each event:

- Why do you think this event stands out to you?
- What were you thinking when this event occurred and how did it make you feel?
- If you were to interpret this event to an outsider, what do you think would be important to understand about the event?
- What, if any, changes might you make to your approach to teaching as a result of this events? Why would you make these changes, or why do you feel no changes are needed?
- What does this event teach you about teaching & learning?
- Could lesson study help you better understand this event? If so, in what ways?

In this assignment, preservice teachers posted, on their public-facing blogs, their reflections on the one specific event that stuck out to them. Students had the option of writing about experiences from their own teaching, or from things they observed when their peers or their mentor teachers were teaching. They were also encouraged to observe during non-instruction times; however, the digital space created barriers to that.

3.4. Data Analysis

To better understand the well-remembered events, we conducted a content analysis [28] of the blog posts. The first stage of this was for each of us to independently read and reread the blog posts on their well-remembered events. We created a workbook that had a page for each of the students and logged an abbreviated version of the event that they were describing, as well as the event focus. Our first round of coding focused on the nature of the events in order to answer the first research question: What events do the preservice teachers identify as memorable in their interactions with students, peers, and teachers during a clinical experience that uses the Lesson Study model? After our first round of coding, we met to discuss the larger areas of focus we were seeing emerge in the data and settled upon the broad categories of students, content and instructional strategies, preservice teacher, lesson study, mentor teacher, and environment. We agree with Saldana that coding can be collaborative [28] and used our conversations to establish intercoder reliability.

After this first layer of analysis, we went through the codes again, reading and rereading to see what themes emerged that could help us to answer our second questions: How does the lesson study model influence preservice teachers' thinking about teaching? Together, we discussed how these codes were presented in the data. We considered their overall conception of teaching when we looked at each of these categories. For example, when they were reflecting upon working with students, what stood out to them about their students? We returned to the data with these questions in mind and were able to collapse the original six categories into four themes: (a) Working with Young Adolescent Learners, (b) Recognizing the Imperfections of Teaching, (c) Valuing Student-Centered Mentors and (d) Taking Risks with Content and Pedagogy. While the environment was part of the initial codes, the content of these events was centered around the online environment of the clinic, which was not part of this study. Table 2 contains a selection of well-remembered events and how they fit with the final themes.

Table 2. Selection of well-remembered events by theme.

| Theme | Example of Well-Remembered Event Excerpted from the Well-Remembered Event Blogs |
|---|--|
| Working with YA Learners | <ul style="list-style-type: none"> • Critical conversation between student and mentor teacher • The students had mentioned that they assigned themselves different jobs within creating the detournement project. • Student stepping in to help a confused student when the teacher was struggling to get through to the student. • Students making connections to interests outside of school. • Teaching using Padlet: Students were funny, clever, and insightful |
| Recognizing the Imperfections of Teaching | <ul style="list-style-type: none"> • Noticing students were bored. • Teaching my first lesson (didn't go great). • A lesson that did not go well. • First moment of experienced frustration. –slight behavior issue and not knowing what to do. • Noticing a complete shift in the students' behavior after making changes to the lesson midday. |
| Valuing Student Centered Mentors | <ul style="list-style-type: none"> • The intentionality behind how my mentor teacher changes their approach to teaching different class periods based on the students. • Mentor teacher having friendly repore' with students in class. • Pep Talk from mentor teacher. • Students feeling comfortable to confide in mentor teacher. • Student interaction with teacher. Could have been contentious . . . the student was being non-compliant, but the mentor teacher just rolled with it. • Class examples are relevant to students and the ways they use Math in real life. • Teacher skipped a plan quiz and did a guided quiz based on prior assessment. |

Table 2. Cont.

| Theme | Example of Well-Remembered Event Excerpted from the Well-Remembered Event Blogs |
|--|---|
| Taking Risks with Content and Pedagogy | <ul style="list-style-type: none"> • Planning a jigsaw. • Six-word memoirs in middle school (I did these in college). • Low participation on a lesson that I was proud of when planning. • Engaging students in a conversation around the podcast “Caught”. “what perspectives or point of view do you feel may be missing or you would like to hear” and “why do you think they created this podcast”. • Discussion on the presidential debate. • During this small group time students were to share out and discuss their ideas for creating their own “meme”/visual literacy medium to portray a message they are passionate about relating to their media study unit. Some topics included media biases, social justice events, and racial issues. |

