Examining Pre-service Teachers’ Learning Experiences Utilizing Different Modes of Case Studies and their Perceived Self-Efficacy in Trauma Informed Instruction

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Examining Pre-service Teachers’ Learning Experiences Utilizing Different Modes of Case Studies and their Perceived Self-Efficacy in Trauma Informed Instruction

A Dissertation
Presented to the Faculty of the
Department of Educational Leadership and Higher Education Administration
West Chester University
West Chester, Pennsylvania

In Partial Fulfillment of the Requirements for the Degree of
Doctor of Education in Policy, Planning, and Administration

By

Michelle Fisher
May 2024

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Dedication

I dedicate this dissertation to my family, friends, and colleagues who have all inspired and supported me in countless ways throughout this journey. To my husband, Mike, whose support and encouragement in me gave me the confidence to apply to graduate school over 20 years ago while I was a bit aimless, a decision that led to a career in instructional design that I have loved ever since and for the motivation to keep learning. Thank you for keeping our chaotic busy lives moving forward for the past three years and for inspiring me to take on an EdD program. To my amazing children Noah, Paige, and Soren, thank you for your encouragement and for understanding all the times I had to read or write for hours. Thank you for being my study buddies on weekends when I had so much to do and just needed some company to keep moving. To my mom for her support and encouragement and for countless rides for my kids while I was busy. To my dad who was one of my biggest cheerleaders even when I told him he was too loud. I miss you and know you would be so proud. To all my colleagues, thank you for your encouragement and support. Thank you for checking in on my progress over the past three years and reminding me that I can do this. To my running friends, thank you for listening to me ramble about my classes and my dissertation progress while I ran off all the stress before most people wake up in the morning.
Acknowledgements

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Abstract

This study examined how different modes of case-based learning activities inform the learning experiences of undergraduate pre-service teacher candidates in an introductory special education course. During the COVID-19 pandemic, I assisted university faculty as they rapidly transitioned from teaching face-to-face courses to teaching online courses. One of the most difficult things to transition to an online format was classroom observations/practicum experiences. While there is an increasing amount of classroom video content available, it is difficult to find video observation content related to hard-to-reach populations (e.g., low-incidence disabilities, or students who have experienced trauma). The data from this study included teacher self-efficacy scale survey data at the start of the study and after each of the four case-based learning activities, in-class observations, small group discussion recordings, and one-on-one interviews. The analysis of the results showed that participants: (1) preferred the animated cases over the text-based cases, (2) had longer and more in-depth group discussions when they discussed the animated cases, and (3) expressed higher self-efficacy with case-based learning.
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Chapter 1: Introduction

Many teacher preparation programs follow a similar curricular path that includes a variety of methods courses, content area courses, classroom observations, early field experiences, more methods courses, and finish up with a student teaching experience at the end. As a preservice teacher, I took several methods courses and content area courses in Earth and Space Science, observed experienced teachers in multiple classrooms, taught science lessons in a few of my field experiences prior to student teaching, and taught lessons to my professors and peers. Outside of my teacher preparation program, I worked to immerse myself with the age group I would be teaching in the future. I tutored middle and high school students in math and science, and I spent my summers as a day camp counselor, gymnastics coach, and swim instructor. Based on my course work and my outside experiences, I entered student teaching feeling excited and nervous but also confident and ready. Unfortunately, I quickly learned during student teaching, how much of teaching I was not prepared to manage and felt frustrated and ineffective.

I was placed in an eighth-grade general science classroom with a teacher in her second year of teaching who favored traditional lecture-style teaching. There were five class periods each day of general science with approximately 28 students in each class. Eleven students in the seventh period class were classified as “learning support students,” and these students had a wide range of significant academic struggles that I was not prepared to meet in a lab-based science class. To make things more complicated, the mentor teacher in the classroom appeared unsure of how to include those students and deferred to the special education teacher who accompanied the students. The special education teacher moved from student to student to try to get each student through science lessons and labs that were designed for “the average” student. I felt confident in
my ability to teach during four out of five periods each day, but during seventh period, I felt unprepared, ineffective, and frustrated both for myself and for the students. During three and a half years of teacher preparation, I had never observed, designed a lesson for, or practiced teaching students with significant learning differences. Despite positive feedback from my mentor teacher and student teaching supervisor, my experiences in seventh period left me questioning my ability to teach and ultimately led me away from the teaching profession.

In this chapter, I will present an overview of case-based instruction to frame my study on how different modes of case-based learning activities inform the learning experiences of undergraduate preservice teacher candidates in an introductory special education course. This explanatory sequential mixed methods study incorporated quantitative data from the self-efficacy scale and qualitative data from the case study that included in person observation of preservice teachers engaging in multiple modes of case-based learning and interview data.

**The Complicated Nature of Early Field Experiences**

Preservice teachers often engage in a variety of early field experiences in the semesters before student teaching. Some of these experiences are purely observational while others involve assisting in the classroom. Some early field experiences may be directly related to the teacher preparation courses they are taking while others simply provide a general high-level exposure to the K-12 classroom environment. There can be difficulties involved in planning early field experiences and student teaching experiences (Billingsley and Scheuermann, 2014). Beyond the logistical issues, in my work as an instructional designer, I have observed that there is a wide variety in what pre-service teachers will encounter in their early field experiences. Darling-Hammond (2010) noted that one of the challenges with these placements is the disconnect between teacher preparation programs and K-12 institutions. Pre-service teachers may observe
an exemplary teacher, or they may unfortunately observe a weak teacher. Darling-Hammond (2010) pointed out that these inconsistencies make it difficult to provide high-quality teacher preparation. Billingsley and Scheuermann (2014) noted that while a face-to-face field experience is the most ideal option for preservice teachers, there are problems in finding placements that will expose every student to the wide variety of diverse learning populations they will encounter as future teachers. They identified five obstacles in finding high-quality appropriate placements for preservice teachers experiences: a limited number of locations, the number of teachers willing to take on additional work, logistical issues involved in special education teaching loads, logistical issues in ensuring preservice teachers experience enough exposure to different types of support needs they may encounter as future special education teachers, and the ability to practice a wide range of skills that may not be available in a physical field experience.

**Alternatives to In-Person Field Experiences**

The COVID-19 pandemic brought to light the need for alternatives to in-person field experiences. Darling-Hammond et al. (2020) noted that strong clinical experiences are essential components of high-quality teacher preparation programs. There are alternatives to in-person field experiences. Before and during the COVID-19 pandemic, I included the following elements in early field courses as alternatives to in person early observation and field experiences: (a) reflections on classroom observation videos (Gold et al., 2021), (b) role play with peers either in person or in Zoom (Juarez, 2019), lesson delivery to peers (Darling-Hammond, 2005), (c) animated classroom case study (Aaron & Herbst, 2015), or (d) a written case study (Florez, 2011).

Darling-Hammond et al. (2020) shared several exemplars from the COVID-19 pandemic of alternatives to in-person field experiences. In one example, the University of Chicago Urban
Teacher Education Program (UTEP) worked with alumni to create a collaborative learning network for preservice teachers while K-12 schools were shut down. In another example, Darling-Hammond et al. (2020) highlighted Long Beach Unified School District’s program that allowed preservice and in service teachers the ability to watch a highly skilled experience teacher deliver a lesson in real time. Teacher preparation programs seeking alternatives or supplements to in-person field experience may consider providing students access to a live streamed or recorded class, unfortunately limited content is available at this time. In the absence of a relevant video example, the use of real-world classroom case-studies may provide learners access to content and experiences they may not otherwise have access to until they graduate and are working in the field.

**Why Case-Based Instruction?**

Case-based learning involves the use of real-world or realistic fictional situations to allow students to apply content and theory to practice situations (Karin, 2016). Case-based learning can involve the use of written cases, video cases, or animated cases. Given the gap in existing video content, case-based instruction can help provide additional opportunities for pre-service teachers to apply what they are learning to classroom situations. Law schools, medical schools, and schools of education have used case-based instruction for over a century to provide real-world context to content and allow students to demonstrate and apply class content before they practice their chosen profession (Arrastia-Chisholm et al., 2021). In their qualitative study on the use of cased-based learning in teacher preparation, Gravett et al. (2017) identified case-based instruction as a pedagogical approach to bring theory-based knowledge in education closer to practice-based knowledge of teaching education for preservice teachers.
Case-based instruction may have a positive impact on the learning environment. Yadav and Koehler (2007) highlighted the benefit of case-based learning as an active learning approach in their mixed-methods study that looked at the impact of video-based teaching cases on students' beliefs of “good teaching.” The researchers used case-based learning to show that preservice teachers’ epistemological beliefs had a direct impact on how they interpreted classroom cases, that information allowed teacher preparation faculty to engage in conversations and reflections with preservice teachers on their views of good teaching (Yadav & Koehler, 2001). In other studies, Gunn and Williams (2015) and Cho et al. (2015) found that case-based learning allowed students to develop critical inquiry and analytical skills that they will need as future teachers.