4. Findings

4.1. Working with Young Adolescent Learners

A majority of the events that the teacher candidates identified pertained to the students in the classroom. This clinical is one of the first official times in the program in which the students spent a significant part of their day with a classroom of young adolescents. One thing that stands out in their observations about students are the ways they were surprised or impressed by students. In coding the data, we found that 45% of the comments coded as being related to students used the word surprised, or could be characterized as the preservice teacher being surprised. In addition, preservice teachers used words like “amazed”, “impressed”, “excited”, “encouraged”, and “insightful” when referring to conversations and observations of students in their middle grade classroom.

Carrie said, “I was very impressed and excited by all the conversations I was having with the eighth graders”. Similarly, Jenny stated “I continue to be impressed with the number of students who come into class ready to have these discussions”. While on the surface, this observation seems very simplistic, it represents a sentiment that was threaded throughout the data: on the whole, these future teachers were not expecting the intellectual capabilities of middle school students. This was underscored by Stacie, who commented on the insights students shared when analyzing media, recognizing that students “brought up ideas I would have never even related to the photos, but they were great”.

As middle-level teacher educators, we recognize that young adolescents deserve educators that respect and value young adolescents [29]. Yet, teacher candidates often observe lessons that leave very little room for young adolescents to stretch and share their thinking. We know that “middle grades educators demonstrate that they value students by listening intensively to their students’ words, observing their actions, and being attuned to their silences in order to actively respond to their needs” [29]. For this reason, one aspect of the lesson study experience that is vital to its success is the selection of the mentor teacher. Through this experience, teacher candidates were partnered with experienced teachers who made space for students to be human, providing preservice teachers with opportunities to discover more about young adolescents. One student, Stacie, really captured the sentiment saying,

“It sounds crazy, but I feel like it often happens where teachers are so focused on improving students’ knowledge that they forget they are actual people going through important experiences inside and outside of the classroom. This taught me to put my students first and never wave them off when they are sharing something important with me”.

These examples suggest that preservice teachers participating in lesson study were able to move beyond the lesson plan and the content of the course and start to understand the young adolescents they were working with.

4.2. *Recognizing the Imperfections of Teaching*

Preservice teachers reflected heavily on their own experiences and shifting understandings in this process. Forty-four percent of the events were on “teaching my first lesson”. These reflections ran the spectrum of describing their very real nerves but working through them, to criticizing and hyperfocusing on perceived mistakes. Carrie captured the shift to becoming more comfortable in front of the classroom saying, “However, what I noticed when I started to teach was that a lot of the things, I felt worried about were not as scary or detrimental as I thought they would be”. Their reflections often captured the misconception that teachers are the sole owners of knowledge and that their delivery of content must be spot-on and mistake-free. When they were finally able to work with students, they realized that these unrealistic expectations often set them up for disappointment and cause them to hyperfocus on the content of the lesson rather than their interactions with their students. Elizabeth noted that there was a sense of imposter syndrome that caused her to question whether or not she should be teaching students. She followed this observation by noting, “It felt so right to finally be a teacher, but it also felt weird because I am still learning so much and have so much room to make mistakes. I think what I need(ed) to realize is that it is okay to make mistakes as long as you do not let them control your life”.

In other cases, teacher candidates viewed these first experiences as unsuccessful because of issues they felt they could have better planned for. Joshua was really fixated on some technical issues that impacted the flow of his lesson while he was teaching virtually to students that were together in a physical classroom. He described that first experience as “chaos”, but in the same post, he talked about how the support of his group helped him to regroup and improve the plan moving forward. Steve shared similar reservations about his teaching experience because of a technical malfunction. Rather than recognizing that teachers are often forced to respond to the unexpected, he internalized the experience and expressed shame around his efforts.