**Theory Practice Gap**

Even if preservice teachers are placed in an ideal field placement, there may be a gap between students’ content knowledge and the application of their knowledge in a real-world classroom. Heemsoth et al. (2022) identified the difficulty of preservice teachers in applying best practice methodology in their lessons as a gap between theory and practice as the rationale for the use of case-based instruction. Strangeways et al. (2016) pointed to the gap between content and theoretical knowledge and classroom practice and the application of that knowledge as a significant problem that case-based learning has the potential to help solve. Students in their study expressed frustration with the disconnect between the child development theories they learned about and the best practices they were observing in the cases. In their study on the use of digital case studies in a teacher education course, Shin et al. (2019) uncovered a gap in students’ ability to recognize the application of knowledge of classroom management methods in the digital cases. Researchers have documented gaps in preservice teachers’ ability to apply theory to
practice in their teaching practices in a classroom setting (Anderson et al., 2005; Baier et al., 2021; Çimen, 2021; Herbst et al., Hover, 2021; Kramer et al., 2020; Olsen et al., 2016; Takala & Wickman, 2019). To try to address the theory-practice gap, Thompson et al. (2019) conducted a mixed-methods study to investigate the impact of scenario-based simulations in an introductory level teacher education course on preservice teachers’ abilities to respond to difficult parent-teacher conversations in a composed manner. Preservice teachers completed digital simulations that consisted of text and video-based scenarios and an opportunity to respond via audio recording to difficult parent teacher conversations three times over the course of the semester. Their data showed that the multimedia case-based simulations enabled students to remain calm in the face of a confrontation and to be able to respond to challenges with the support of their classroom management tools and strategies.

Case-based instruction can help provide access to pre-service teachers when field placements locations are closed. Billingsley and Scheuermann (2014) noted that in-person field placement is the best option, but as a result of the COVID-19 pandemic, field students all over the country were suddenly displaced from their in-person field experiences and shifted to virtual placements which are similar to case-based instruction. After the shift to virtual learning during the COVID-19 pandemic lockdowns, researchers demonstrated that virtual field experiences can provide an equal academic benefit to preservice teachers (Vu & Fisher, 2021) as in-person early field experiences. Vu and Fisher (2021) conducted research on the impact of virtual field experiences on preservice teachers as a result of the COVID-19 pandemic and found no statistically significant difference between the academic experiences of students who had completed their field experiences in person (pre-COVID) and those that were forced in an emergency situation to complete their field component virtually. Vu and Fisher (2021) noted that
students who participated in a virtual field experience performed statistically similar on the course capstone assessment for early field experiences to peers who had completed an in-person field experience. As a result of a current lack of and depth of available video content, the use of authentic animated classroom scenarios may provide learners access to content and experiences they may not otherwise have access to until they graduate and are working in the field.

**Video and Animated Cases**

Given the logistical constraints involved in providing students with the best field experiences, many teacher preparation programs add video observations to their coursework (Hartshorne et al., 2020). Much of the current research on case-based instruction for preservice teachers is focused on the use of video-based cases (Fitzgerald et al., 2009; Gold et al., 2021; Heemsoth et al., 2022; Kurz & Kokic, 2012; Saltan, 2017; Shin et al., 2019; Yadav et al., 2011). Unfortunately, there is currently limited research on the use of animated case studies, but researchers in those studies have seen positive results (Aaron & Herbst, 2015; Herbst & Kosko, 2014; Moreno & Ortegano-Laynem 2008). The relative lack of research on the use of animated case-based instruction in teacher preparation programs (de Araujo et al., 2015) is likely a result of the cost and time required to develop high-quality animation. Creating case-based animation involves writing or modifying an existing text-based case, ensuring the case is authentic through content expert review, developing a storyboard to lay out the visuals for each scene, selecting actors, developing graphics for each scene, recording the script, animating the scenes, adding the actors’ audio in (often one line at a time), then testing and revising. There are currently no industry standard guidelines for the development of instructional animation. In one study, Smith et al. (2012) suggested that at the lowest end, animation development costs approximately $5000 and noted it took 500 hours to create an 86-minute animation. Based on my professional
experience, I schedule three to four months to design and develop a ten-minute custom animation.

Despite the limited research in this field, the use of animated case-based instruction could solve a problem in some fields of teacher education due to a lack of contextually appropriate video-based cases or exemplars, or opportunities for in-person placements for students (e.g., hard to reach populations). Herbst and Kosko (2014) discussed the ability to control the content and scenario through written and animated presentations as a rationale for exploring the differences between video and animated classroom scenarios. Their data showed no significant difference between the number of comments made by pre-service teachers when viewing video scenarios compared to animated scenarios and an increase in the frequency of pre-service teachers’ contextually relevant comments while watching animated classroom scenarios compared to those made while watching recorded videos. The authors noted a trend towards more polite professional comments when viewing videos compared to comments made while watching animations. They suggested that pre-service teachers may feel uncomfortable criticizing professional teachers but not animated characters (Herbst & Kosko, 2014).

**Self-Efficacy Through Practice**

In addition to closing pre-service teachers’ theory-practice gap in the application of content knowledge, providing additional observation and practice activities through animated classroom scenarios may help increase self-efficacy. Bandura (1997) described self-efficacy as “beliefs in one’s capacity to organize and execute the courses of action required to produce given attainments” (p. 3). Bandura’s work showed that perceived self-efficacy can not only have an impact on the choice of activities but in the effort put forth in those activities toward the success of the task (Bandura 1977). According to VanLone et al. (2022), preservice teachers gain self-
efficacy through hands-on practice and novice teachers with higher self-efficacy are more likely to stay in the teaching profession which has a positive impact on students.

**Problem Statement**

Researchers have documented a gap between pre-service teachers’ abilities to apply the content and theory they learn in their teacher preparation courses to their practice in the classroom (Baier et al., 2021; Billingsley & Scheuermann, 2014; Heemsorth et al., 2022; Kale & Whitehouse, 2012; Saltan, 2017; Shin et al., 2019; Strangeways et al., 2016; Strangeways et al., 2016). While the best practice for preparing pre-service teachers is in-person field experiences (Darling-Hammond et al., 2020), it is not always feasible to provide an in-person field placement (Billingsley & Scheuermann, 2014). Case-based learning may be a beneficial addition to in-person field experiences or as a replacement for in-person field experiences due to lack of access (e.g., to the field site or to a specific student population). This study will examine how different modes of case-based learning activities inform the learning experiences of undergraduate preservice teacher candidates in an introductory special education course.

**Purpose of Study**

This research investigated the application of animated classroom cases in a special education course for trauma-informed instruction with undergraduate preservice teachers. Preservice teachers who will be working with special education students or students who have experienced trauma normally do not have in-person access to the large variety of diverse learners and their needs to gain direct experience with many of the populations they will encounter as future teachers.
Significance of Study

Scripting, designing, and developing animations is time consuming and can be costly. This study aimed to provide helpful data to the instructional design process at a mid-sized, public state university in the mid-Atlantic region in a teacher preparation program. Previous researchers have found that animated cases helped students critically analyze lessons (Herbst & Kosko, 2014), and allow instructors to control the content of an observation (Aaron & Herbst, 2015). The results of this study can inform design decisions prior to course development so that instructional design teams and faculty can focus their time and energy on course design and development elements that have the biggest benefit to learners. This study aimed to add to the existing limited research on the use of animated cases in educational settings.

Research Questions

This study was guided by the following research question:

*How do different modes of case-based learning activities inform the learning experiences of undergraduate preservice teacher candidates in an introductory special education course?*

To answer this question, I addressed the following sub-questions:

a. How do undergraduate preservice teachers compare the experience of learning through animated or written case studies? (Qualitative)

b. In what ways do animated and written case-based learning activities inform preservice teachers’ perceived self-efficacy related to trauma-informed instruction? (Quantitative and Qualitative)
Rationale for Methods

The purpose of this study was to gain insight into the learning experiences of undergraduate preservice teachers with different modes of case-based learning. I used an intrinsic case study design. This approach allowed me to examine differences in pre-service teachers’ self-efficacy through the quantitative data and use those results to gather qualitative data through observations and interview which will help paint a more holistic picture of the pre-service teachers’ learning experiences.

This study was implemented in two phases. The first phase included quantitative data that came from the administration of a self-efficacy scale and qualitative data from in-class observations and small group discussion recordings. I analyzed the data from the first phase of this case study to create questions for the semi-structured interviews in the second phase of the case study.

Positionality

My research examined the instructional use of animated teaching cases and the relationship between the use of these cases and undergraduate pre-service teachers’ self-efficacy. I also examined the learning experience of the preservice teachers who interact with the animated teaching cases. I conducted this study at an institution where I work as an instructional designer who is tasked with working with faculty in an educator preparation. I am part of a team that designed and developed the animated case studies that I used in my research, and I have worked closely with the faculty member who used these animations in multiple courses. I am also the co-author of a grant that funded the development of the most recent animated case studies. As both an instructional designer and a learner, I prefer story-based, case-based, and scenario-based learning activities as I feel they are the best way to add context to content and connect learners to
the content in a way textbooks and traditional lectures cannot. As a designer and developer who has spent hours scripting and developing animations, I aimed to gain insight into this use of animation to help guide my future work.

At the most basic level, the instructional design process many designers start with is the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). In instructional design, the evaluation stage refers to evaluating the success of the instructional design (not evaluating learners on how well they learned the content). The evaluation stage is often skipped for time or budget reasons. This research allowed me to evaluate the use of animated teaching cases in teacher preparation programs.

Limitations

This study has limited generalizability. I conducted this study over the course of one semester with approximately 60 students enrolled in two sections of a single faculty member’s Trauma-Informed Instruction course. I used cases that were focused on students who receive special education services and may have experienced trauma. The results are not generalizable to other cases and there is the possibility of the internal threat of history if students have experienced scenario-based learning in other courses or have been exposed to content on trauma-informed instruction in prior courses or in a prior field experience. I collected data that speaks to this in my survey. Since this study was conducted in an undergraduate course, participant attrition is also a potential threat to internal validity. Lastly, the selection of participants being limited to approximately 60 students enrolled in a specific course may have created a threat to internal validity.
Definition of Terms

- **Active Discussion:** A discussion that includes a collaborative exchange of ideas among participants.

- **Case:** Case, teaching case, scenario, classroom scenario, case-study, case-based, and scenario-based. These terms are used to describe descriptive narrative content that describes an educational situation. For the purpose of this study, the term case is used to describe a classroom situation related to a teacher, student, or group of students. Case, scenario, case-study, case-based, and scenario-based are all terms used in the existing literature to describe teaching cases.

- **Self-Efficacy:** Bandura (1977) described self-efficacy as “beliefs in one’s capacity to organize and execute the courses of action required to produce given attaiements” (p. 3). Bandura’s work in self-efficacy showed that an individual’s perceived self-efficacy may not only have an impact on the choice of activities they select but also in the effort the same individual puts forth in those activities toward the activity or task (Bandura 1977). Bandura (1977) identified four key experiences that contribute to an individual building self-efficacy: observational or vicarious experiences, mastery experiences, receiving social or peer confidence in an individual’s ability (verbal persuasion), or having positive or energizing emotional or physical reactions to an experience.

- **Teacher Preparation Program:** Undergraduate or graduate program designed to prepare students to become licensed teachers in a PK-12 classroom environment.

- **Preservice Teacher:** Undergraduate or graduate students who are preparing to become licensed teachers. This term describes teacher preparation students prior to graduation, certification, and before they are certified teachers in their own classrooms.
Chapter 2: Review of Literature

Preservice teachers often engage in a variety of early field experiences in the semesters before student teaching. Some of these experiences are purely observational while others involve assisting in the classroom and in some cases teaching one or two lessons. Strong early field experiences that provide preservice teachers with access to experienced teachers in classrooms are essential components of high-quality teacher preparation programs (Anderson et al., 2005; Darling-Hammond et al., 2020).

Theoretical Framework

The animated cases involved in this study represent hard-to-reach populations in special education that may not be accessible to preservice teachers. In the absence of access to these populations, it is my hope that the use of authentic and carefully scripted animated cases can help fill the gap to provide an alternative observation and reflection experience for classroom situations and settings that are more difficult to get into during early practicum experiences. I conducted this research through the lenses of two different theories.

Self-efficacy theory and situated learning theory contribute to the theoretical framework for this study. These theories support the research on the ways different modes of case-based learning activities inform the learning experiences of undergraduate preservice teacher candidates in an introductory special education course. Each theory is described below with a summary of research that connects the theory to this study.

Self-Efficacy Theory

Albert Bandura developed Self-Efficacy Theory in 1977, he described self-efficacy as “beliefs in one’s capacity to organize and execute the courses of action required to produce given attainments” (p. 3). Bandura’s work in self-efficacy showed that an individual’s perceived self-
efficacy may not only have an impact on the choice of activities they select, but also in the effort the same individual puts forth in those activities toward the activity or task (Bandura, 1977). Bandura (1977) identified four key experiences that contribute to an individual building self-efficacy: observational or vicarious experiences, mastery experiences, receiving social or peer confidence in an individual’s ability (verbal persuasion), or having positive or energizing emotional or physical reactions to an experience. Of the four experiences, Bandura (1977) noted that mastery experiences have the most potential to increase self-efficacy. Bandura’s statements on self-efficacy demonstrated his belief in the powerful impact self-efficacy has on human behavior and performance:

People’s beliefs in their efficacy have diverse effects. Such beliefs influence the course of action people choose to pursue, how much effort they put forth into given endeavors, how long they will persevere in the face of obstacles and failures, their resilience to adversity, whether their thought patterns are self-hindering or self-aiding, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize. (p. 3)

Bandura (1977) attributed having positive self-efficacy to the level of success an individual would achieve.

**Self-Efficacy and Teacher Preparation**

Prior research on self-efficacy in teacher education shows the importance of self-efficacy for preservice and in-service teachers (Gurvitch & Meltzer, 2009; Martins et al., 2015; VanLone et al., 2022; Woolfolk Hoy & Spero, 2005). Woolfolk Hoy and Spero (2005) mapped Bandura’s (1997) sources of self-efficacy building experiences to common experiences in teacher preparation programs (observation, early field, peer teaching, and reflection). Teacher
preparation research has shown important ties between strong self-efficacy and preservice teachers’ success in the teaching profession (Gurvitch & Meltzer, 2009; Martins et al., 2015; VanLone et al., 2022; Woolfolk Hoy & Spero, 2005). Preservice teachers who have built positive self-efficacy through their observation and early field experiences are likely to carry that self-efficacy with them to their classrooms which can have a positive impact on student achievement (Woolfolk Hoy and Spero, 2005; Martins et al., 2015). VanLone et al. (2022) noted that considering the research on self-efficacy and teacher retention, establishing high self-efficacy in preservice teachers could help to solve the current teacher shortage issues. Martins et al. (2015) found that preservice teachers with high-self efficacy prior to student teaching reported that their student teaching experiences had a positive impact on their self-efficacy and confidence in their abilities while preservice teachers with low-self efficacy prior to student teaching attributed the struggles they experienced during student teaching to external factors such as the make-up of the class.

According to VanLone et al. (2022), preservice teachers gain self-efficacy through hands-on practice and found that higher self-efficacy in novice teachers benefitted their students. In their study on the impact of COVID-19 disruptions to preservice teachers’ field experiences, VanLone et al. (2022) found that preservice teachers with no changes to their field experience or student teaching placement had no change in perceived self-efficacy while preservice teachers with a change in placement experienced a drop in perceived self-efficacy. Based on their qualitative data, the drop in perceived self-efficacy was likely due to a lack of significant exposure to virtual teaching environments or the tools. Gurvitch and Metzler (2009) compared the self-efficacy of preservice teachers completing early field experiences either in a laboratory setting or a K-12 classroom setting. They found students that completed their early field
experiences in the laboratory setting had higher self-efficacy compared to students in the classroom setting early on in their placements. Gurvitch and Metzler (2009) suggested that difference was a result of the guidance and support available in the laboratory setting. Based on the differences, they noted that it is important to build guidance into early field experience to help support the development of strong self-efficacy.

**Situated Learning Theory**

While Self-Efficacy Theory focuses on an individual’s beliefs in their own abilities, the four elements noted earlier that Bandura (1997) identified as contributing to self-efficacy aligned well with Lave and Wenger’s (1991) key components of Situated Learning that are described in this section.

Lave and Wenger (1991) developed Situated Learning Theory based on the work of Lev Vygotsky and John Dewey and posited that learning occurs best when it is embedded in authentic activities, not as a detached stand-alone act of acquiring knowledge in isolation. Bell et al. (2013) noted that in Situated Learning Theory, learning cannot occur outside of the context of the content. Situated Learning Theory emerged from the closely related theory of Situated Cognition, both of which focus on the process of learning through participation. Both theories have strong roots in the work of Lev Vygotsky (McLellan, 1996).

In Situated Learning Theory, Lave and Wenger (1991) described the learning process as unintentional. Learning occurs through a concept they identify as Legitimate Peripheral Participation. Legitimate Peripheral Participation is not a teaching or pedagogical approach but a way to understand the process of learning. Learning may happen through any level of participation in an authentic activity where a learner starts as a novice on the periphery of the activity and gradually assumes more responsibility as they gain expertise. Lave and Wegner
(1991) noted that situated learning takes place as part of a community of practice which is made up of four elements (activities, artifacts, identities, and relationships). The transition from novice to expert is a key component of Situated Learning Theory. In their work on Situated Learning Theory and teacher preparation, Kim and Hannafin (2008) identified Situated Learning Theory as a way to describe the development of an individual from novice to expert in their chosen field over time.

Situated Learning Theory involves the following key learning components: (a) learning occurs within a community of practice, (b) learning occurs in an authentic real-world situation, (c) learning begins through observation and with the guidance of experts in the community of practice, and finally, (d) learners progress towards a level of expertise within the community of practice through observation and guided practice (Lave & Wenger, 1991). Herrington and Oliver (2000) underscored the importance of learning in authentic learning situations. They noted that content taught in K-12 and higher education classrooms separated from its context is not useful to learners in the real world. Lave and Wegner (1991) focus on the concept of learning within a community of practice as evident in 3 out of 4 of the key components of Situated Learning Theory. In light of this, collaboration plays an important role in situated learning as learners begin in a novice role and gradually grow towards a more expert role in the community of practice. Meyers and Lester (2013) noted that Situated Learning Theory helps provide support for the development skills (e.g., leadership, collaboration, and reflection) through engagement in real-world environments in a way that traditional classroom methods do not.

**Situated Learning in Educational Research**

Teacher preparation programs incorporate Situated Learning starting with early field observations and experiences and ending with student teaching. Green et al. (2018) noted that
teacher preparation programs that align with Situated Learning Theory allow students to construct knowledge collaboratively in real-world situations that help prepare them for their own classrooms in the future. Research in the field of teacher preparation and situated learning highlights the benefits of applying Situated Learning Theory to teacher preparation. Meyers and Lester (2013) conducted a study that looked at the difference between situated learning and traditional learning for graduate students in a preservice special education course. In this study, the authors partnered with the local ARC, a community-based organization that serves individuals with disabilities of all ages. The authors found that the situated learning environment had a positive effect on students’ content knowledge and pedagogical knowledge acquisition compared to students in the traditional class environment. Bell et al. (2013) conducted a study with graduate preservice teachers on the impact of a graduate degree aligned with Situated Learning Theory on preservice teachers’ integration of technology in the classroom during their student teaching semester. The authors’ showed that aligning their program to Situated Learning Theory helped preservice teachers not only transfer the skills and knowledge they observed throughout their program, but their technology adoption went beyond simple transfer of skills and knowledge to adapting those skills and using them in new and innovative ways in their student teaching classrooms.