“I completely butchered the beginning of it by messing up very controllable things. I was and still am very embarrassed about this, as I basically had to be walked through how to solve the problem in the middle of class. I was upset that I had fallen off pace with my lesson plan as well and spent the next several minutes thinking of ways to make that time up and get through everything in the lesson”.

He also noted the support of his group and the mentor teacher in helping him to re-engage the students. These examples, as well as other examples shared by preservice teachers, further underscore a limitation in traditional early clinical experiences where students who teach in isolation do not have the opportunity to watch other novice teachers make mistakes or come to realizations that are common as you begin the profession—or are common even after you have been teaching for more than 30 years. Perhaps Joshua best captured the power of recognizing this, alongside his peers, when he stated, “We have this fantasy of going into a classroom and we almost write scripts for how the lesson is going to turn out in our heads. But in the end teaching can be messy, difficult, and not the way we intend it to go”. Through lesson study, this cohort of soon-to-be teachers were able to wrestle with this realization and emerge understanding that they do have the capacity to be teachers and to respond to unexpected moments. In fact, this is part of the fabric of the profession.

4.3. *Valuing Student-Centered Mentors*

Lesson study afforded us the opportunity to be selective in the mentor teachers that we partnered with. Large numbers of teacher candidates often force teacher educators to place preservice teachers with mentors who do not always exhibit the qualities, characteristics, or philosophies that align with current research or the program’s values [14]. By using the small-group model, rather than needing 19 different clinical placements, we were able to partner with just three teachers whose teaching had been characterized by us or by their administration as risk-takers and who were very deeply student-centered.

This translated in preservice teachers' observations, as they recognized the importance of adaptable, student-centered teaching and supportive learning environments.

Adaptability is an important characteristic of the lesson study model. The very structure requires teachers to reflect upon what worked and what did not work for students and adjust before teaching the next lesson. For this reason, selecting mentor teachers who have reflective and flexible disposition is a vital key to the success of the experience. Our teacher candidates noticed this reflection as they observed their teachers while working with students: "I think I always assumed that my teachers in middle school approached teaching each class the exact same way, but through these two experiences, I was able to see how many different tactics can be used to make small adjustments to lessons depending on the needs of the class". Watching their teachers make these adjustments based upon the needs of their students and particular class characteristics and needs legitimized the lesson study approach for teacher candidates: we were not making up an approach to make them do more work. Rather, we were practicing a disposition that student-centered teachers regularly exercised.

Seeing the impact student-centered teaching had on student success and recognizing that this is not a mindset that all teachers approach teaching from was frustrating to some of our preservice teachers, with Angie stating:

"I'm glad that there are teachers like Mr. Tripp that center students in their learning environment but I'm also frustrated that student centered learning spaces are not a required approach. Teachers can choose to not center students or not actively work to center students and that isn't necessarily productive".

Watching student-centered teachers in action was just one of the benefits of working with their mentors. Teacher candidates noted that student-centered extended beyond young adolescents to themselves. Their mentors recognized the preservice teachers were also learners, so their mentors took the time to extend their student-centered approaches to the college students. Even with multiple teacher candidates in the placement at the same time, the well-remembered events suggest that preservice teachers felt well-supported and mentored. In each group, at least one pre-service teacher (if not more) noted the specific pep talks, feedback, or debriefing that they or their group received from their mentor teacher and the ways that these impacted their understanding of teaching and learning.