In addition to helping with content knowledge and application, students and faculty have reacted positively to situated learning. Meyers and Lester (2013) noted that student participants identified the ability to work with members of the ARC team as having a positive impact on their ability to solve problems related to the students at ARC. Faculty participants indicated that the situated learning environment was a positive addition to their course and was easy to implement.
Figure 1

Theoretical Framework

Note: This diagram provides a visual representation of the theoretical framework for this study.

Summary

Self-Efficacy Theory and Situated Learning Theory contribute to the theoretical framework I used to frame this study on the instructional impact of animated classroom cases on preservice teachers. Self-efficacy is an important disposition for teacher educators and has been shown to have an impact on novice teacher performance and retention in the teaching profession (Gurvitch & Meltzer, 2009; Martins et al., 2015; VanLone et al., 2022; Woolfolk Hoy and Spero, 2005).

Lave and Wenger (1991) suggested that with Situated Learning Theory learning happens best in the context of authentic situations and not as an isolated knowledge focused classroom lesson. The focus on learning in authentic situations makes situated learning a practical approach to building self-efficacy in preservice teachers during their teacher preparation program.
Both Lave and Wegner (1991) and Bandura (1977) suggested that learning through authentic contextually relevant experiences is essential for learning. While these theories are independent and were developed over a decade apart, they complement each other and provide theoretical support for the use of observation in teacher preparation programs.

**Case-Based Learning and The Importance of Early Field Observations in Teacher Preparation**

Early field experiences and observation are an important component in teacher preparation programs (Darling-Hammond, 2014). Darling-Hammond (2014) noted that the most successful teacher preparation programs place students in lengthy practicum experiences in K12 classrooms in conjunction with their coursework. Over a century ago, in “The Relation of Theory to Practice in Education” John Dewey (1904) criticized college programs that prepare teachers using alternatives to in person K12 classroom practicum experiences going as far as suggesting that learning to teach outside of a K12 school would be like learning to swim outside of the water. While Dewey obviously did not have access to modern technology in 1904, it seems clear that he feels strongly about the need to position teacher education students in a K12 setting. Dewey’s statements continue to be supported in this century. Kwok and Bartanen (2022) identified in person observations and early field experiences as the first opportunity for preservice teachers to experience a K12 classroom as a future educator. Darling-Hammond (2014) suggested that content and theoretical knowledge alone is not a sufficient means to prepare future teachers, aligning with Dewey’s statements on the importance of getting preservice teachers into classrooms with experienced teachers.
The Role of Classroom Observation in Closing the Theory-Practice Gap

In person observation of K12 classroom teachers is a critical component of teacher preparation programs that may help close the theory practice gap (Anderson et al., 2005; Madsen & Cassidy, 2005; Young et al., 2011). John Dewey (1904) made note of the theory-practice gap in teacher education students’ ability to apply theory to their classrooms. Modern researchers have continued to identify the theory practice gap as a struggle in teacher preparation. Several studies have cited a theory-practice gap in teacher preparation programs as an ongoing problem (Billingsley & Scheuermann, 2014; Heemsoth et al., 2022; Saltan, 2017; Shin et al., 2019; Strangeways et al., 2016). Beck et al. (2020) identified several gaps in what preservice teachers were learning in their teacher preparations courses and what they were observing in the field.

Anderson et al. (2005) described early field experiences as an opportunity for preservice teachers to observe expert teachers in the classroom. Dewey (1904) identified two practical options for the development of teachers: observation in a real school setting starting or provide a strong theoretical base in conjunction with the use of prior classroom experiences (as a K12 student) to provide a real-world reference for the theoretical base.

Regarding observation, Dewey (1904) noted that preservice teachers should conduct their initial observations through an educational psychology lens and that their observations should be more than just watching an experienced teacher and documenting the methods to use later. Dewey (1904) suggested that for observation to be useful, teacher education students need to learn to observe. More recent research has supported the inclusion of guided observation in teacher preparation programs (Darling-Hammond, 2014; Salazar Noguera, 2018; Young et al., 2011).
Anderson et al. (2005) suggested that unguided observations can provide preservice teachers with a variety of perspectives about the classroom they are observing but caution that preservice teachers may only develop a general view of teaching which may cause them to miss important pedagogical details. In contrast, Anderson et al. (2005) noted that guided observations allow preservice teachers to focus on a specific piece of classroom instruction, unfortunately this focus may cause them to miss the bigger picture. According to Dewey (1904), teacher education students should be watching the interactions in the classroom between the teacher and the student and among students. Dewey (1904) recommended a series of guided observations that begins with a focus on educational psychology and classroom interactions then transitions to observing instructional methods and theory prior to assisting in a classroom.

**Benefits of In-Person Classroom Observations in Teacher Preparation**

Salazar Noguera (2018) studied the impact of in-person classroom observation on preservice teachers and found that in class observations helped preservice teachers build their identity as future educators. The results showed that observing practicing teachers in their classrooms raised their awareness of the importance of selecting appropriate instructional methods. Preservice teachers in the study reported that the observations helped increase their teaching knowledge (Salazar Noguera, 2018). Participants also noted a difference between newer teachers and experienced teachers in their ability to manage their classrooms. This study showed that longer observations had a positive impact on the quality of preservice teachers’ written reflections. Salazar Noguera (2018) found that observation helped preservice teachers engage in self-reflection as future teachers based on what they observed experienced teachers doing in their classrooms. Of note, Salazar Noguera (2018) found that extended classroom observation was helpful in developing preservice teachers’ observation skills. Over the course of a two-month
period, preservice teachers’ observations evolved from noticing general classroom practices to a more analytical and critically-focused observation. Jenkins (2014) studied the observation experiences of preservice physical education teachers over the course of a semester. The results showed that at the beginning of the semester, preservice teachers’ observations appeared to be narrowly focused on noting classroom events that supported pedagogical content they were learning in a companion course. As the semester went on, preservice teachers began to reflect and analyze the pedagogies they saw modeled by the classroom teachers. By the end of the semester, the preservice teachers’ comments showed continued growth as they reflected on the connections of pedagogy, students, and course content (in this case physical education) (Jenkins, 2014). These results mirror the benefits of extended observation found by Salazar Noguera (2018).

Hummel (1993) noted that real-world observation and experiences were superior learning opportunities compared to digital ones. Hummel (1993) argued that computer-based activities and courses cannot be grounded in situated learning because the technology becomes the environment instead of the real-world environment the technology is simulating. Hill (2021) echoed those concerns and suggests that participating in a virtual practicum could cause preservice teachers to miss experiences they would get from physically being in a school such as school culture and professional expectations. In their study on teacher preparation and retention, Beck et al. (2020) interviewed experienced classroom teachers about their teacher preparation experiences. Their results showed that early access to K12 classrooms had a positive impact on teachers’ experience during their teacher preparation programs. Participants noted the importance of early access to K12 classrooms as a way to make sure the teaching profession was
a good fit. They also emphasized the importance of having access to a variety of settings (Beck et al., 2020).

Kwok and Bartanen (2022) conducted a study to examine the impact of early field observations on preservice teachers’ experiences in teacher preparation programs. They identify the early field experiences in K12 classrooms as having potential to build self-efficacy in preservice teachers. Similar to the results found in Beck et al. (2020), these results showed that early field observations help to increase motivation to continue in the teaching profession and helped preservice teachers develop their own views on what good teaching looks like. Scherff and Singer (2012) explored the use of reflection and small group discussion in their teacher preparation course that included face-to-face early field observation. Preservice teachers’ reflections and discussion comments highlighted the theory-practice gap they observed in their placements, but working through the reflection and discussion process allowed them to work through the tensions they felt together. The authors noted after their study they found the reflection and discussions that came up based on preservice teachers’ K12 classroom observations were a critical component of their course that would continue in the future (Scherff & Singer, 2012).

Kwok and Bartanen’s (2022) results showed that while preservice teachers’ experiences during their observation varied in the quality of teaching, they observed and the perceived helpfulness of the experiences, there was no long-term effect on the desire to continue in the teaching profession or their future effectiveness as student teachers.

Concerns Related to In Person Classroom Observations

Billingsley and Scheuermann (2014) noted that while a face-to-face field experience is the most ideal option for preservice teachers, there are problems in finding placements that will
expose every student to all diverse learning populations they will encounter as future teachers. They identified five obstacles in finding appropriate, high-quality placements for preservice teachers experiences: limited number of locations, the limited number of teachers willing to take on additional work, logistical issues involved in special education teaching loads, logistical issues in ensuring preservice teachers experience enough exposure to different types of support needs they may encounter as future special education teachers, and the ability to practice a wide range of skills that may not be available in a physical field experience.

Arrastia et al. (2014) noted in their comprehensive review of research on early field experiences that preservice teachers had positive outcomes from in-person observation when observing skilled and highly experienced teachers but preservice teachers who observed poor classroom instruction did not experience a growth in pedagogical or methodological knowledge because they were more focused on the negative experience. Young et al. (2011) identified some problems with unstructured in-person observations. Their results showed that preservice teachers who observed classroom teachers during an early field experience had very little to reflect on after a four-hour observation. They suggest preservice teachers need guidance to get the most benefit from classroom observations. While it may be ideal for preservice teachers to observe classroom teachers and students in person, there are alternatives to in person classroom observation that are worth considering.