4.4. Taking Risks with Content and Pedagogy

Even veteran teachers struggle to take risks with a new pedagogy or complex content, and yet we know that these very risks move education forward and ensure that we are designing learning experiences that are inclusive for all students. For this reason, it was also important to choose mentors who were willing to take risks themselves and open to clinical students taking risks, and potentially failing in their attempts at lesson design and implementation. In this study, teacher candidates benefited from working with mentors who encouraged them to try new things, even if those new things were only new to the preservice teachers. For example, while it is a long-accepted practice, jigsaw discussions were a new instructional approach to the social studies group. Because they were unfamiliar with the approach, the teacher candidates were hesitant to use a jigsaw when they designed their lesson. Yet, because they were supported by their mentor when trying it, they discovered a successful way to structure discussions, with one student observing that "overall, this lesson was incredibly impactful because the students participated so much more than expected". She shared that, until they were actually implementing the strategy and observing it, she felt nervous that students would not understand. Yes, lesson study, paired with a supportive mentor teacher, provided a safe space for these apprenticing teachers to try strategies they have engaged in themselves, but not as or with young adolescent learners. We saw this again when several of the teacher candidates discussed the use of a six-word memoir, which they had learned in their pedagogy courses but felt nervous about trying with young adolescents.

While the teacher candidates often found success in their risk-taking, they also experienced lessons that crashed and burned. This was an important lesson for them, as well, because it demonstrated that teaching is a series of experimentations as we constantly prototype and try new ways to meet the needs of all our learners. By failing in a safe environment, the preservice teachers learned not to be afraid of failure. One example of such failures revolved around utilizing games as an instructional strategy. Two groups discovered this when they attempted game-based approaches through Kahoot and Desmos. Although they were excited by their ideas, their students were not as engaged as they thought they would be, and the lesson flopped. Reflecting on this experience, Kate said, "I honestly thought the students were going to love it and I was so excited to present this to them. However, I was quickly discouraged when one student, per class period, played the game". These disappointments allowed candidates to reflect on why the lesson was not effective and to think further about why we design learning experiences the way we do.

Teacher candidates also noted that there were times that risky content also needed to be addressed. They expressed this when they shared their surprise at the depth of the academic conversations taking place in class. They noted that young adolescents had the ability to talk meaningfully about content surrounding politics, injustice, and inequality in ways that were not only just surface-level and checked boxes around diversity, but required middle schoolers to wrestle with real issues around equity, inclusion, and belonging.

Their understanding that young adolescent students could engage in these types of meaningful conversations led them to create lesson plans that centered these issues. While our colleagues questioned us regarding whether students should be taking on these topics with new, inexperienced teachers, we encouraged it because we felt that having students do so now helps them to build their dispositions and gives them the space for meaningful reflection. We felt positive that the mentor teachers in their room could navigate any sticky situations, and that the successful implementation of these topics would serve as a point of pride for students, on which they would continue to build. If we tell preservice teachers to not tackle certain topics while they are new to the field, how do we expect them to eventually take these things on? The well-remembered events support our original inclination that this lesson study environment provided the right amount of scaffolds and models to allow students to experience teaching topics that some would characterize as risky.

5. Discussion

Our first research question began with identifying preservice teachers' memorable events because, by understanding the experiences that stand out to future teachers, we can better design clinical experiences that are responsive to their developmental needs as future middle-level teachers. As teacher educators, while student-centered instruction may seem to be an obvious stance, the reflections shared by this group of teacher candidates signal to us that there needs to be an emphasis on designing learning experiences around students rather than content. While we know that it is important that middle-level teachers have complex understandings of content, they should approach lessons with students in mind first, not necessarily the content [29]. Plenty of research exists suggesting that learner-centered instruction is preferable for young adolescent learners and leads to improved outcomes in academic and social emotional standards [30–34]. It is not as clear that teacher candidates are in clinical placements where they can practice these pedagogies or even observe them in action. Requirements, such as state performance tests, sometimes keep teacher candidates from utilizing these more responsive pedagogies in favor of learning experiences that can be captured and video-recorded in one take [3].

Further, while we often spend time on coursework focusing on young adolescent development, we see that there needs to be more tangible connections between development and, indeed, young adolescents' intellectual, social, and moral capabilities, when engaging in pedagogical design. This lines up with the work of Daniels [35], a qualitative study on teachers' efficacy when teaching middle school, which concluded that enough is not

being done in teacher preparation programs to be sure that teacher candidates are making connections with young adolescent development when planning. According to Daniels, acquiring this knowledge enhances teachers' self-assurance in effectively addressing classroom challenges, consequently bolstering their overall sense of efficacy [35]. It should also be noted that the 2022 AMLE Middle Level Teacher Preparation standards require that teacher candidates not only have a "comprehensive knowledge of young adolescent development" but also create "responsive and affirming environments", and are helpful in "planning and implementing curriculum" [36].