**Alternatives to In Person Classroom Observations**

Traditional early field observation takes place in person, in a licensed teacher’s classroom. Billingsley and Scheuermann (2014) noted that even before the COVID-19 pandemic, there were logistical and instructional issues involved with these placements. As a result of those issues, teacher preparation programs have been exploring the use of alternatives to
in-person classroom observations including recorded classroom videos and written, video-based, and animated classroom cases.

Due to sudden K12 school and higher education closures, the COVID-19 pandemic brought to light the need for alternatives to in-person field experiences. Teacher preparation programs had to quickly and creatively find ways to prepare preservice teachers in all stages of their programs. Darling-Hammond et al. (2020), shared a promising example from Long Beach Unified School District (California) that allowed preservice and in-service teachers the ability to watch live lessons taught by highly skilled, experienced teachers during the pandemic closures of K12 schools. This access not only helped preservice teachers maintain exposure to classrooms but also provided content for K12 students. The live lessons also provided access to modeling of remote synchronous teaching practices for novice teachers. Hover (2021) noted the increasing difficulty in finding qualified mentor teachers willing to take on preservice teachers at different levels as justification for investigating the use of case-based videos as part of educator preparation programs. Willems et al. (2021) identified the increasing popularity of distance education programs as a rationale for the inclusion of case-based learning in teacher education, also noting the difficulty of finding enough appropriate field placements for students in different stages of their program. Keefe (2020) found that shifting to a virtual practicum format increased preservice teachers’ confidence. The inclusion of recorded lessons allowed for the addition of peer analysis and feedback, and for the ability to review lessons more than once. While the changes in Keefe’s (2020) study were made as a result of the COVID-19 pandemic’s urgent shift to remote learning, Keefe (2020) suggested the strategies were beneficial to preservice teachers and recommended they be continued in future courses. Overall, the research on the use of video
and animated classroom cases as an alternative to in-person classroom observation shows some promising results.

**Case Based Learning**

Case-based instruction can provide learners access to content and experiences they may not otherwise have access to until they graduate and are working in the field. There are many aspects of case-based instruction that benefit preservice teachers. This brief review of literature will look at what the research says about the case-based instruction as a tool for preservice teachers and three different types of case-based instruction specifically: (a) written, (b) video-based (including what some researchers label as multimedia-based), and (c) animated-based case studies.

**Theory Practice Gap in Teacher Education**

Several researchers cite a theory-practice gap in teacher preparation programs as the rationale for the inclusion of case-based learning (Billingsley & Scheuermann, 2014; Heemsorth et al., 2022; Shin et al., 2019; Saltan, 2017; Strangeways et al., 2016). Case-based learning can help close the gap between teacher preparation program content learning, preservice teacher field experiences, and the diverse needs of real-world students. Saltan (2017) cited a gap between policies and the best practices they identified for technology integration in the classroom and current classroom teaching as a rationale for the introduction of case-based instruction in teacher education.

Preservice teachers who will be working with special education students or students who have experienced trauma normally do not have in-person access to the large variety of diverse learners and their needs to gain direct experience with many of the populations they will encounter as future teachers. Even if preservice teachers are placed in an ideal field placement,
there may be a gap between their content knowledge and their application of their knowledge in a real-world classroom. Heemsorth et al. (2022) identified the difficulty of preservice teachers in applying best practice methodology in their lessons as a gap between theory and practice as the rationale for the use of case-based instruction. A similar theory practice gap problem was documented by Strangeways et al. (2016) who pointed to the gap between content and theoretical knowledge and classroom practice and application of that knowledge as a significant problem that case-based learning has the potential to help solve. Students in their study expressed frustration with the disconnect between the theory they learned about child development and the best practices they were observing in the cases. Shin et al. (2019) uncovered a gap in students’ ability to recognize the application of knowledge of classroom management methods.

Baier et al. (2021) and Kale and Whitehouse (2012) also identified a gap between educational theory and content knowledge and preservice teacher practical application as a motivation for the inclusion of case-based instruction in teacher preparation programs but discuss a lack of conclusive research in this area as the rationale for their study. To try to address the theory-practice gap, Thompson et al. (2019) conducted a mixed-methods study to investigate the impact of scenario-based simulations on preservice teachers’ ability to respond to difficult parent-teacher conversations in a composed manner. Their data showed that the multimedia case-based simulations enabled students to remain calm in the face of a confrontation and to be able to respond to challenges with the support of their classroom management tools and strategies.

**Overview of Case-based Instruction**

Law schools, medical schools, and schools of education have used case-based instruction for over a century to provide real-world context to content and allow students to demonstrate and apply classroom and textbook content before they practice their chosen profession (Arrastia-
Chisholm et al., 2021). Law schools initially used case-based instruction to enrich and provide context to discussions in the late nineteenth century and increased adoption of case-based learning in the early twentieth century (Merseth, 1991). Merseth (1991) noted that business schools were next to adopt case-based instruction broadly in the 1920s to bring real-world examples and problem-solving into courses, followed much later by teacher education towards the end of the twentieth century.

Several studies have shown that case-based instruction may have a positive impact on the classroom environment. Yadav and Koehler (2007) highlighted the benefit of case-based learning as an active learning approach. Gunn and Williams (2015) and Cho et al. (2015) focused on the ability of cases to allow students to develop critical inquiry and analytical skills. Gravett et al. (2017) identified case-based instruction as a pedagogical approach to bring theory-based knowledge in education closer to practice-based knowledge of teaching education for preservice teachers. According to Mostert (2007), research in the field of teacher education supports the use of case-based instruction to bring real-world content to preservice teachers as a result of the complicated nature and detailed interactions that take place in a classroom between teachers and students.

The use of case-based instruction can help provide access to field placements that are not physically accessible. Billingsley and Scheuermann (2014) noted that in-person field placement is the best option, but as a result of the COVID-19 pandemic, field students all over the country in the spring of 2020 and into 2021 were suddenly displaced from their in-person field experiences and shifted to virtual placements which are similar to case-based instruction. As a result of this shift, research has shown that virtual field experiences can provide an equal academic benefit to preservice teachers. Vu and Fisher (2021) conducted research on the impact
of virtual field experiences on preservice teachers due to the COVID-19 pandemic and found no statistically significant difference between the academic skills of students who had completed their field experiences in person (pre-COVID) and those that were forced in an emergency situation to complete their field component virtually.

Much of the current research on case-based instruction for preservice teachers is focused on video-based cases (Fitzgerald et al., 2009; Gold et al., 2021; Heemsoth et al., 2022; Kurz & Kokic, 2012; Saltan, 2017; Shin et al., 2019; Yadav et al., 2011). The research on written cases helps support the use of case-based instruction as a useful pedagogical approach (Florez, 2011; Gravett et al, 2017; Shin et al., 2019). The following sections provide an overview of written, video-based, and animated case-based instruction.

**Text-Based Case Studies**

Text-based or written case studies (with or without still pictures) are narratives or stories that describe an event, a scenario, or a problem. In teacher preparation programs, case studies are helpful in capturing the complex nature of a classroom environment and applying content knowledge to problems before they are in the field (Florez, 2011; Gravett et al., 2017; Shin et al., 2019). Written case studies can be assigned as homework or read aloud in class by a professor or student and reflected on via discussion or writing. Baier et al. (2021) suggested that text-based case studies are more straightforward and may be easier for preservice teachers to analyze without the distractions that may occur with a video-based case study. The authors also posited that the cost and time required to create text-based case studies make this a more practical approach for teacher preparation programs.

In addition to being able to capture the complex nature of classrooms and contextualize content, text-based case studies also have been shown to increase student engagement during
Gunn and Williams (2015) found that the inclusion of case-based instruction increased student engagement in class. Students were more likely to engage in course-related discussions with their peers prior to class and rather than sit passively through a lecture, students were actively engaged in-class discussions and asked questions during class (Gunn and Williams 2015). Similarly, Baier et al. (2021) found that the use of text-based cases increased student engagement and interest in the content compared to students who were taught in a more traditional content-only class. Florez (2011) found no difference in content acquisition between students in the direct instruction group and the case-based instruction group.

**Learners’ Experiences with Case-Based Learning**

Some researchers focused on learners’ experiences with case-based learning. Both Thompson et al. (2019) and Gravett et al. (2017) showed that written cases had a positive impact on students' learning experiences. Thompson et al. (2019) found that students’ perceptions of the authenticity of the simulation experience were positive. Student comments showed that the students found the simulations to be authentic and that the simulations generated an emotional response that was relevant to the situations (Thompson et al., 2019). In a second study focused on students’ learning experiences, Gravett et al. (2017) studied the use of case-based teaching in teacher preparation courses and identified five major themes through their analysis. The strongest theme that emerged was that the use of cases generated an active learning environment. The additional themes showed that cases gave students experiences in a virtual environment that they would not have had access to in a traditional physical field experience, helped them understand the uncertainty of teaching, allowed them to bridge the gap between theory and practice, and brought out their previous understanding and thoughts on teaching.
Video-Based Case Studies

Video-based case studies bring written case studies to life and allow students to view a richer presentation format than written cases. The use of video cases and observation has the potential to deepen preservice teachers’ depth of knowledge especially when it comes to diverse learners in special education (Baecher & Connor, 2010). Preservice teachers who access video cases prior to student teaching may deepen their pedagogical knowledge of teaching methods by observing that content in a classroom setting. Several researchers showed that video-based cases had a positive benefit for preservice teachers (Fitzgerald et al., 2009; Kurz & Kokic, 2012; Saltan, 2017; Shin et al., 2019). Additionally, some of the research made a direct comparison of written case studies to video-based case studies and showed that students benefit from video cases more than written cases (Gold et al., 2021; Heemsoth et al., 2022; Yadav et al., 2011).

Student Learning Experiences

Students in a few studies expressed positive feelings about the inclusion of video cases in their courses (Kokic, 2012; Kurz & Kokic, 2012; Shin et al., 2019). Kurz and Kokic (2012) presented video cases to students, their analysis showed that students viewed the video-based cases as a positive addition to their teacher preparation courses. Cho et al. (2015) also found that students reflected positively on the use of video cases in their mixed-methods study of the development of case-based modules focused on students and poverty. Student evaluation of the modules indicated they viewed the scenarios in the modules as the most helpful elements, their comments indicated that they valued the authenticity of the content and that the scenarios were helpful (Cho et al., 2015).
**Student Motivation**

Video cases also appear to have a positive impact on student motivation. Heemsoth et al. (2020) showed that student motivation scores in the video-based case group demonstrated a higher motivation to learn than students in the other groups. Shin et al. (2019) also showed that video cases increase student motivation. Their student survey data indicated that a large majority of the students in the study felt the video cases motivated them to participate in class discussions related to the cases. Students’ interviews showed that the post-case discussions helped them better process the teaching experiences they observed. Fitzgerald et al. (2009) showed that undergraduate preservice teachers reacted positively to the addition of video-based case studies to the content while learning about working with students with emotional and behavioral disorders. Strangeways et al. (2016) found that preservice teachers viewed the video-based cases as helpful to them in gaining knowledge and confidence in challenging areas such as classroom management. The authors also noted that the cases helped create a learning community where preservice teachers could engage in challenging discourse on professional topics. Students may be able to deepen their understanding of course content by watching classroom teachers apply the theory and methods related to challenging teaching areas such as classroom management.

**Content Gains with Video-Based Cases**

The inclusion of video-based case studies showed that the video-based cases had a positive impact on student content knowledge gains when compared to written case studies or no case studies (Heemsoth et al. 2020; Gold et al., 2021; Kurz & Kokic, 2012; and Saltan, 2017). In one study, Heemsoth et al. (2020) measured the differences between video-case and text-case instruction with preservice physical education teachers. Their results showed that students in the video group made more significant gains than those in the written case group or the control
group (no case). Gold et al. (2021) compared three different approaches where student teachers analyzed one of the following: video cases of an unknown teacher, their own classroom management experiences without video, and video of an unknown teacher and the student teacher. The results showed that students in the group that watched and reflected on their own videos and videos of unknown teachers made the biggest gains, followed by the group that reflected on their own teaching (without video), then the group that only watched an unknown teacher’s video, and lastly, the control group. In another study on the use of video case studies in teacher education, Saltan (2017) explored the impact of video cases in improving preservice teachers’ TPACK (technological pedagogical and content knowledge) in a classroom management course over the course of 14 weeks. In Saltan’s (2017) study, students in the video case group had significantly higher post-test scores than students in the control group. Kurz and Kokic (2012) showed that students were able to make connections between the content and theory they learned in the classroom and what they were observing in videos.

Video-based case studies can provide students with a real-world view of the content they are learning in their classes. Students expressed appreciation for the cases and indicated that the cases gave them a real-world view of classroom teaching before they experienced it as student teachers (Kurz & Kokic, 2012). Fitzgerald et al. (2009) found two main real-world application themes that emerged through their qualitative analysis: (a) “the importance of knowing and using multiple perspectives in serving students with EBD” and (b) “the value of working on service teams” (Fitzgerald et al., 2009, p. 44).

While most of the studies reviewed focused on the addition of case-based instruction in general and student gains either in content, or problem-solving skills, one study looked specifically at the impact of the design and structure of the video cases on student outcomes.
Kale and Whitehouse (2012) showed that cutting videos into shorter segments did not help students make bigger gains than students who watched the full unsegmented videos. Kale and Whitehouse (2012) showed that when video sequences included teacher reflection mixed in, students produced higher quality reflection responses. Based on the research, it appears that video-based case instruction has the potential to increase student motivation and application of content knowledge, but further research could help strengthen the existing results.

**Animated Case Studies**

The use of animated case-based instruction could solve a problem in certain fields of teacher education where it is difficult to find contextually-appropriate, existing video-based cases for virtual observation, or opportunities for in-person placements for students. Currently, there is minimal research on the use of animated case-based instruction (Aaron & Herbst, 2014; Herbst & Kosko, 2014; Moreno et al., 2008). Animation may be a helpful tool in preparing preservice teachers to work with hard-to-reach populations. Herbst and Kosko (2014) discussed the ability to control the content and scenario through written and animated presentations as a rationale for exploring the differences between video and animated classroom scenarios. Their data showed no significant difference between the proportion of comments made by teachers when viewing video scenarios compared to animated scenarios. The data showed an increase in the frequency of appropriate comments made by preservice teachers while watching animated classroom scenarios compared to those made while watching recorded videos. The authors noted a trend towards more polite professional comments when viewing videos compared to comments made while watching animations. They suggested that preservice teachers may feel uncomfortable criticizing professional teachers but not animated characters.
The use of animation allows the designer of the case-based instruction to control the details of the case. In another study, Aaron and Herbst (2014) looked at teachers’ perceptions of students’ work. This study used nondescript characters (large blue circles as heads) which is unique in current research as animated case studies typically aim for a level of authenticity. Their data showed that teachers’ perceptions focused on the resources students used rather than the students’ process of conjecture.

Prior researchers have shown that animated case-based instruction may be as beneficial to learners as video case-based instruction. Moreno et al. (2008) investigated the difference in the effectiveness of three different formats of K12 classroom case studies for preservice teacher education students. The researchers looked at how well preservice teachers were able to apply what they learned in case studies to new classroom experiences and if the format of the case study itself impacted students’ perceptions of their learning experience. The results showed when students watched video and animated-based cases, students were able to identify more model applications in their own teaching than those who read the case study or were not exposed to any cases. Video and animation group assessment scores were also higher on the application test with the animation group scoring the highest.

**Case-Based Instruction and Epistemology**

If preservice teachers’ epistemological beliefs shape their views on how students learn, case-based instruction may have different impacts on students’ depending on their epistemological beliefs. In similar studies, Peng and Fitzgerald (2006) and Yadav and Koehler (2007) looked specifically at preservice teachers’ epistemology and how that impacted their interaction with case-based instruction. Both studies utilized the same epistemology questionnaire to identify students’ epistemological beliefs. Based on the results they learned that
most students held either one extreme or another of a fixed ability or simple knowledge epistemology.

Students’ beliefs on good teaching are often rigid and based on their own experiences as students (Peng & Fitzgerald, 2006; Yadav & Koehler, 2007). Yadav & Koehler (2007) conducted a mixed-methods study to determine what impact preservice teachers’ epistemological beliefs impacted their views of “good teaching” when presented with video-based case studies. The data showed that the video participants selected examples of “good teaching” reflected their epistemology and prior beliefs on teaching. In a similar study, Peng and Fitzgerald (2006) looked at the relationship between special education preservice teachers’ epistemology and their content knowledge gains and performance on tasks related to a multimedia case. Their results showed that preservice teachers’ epistemologies had a slight but statistically significant impact on their problem-solving tasks related to the multimedia case. Their data suggests that students with naïve epistemological beliefs (Peng & Fitzgerald, 2006) struggled with the ability to apply content knowledge and problem solve in relation to the multimedia cases. They also found that preservice teachers who believed that students’ ability to learn is fixed at birth scored poorly on problem-solving assessments related to the case study. These results both point to a need to address students’ epistemological beliefs in case-based instruction.

**Problems with Case-Based Instruction**

Some of the research provided concern over the use of case-based instruction (Fitzgerald et al. 2009; Florez, 2011; Heemsoth et al., 2022; Mostert, 2007; and Roy & McMahon, 2012). In his brief review of literature, Mostert (2007) highlighted 21 specific pedagogical challenges implementing case-based teaching effectively. In their qualitative study on the use of text and video-based case studies in medical education, Roy and McMahon (2012) presented a counter
result to much of the positive research on case-based learning. Specifically, the authors looked at learner preference for either text or video-based case studies and the negative impact those cases had on students’ deep thinking during problem-based learning (PBL) activities. The authors observed that the use of written case studies and the potential for videos to provide too much of a distraction. In their study, Roy and McMahon (2012) looked at students' critical thinking in response to the case studies. The authors showed that both students and instructors had a strong preference for video-based case studies and that the students who viewed video-based cases engaged in less critical thinking than students who read the text cases based on the students’ verbal reflections while they were engaged in the cases (Roy & McMahon, 2012).

Mosert’s (2007) review documented that the challenges with case-based instruction fall within a few general categories, instructional implementation, instructor workload, discussion facilitation, and student expectations. Mosert (2007) conceded the problems with case-based teaching are not in the approach itself but the implementation of the approach. Strangeways et al. (2016) identified a minor potential problem with case-based learning in their small pilot study where preservice teachers noticed a disconnect between theory and practice in the video case they observed. In future studies, a similar situation could be an opportunity to engage in a faculty-led class discussion on the disconnect between theory and practice.