Teacher candidates' reflections also signal the importance of selecting mentor teachers who embody creative risk-taking and support teacher candidates as they come to the realization that there is no "ideal" classroom or practice. Rather, teaching requires flexibility of mind and a resiliency of spirit, so selecting mentors who not only recognize these traits, but also have the ability to support preservice teachers as they come to these realizations is essential. Research shows us that it can be difficult to find quality mentor placements [10–12]. However, scholars are clear that the mentor teacher plays a pivotal role in the teacher candidates' understanding of teaching and learning [3,15].

As we reflect upon the lessons the teacher candidates learned, we are also reminded of our colleague's concerns regarding the ability to assess individual contributions to a lesson plan. While we understand this concern, we are mindful of the fact that one clinical cannot achieve everything, and lesson study provided teacher candidates with a foundation to build individual skills as they progressed onto later clinicals and student teaching. Through lesson study, our preservice teachers were able to recognize and reflect upon impactful instructional strategies because the very structure of the lesson study approach required them to systematically observe their lesson designs and make adjustments according to their students' responses. They were able to take risks they might not have otherwise taken because they had a supportive group made up of peers, mentors, and university faculty. And they were able to engage in thoughtful discussions around their curricular choices, examining why certain approaches were effective and why others failed. All these lessons position teacher candidates with the confidence and knowledge needed to take the next steps on their own.

5.1. Implications

This study supports our use of lesson study as one way to re-imagine our clinical experience, and provides evidence that teacher candidates benefit when they are able to see classroom teachers who innovate and design learning experiences and classroom cultures that center young adolescent learners. The fact that lesson study cuts the number of mentor teachers that we need each semester increases the sustainability of the practice, and provides the opportunity to provide support to practicing teachers, as described by Zeichner, through an on-going, mutually beneficial relationship [14]. Lesson study also met the needs for reflection and collaboration that scholars in the field have noted are sometimes missing from early clinical experiences [6].

5.2. Limitations of This Study

This study is limited as it only captured data from one semester with just 19 students. The study is further edited by our perspectives and our interpretations of how to use the lesson study model. As instructors, we were novices to the practice, so we were learning alongside the teacher candidates. At the first iteration of the new approach, there were things we discovered along the way that we would change in future iterations. For example, we felt that the group sizes were a bit large and allowed for teacher candidates to sometimes not participate as fully if their group mates were particularly eager. Additionally, this study took place during an unprecedented global pandemic that forced our preservice teachers into the digital space.

5.3. Considerations for Future Research

Lesson study has been a part of our middle-level teacher preparation program of study since 2020. A future study looking at the practice after several iterations of implementation would help us to take note of how sustainable the practice is and how the practice has changed since its early iterations. Now that clinical experiences are in-person, it would be interesting to explore the well-remembered events of teacher candidates again and see how they changed or stayed the same to those candidates that were in the digital space.

Lesson study, as a model for clinical experience, should also be studied outside of our setting, and particularly for middle-level teacher candidates. While the practice has been studied inside certain fields (for example in mathematics [37]) and for in-service teachers [38,39], limited research exists on its role in middle-level teachers' clinical experiences.

6. Conclusions

Bishop and Harrison highlight the importance of clinical experiences in preparing middle-level teachers, emphasizing the need for these experiences to facilitate the integration of theory and practice, support the ongoing growth of practicing teachers, and enhancing the learning experiences of middle grade students [29] (p. 36). By employing a lesson study approach to transform our early clinical experience, we believe that we are progressing towards experiences that prioritize these desired outcomes. An analysis of teacher candidates' reflections on their clinical experience utilizing a lesson study model revealed that significant attention is being paid to key themes, including working with young adolescent learners, acknowledging the challenges inherent in teaching, valuing mentors who adopt a student-centered approach, and embracing risks in content and pedagogy.

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