Not all research supports the use of case-based instruction. For instance, Florez (2011) identified some conflicting research in her literature review on the use of case-based instruction. One concern Florez (2011) highlighted came from results that indicated that students without prior knowledge gained less from case-based instruction than their peers. These results would appear to make case-based learning problematic for students without classroom experience. Heemsoth et al., (2022) found that there was no significant difference between
student gains in the text-based case group compared to the control group that received no case-based instruction. In their study on the use of multimedia-based case studies, Fitzgerald et al. (2009) showed that student gains on concept maps were higher except for the group that used the case studies as a stand-alone instructional unit. This study indicated a need for direct instruction to accompany case-based instruction. Baier et al. (2021) found that while student engagement with the content improved with the use of text-based cases, content gains showed no significant difference between students exposed to text-based case cases and students exposed to traditional content-based teaching approaches. Their study also failed to show that the students in the text-based case treatment group had a benefit over the content-based teaching group in terms of the application of theory-based knowledge in answering problem-based questions.

**Conclusions and Future Research**

Based on the research, the use of video and animated case-based instruction appears to be more beneficial to students than written case-based instruction or no case instruction (Aaron and Herbst, 2015; Gold et al., 2021; Heemsoth et al. 2022; Kurz and Kokic. 2012; Moreno & Ortegano-Layne, 2008; Saltan, 2017). Future research on the use of animated case-based instruction would help strengthen the limited research that exists in this field. While exploring the connection between students’ epistemologies and their reaction to animated case-based learning could be helpful in learning how students perceive and benefit from the use of animated case-based learning in teacher preparation programs. I was unsuccessful in finding any research that looked directly at the structure of the reflection and discussion activities used with animated or video cases. Based on this gap in the research, future research may also want to include the design of the video or animated case and the prompts or reflections that accompany the cases. In this literature review, I provided an overview of the existing research on case-based learning
including the limited research on the use of animated case-based learning. In the next chapter, I will describe the explanatory sequential mixed methods research design I used to explore pre-service teachers’ learning experiences using different modes of case-based learning.
Chapter 3: Methodology

The purpose of this research was to examine the association between pre-service teachers’ learning experiences with different modes of case-based learning (written and animated) and their self-efficacy for providing trauma informed instruction. In this chapter I describe: (a) the intrinsic case study research design, (b) the study participants and setting for both the quantitative and qualitative portions of the study, and (c) the instruments used in this research (pre and post self-efficacy scale, observation protocol, and interview protocol). Finally, I will end the chapter with a discussion on the generalizability and limitations of this study.

Research Questions

The goal of this research was to answer the question: How do different modes of case-based learning activities inform the learning experiences of undergraduate preservice teacher candidates in an introductory special education course?

To answer this question, I addressed the following sub-questions:

a. How do undergraduate preservice teachers compare the experience of learning through animated or written cases? (Qualitative)

b. In what ways do animated and written case-based learning activities inform preservice teachers’ perceived self-efficacy related to trauma-informed instruction? (Quantitative and Qualitative)

Case Study Research Design

I answered these questions using a case study design. Utilizing a case study design helped to paint a holistic picture of pre-service teachers’ learning experiences and the way those experiences shaped their perceived self-efficacy. Unlike most case-study designs, I also gathered quantitative data through a self-efficacy scale to look for differences in the pre-service teachers
perceived self-efficacy after each case-based learning activity. My sample size was small, and I wasn’t seeking statistical significance, but I was interested in how participants would rate their own efficacy over time. The case study research design was based the qualitative data that was gathered through in-class observations, small group discussion recordings, and student interviews. Within the case study, I triangulated the data to provide a complete picture of pre-service teachers’ learning experiences and their self-efficacy.

Case Study Design

I utilized an intrinsic case study design for this study. Stake (2005) notes that the purpose of an intrinsic case study is not designed to develop a theory, support existing case research, or illustrate a specific problem. Instead, Stake (2005) suggested that an intrinsic case study research design is appropriate when the researcher has an intrinsic interest in a specific naturally occurring case such as an individual, or a specific classroom. Case study design provides researchers with the opportunity to take a detailed look at an individual, group, event, process, or activity (Cresswell and Guetterman, 2019). While Stake’s (1995) position on what constitutes a case is flexible, he asserted that a case is also specific (e.g., a person, group of people, or a program) and that a case has a “boundary and working parts (Stake 1995, p. 2). Under Stake’s (1995) description, the case in this study was an intrinsic case based on the need to take an in-depth look at a specific existing group or program, (e.g., the use of different modes of case-based learning with pre-service teachers and the relationship between those learning activities and self-efficacy. Stake (1995) described the defining characteristics his qualitative case study approach as: (a) holistic, a case is defined within a bounded system that examines phenomena within its natural context, (b) empirical, a case “is field oriented” (p. 47) and focuses on naturalistic
observation of phenomena (c) interpretive, a case relies on the researchers intuition through observation and (d) emphatic, a case is a responsive and emergent approach to research design.

Application of Stake’s Model of Case Study

I selected Robert Stake’s approach to case study research for this study based on Stake’s (1995) description of his intrinsic case study research model which allows for flexibility and looks holistically at a naturally occurring case. This study examined the learning experiences and perceived self-efficacy of preservice teachers who were enrolled in two sections of a special education course focused on trauma-informed instruction. The case itself is not related to other previously researched cases and my interest in the case is not generate a new theory or produce generalizable results but to look further into a specific instructional intervention for a specific population. The classroom observations of case-based learning activities and small group discussions followed by one-on-one interviews that built this case allowed me to get a close look at participants learning experiences and perceived self-efficacy.
Participants

Participants were recruited from an introductory special education course on trauma-informed instruction courses in the Fall of 2023. I worked with the course faculty member to develop animated teaching cases for this course and the graduate-level version of this course because there was a lack of observational video-based materials available for this content.

The participants in this study were enrolled in two sections of an undergraduate special education course focused on trauma-informed instruction. The first section of the course met twice per week and had 28 students enrolled, while the second section met once per week and had 24 students enrolled. All students in both sections were pre-service teachers who were completing a teacher preparation program. Of the 52 students enrolled in both sections of the class, 40 consented to participate in the study.
**Inclusion and Exclusion Criteria.** I recruited participants from two sections of a special education undergraduate course on trauma-informed instructional practices. In order to be eligible to participate in the study, participants needed to be at least 18 years old and enrolled in a teacher preparation program at the university where the study was conducted. Students who were younger than 18 years old, who were not enrolled in a teacher preparation program, or who had missed 50% or more of the classes were excluded from participating in the study.

**Sampling.** My original research design included a quasi-experimental quantitative phase based on pre-test and post-test survey data. Unfortunately, as a result of uneven survey response between sections, I was unable to include a statistical analysis of that data in this study. For this phase of the research, I used purposeful sampling for the quantitative quasi-experimental piece of this study. Cresswell & Guetterman (2019) defined purposeful sampling as a sampling approach where the researcher identifies and selects participants intentionally to understand a phenomenon, in this case the learning experiences of pre-service teachers with different modes of case-based learning and how those experiences relate to the participants self-efficacy in trauma informed instruction. Shadish et al. (2001) noted the increasing use of purposeful or purposive sampling in quasi-experimental research as an approach that may be helpful in looking for “generalized causal inference” in quasi-experimental studies that lack the ability to randomly assign participants to a group. Maximal variation sampling was used to select interview participants from the group of volunteers. Researchers use maximal variation sampling, a form of purposeful sampling, to select individuals that vary in a specific characteristic (Cresswell & Gutterman, 2019).
Setting

The setting for this study was a large, public state university with a R2 Carnegie classification in the mid-Atlantic region. The study took place in a teacher preparation program of an undergraduate special education course focused on trauma-informed instruction. The trauma-informed instruction course is a required course for special education majors and an elective course for students in the university’s teacher preparation programs. This university runs on a 15-week semester schedule, and this study took place between weeks 7 and 12.

The participants were enrolled in two sections the trauma informed instruction. The first section met on Tuesdays and Thursdays from 9:30 until 10:45, and the second section met once a week on Wednesday evenings between 4:25 and 7:00 p.m. Both sections of the course were taught in-person in a traditional classroom environment. The desks in the classroom were on wheels to allow for easy movement and flexible grouping opportunities. Many participants utilized laptops during case-based learning activities to either take notes or read a written case study.

Description of the Materials

I gathered three different types of data for this study: (a) quantitative data on pre-service teachers’ perceived self-efficacy, (b) qualitative data on pre-service teachers’ learning experiences gathered through in-class observation of case-based activities, and (c) qualitative data on participants’ learning experiences and perceived self-efficacy gathered through one-on-one semi-structured interviews.

Instrumentation

This quantitative data for this study was gathered through a self-efficacy scale that was administered at the start of the study and after each case-based activity, in-class observations,
and optional one-on-one interviews. I selected these instruments to provide a richer picture of pre-service teachers’ learning experiences.

**Pre-service Teacher Trauma-informed Instruction Sense of Self-efficacy Scale**

I developed the pre-service teacher trauma-informed instruction sense of self-efficacy scale based on the Teacher Efficacy Scale (Hoy & Woolfolk: Short Form) found in Appendix C. Under the guidance of the classroom faculty member, I adapted the fourteen-question scale to focus the questions on pre-service teachers’ self-efficacy related to trauma informed instruction. The scale consists of 14 Likert scale questions with 6 answer choices: (a) strongly agree, (b) agree (c) agree more than disagree (d) disagree more than agree (e) disagree, and (f) strongly disagree. I presented a draft of the modified scale to undergraduate students who had completed the trauma-informed instruction course in the spring of 2023 to check for clarity.

**Observations**

I conducted in-person observations in each section of the introductory trauma-informed instruction course. The goal of the observations was to take a more in-depth look at pre-service teachers’ learning experiences with the different modes of case-based learning. Specifically, I wanted to know if students developed any emotional connections to the characters in the cases and if they perceived the cases to be authentic. I conducted observations during each case-based activity based on the following schedule:
Table 1

**Case-Based Learning Activity**

<table>
<thead>
<tr>
<th>Week #</th>
<th>Class A Case Activity</th>
<th>Class B Case Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 7</td>
<td>Kate Animation</td>
<td>Andy Written</td>
</tr>
<tr>
<td>Week 9</td>
<td>Andy Written</td>
<td>Kate Animation</td>
</tr>
<tr>
<td>Week 10</td>
<td>Kalil Animation</td>
<td>Shari Written</td>
</tr>
<tr>
<td>Week 12</td>
<td>Shari Written</td>
<td>Kalil Animation</td>
</tr>
</tbody>
</table>

*Note: Schedule of case-based learning activities*

I observed students and took descriptive notes while they watched or read each case. I used recording devices to record small group discussions after each case and continued to take descriptive notes throughout the small group discussions and whole class discussions. Students who opted out of the study were placed in groups together and their discussions were not recorded or observed. I spent approximately 20 minutes during each class session to conduct the observation.

**Interviews**

Semi-structured interviews were conducted with eight students who volunteered to participate in the optional interviews. I chose semi-structured interviews to allow myself the opportunity to expand or modify questions based on participant responses. Interview participants were given a $10 gift card to thank them for their time. The interview questions (Appendix D) focused on learning more about participants’ learning experiences and perceived self-efficacy related to trauma-informed instruction. The following are samples of the semi-structured interview questions, the complete list of interview questions is found in Appendix D: (a) describe any experience you’ve had working with K12 students either through your coursework at this
university or an internship or paid position (b) describe yourself as a learner (secondary prompts if the student is unsure of what to describe: what do you like, what don’t you like, what types of learning activities do you enjoy, what types of learning activities would you rather skip), (c) Please describe any differences in how your group worked together with the different modes of cases (written or animation).

**Qualitative Data Reliability and Validity**

In this study, there is the possibility of the internal threat of history if students have experienced case-based learning in other courses or have been exposed to content on trauma-informed instruction in prior courses or as a result of prior field experiences (Cresswell & Guetterman, 2019). I will collect data that speaks to this in my survey. Since I conducted this study in an undergraduate course, participant attrition is also a potential threat to internal validity that will need to be addressed. Lastly, the selection of participants being limited to approximately 60 students enrolled in a specific course may create a threat to internal validity (Cresswell & Guetterman, 2019).

**Defining Reliability, Validity, and Trustworthiness in Qualitative Research**

The terms reliability and validity are commonly used to validate quantitative research studies, but the traditional definitions of those terms do not translate easily or naturally to qualitative research. This is not to say that they do not apply to qualitative research but that their definition and use are currently evolving (Merriam & Tisdell, 2016). In qualitative research, ethics plays a large role in study validity and reliability. Carspecken and Saxena (2022) equated validity to trustworthiness in ethnographic research. I have constructed the following definitions based on a variety of readings that are cited within each definition.
**Reliability**

Merriam and Tisdell (2016) defined reliability in experimental research as how well a study can be replicated with future studies while noting that this may be problematic in qualitative research because human behavior is not consistent. The authors suggested that in qualitative research, reliability looks much different than reliability in experimental research. In qualitative research, the goal for reliability should be that readers of the study should find that the results make sense based on the observations of the participants and data collected for that specific study not that the results be replicable for future similar studies (Merriam & Tisdell, 2016).

**Trustworthiness**

Carspecken and Saxena (2022) noted that when a study is rigorous the results may be trustworthy. They describe trustworthiness as providing rich detailed descriptions of your study settings and participants and being transparent about your positionality. Cresswell and Miller (2000) identified trustworthiness as a criterion for validity in qualitative research and liken it to credibility.

**Validity**

Creswell and Miller (2000) noted that there are varying opinions on what constitutes validity in qualitative research. Cresswell and Miller (2000) cited Schwandt’s (1997) definition of validity which describes “validity as how accurately the account represents participants’ realities of the social phenomena and is credible to them.” Merriam and Tisdell (2016) noted that in qualitative research the definition of validity and reliability are currently evolving but suggest that validity is relative to each research study’s unique situation. The authors suggested that
internal validity can be a strength of qualitative research because there is no instrument to misinterpret the reality of the study participants (Merriam & Tisdell, 2016).

**Generalizability**

This study had limited generalizability. I conducted this study over the course of one semester with approximately 60 students enrolled in two sections of a single faculty member’s trauma-informed instruction course. The case studies that I used are focused on students who receive special education services and may have experienced trauma. The results are not generalizable to other case studies.

**Procedures**

Before the start of this study, West Chester University’s Institutional Review Board (IRB) approved this study (IRB-FY2023-307) (Appendix A). To recruit participants, I shared a recruiting flyer on the course home page in the learning management system for the course sections where animated case studies were used as part of the normal course instructional activities. In addition, I utilized a Qualtrics survey to obtain informed consent for participants (Appendix B). The faculty member for the trauma-informed instruction course shared a link to the informed consent survey in the learning management system and I attended class to introduce the study and explain the study procedures and informed consent.

After obtaining informed consent, I randomly assigned a unique numeric identifier to each participant that they used to respond to initial survey which included demographic questions and then a pre-test for the self-efficacy scale (Appendix B). I observed in-class case-based activities taking descriptive notes and used recording devices to record small group conversations. Consenting participants were placed in groups together to avoid observing or recording non-participating members of each class. After the conclusion of all case-based
learning activities, I conducted, recorded, and transcribed one-on-one optional interviews with eight participants.
Figure 3

Overview of Procedures

Note: This diagram provides an outline of the study procedures.
Data Collection Schedule

Data collection was arranged based on the timing of the case-based activities in both sections of the trauma-informed instruction course. The following table outlines the data collection schedule for each class.

Figure 4

Data Collection Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Class A</th>
<th>Class B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 7</td>
<td>Initial Survey and Self-Efficacy Scale</td>
<td>Andy Case (Written)</td>
</tr>
<tr>
<td></td>
<td>Kate Case (Animated)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-Case Self-Efficacy Scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-Class Observation</td>
<td></td>
</tr>
<tr>
<td>Week 9</td>
<td>Andy Case (Written)</td>
<td>Kate Case (Animated)</td>
</tr>
<tr>
<td></td>
<td>Post-Case Self-Efficacy Scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-Class Observation</td>
<td></td>
</tr>
<tr>
<td>Week 10</td>
<td>Kalil Case (Animated)</td>
<td>Shari Case (Text)</td>
</tr>
<tr>
<td></td>
<td>Post-Case Self-Efficacy Scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-Class Observation</td>
<td></td>
</tr>
<tr>
<td>Week 12</td>
<td>Shari Case (Written)</td>
<td>Kalil Case (Animated)</td>
</tr>
<tr>
<td></td>
<td>Post-Case Self-Efficacy Scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-Class Observation</td>
<td></td>
</tr>
<tr>
<td>Week 12 - 15</td>
<td>Optional Interviews</td>
<td></td>
</tr>
</tbody>
</table>

Note: Data collection schedule based on class section and assigned case and mode.

I collected data over the course of eight weeks during this study from two sections of a special education course focused on trauma-informed instruction. In this study, each class completed the same four case-based learning activities.
**Quantitative Analysis and Coding Procedures**

In order to look for pre-service teachers’ potential growth in self-efficacy, I modified the Teacher Efficacy Scale (Hoy & Woolfolk: Short Form) to meet the needs of this study and to match the content being presented through the animated and written cases. From these modifications, I created the pre-service teacher trauma informed instruction sense of self-efficacy scale to collect quantitative data found in Appendix C. I administered the initial survey that included demographic background questions and the pre-service teacher trauma informed sense of self-efficacy prior to any case-based learning activities and the self-efficacy scale again after each case-based activity. Unfortunately, as a result of class absences and uneven survey response rates between classes, I was unable to analyze this data statistically.

**Qualitative Analysis and Coding Procedures**

To help clarify and support the quantitative data gathered through the self-efficacy scale, I collected qualitative data through observation and interviews. I conducted in-class observations while students watched an animated case or read a written case then discussed the cases in small and large groups. During observations, I took descriptive notes of in-class activities and used recording devices to record small group discussions. I utilized a constant comparative data analysis approach to code the qualitative data. Cresswell and Guetterman (2019) described this data analysis approach as a way to move from highly-specific to broad categories by taking multiple passes at coding the data. Glaser and Strauss (2017) explained the four states of constant comparative data analysis as: “(1) comparing incidents applicable to each category, (2) integrating categories and their properties, (3) delimiting the theory, and (4) writing the theory” (Glaser & Strauss 2017, p. 105). I began with a first pass of coding that consisted of identifying as many categories as I could in the observation notes and small group discussion
transcripts by following the constant comparative process Glaser and Strauss (2017) and Cresswell and Guetterman (2019) described in their texts. With the next pass, I was able to combine related codes into broader more representative categories allowing themes to emerge through the coding.

**Researcher’s Bias**

As I noted in my positionality statement (see Chapter I), I have close ties to this research as it is based on work I have done as an instructional designer. Specifically, I designed and developed the animated case-studies utilized in the research. In partnership with a special education faculty member, I designed and developed animated cases based on written cases about special education students who have experienced trauma. As an instructional designer, it was my hope that the animations would help bring the cases to life for pre-service teachers. While I have close ties to this work, as an instructional design, my goal is to evaluate the effectiveness of the learning experiences I designed. The design and development of animated cases is time consuming and can be expensive. As an instructional designer, I wanted to know at the most basic level, “Do these animations help prepare preservice teachers to implement trauma informed practices in their future classrooms?” I am deeply connected to the animations and proud of the work that went into bringing the cases “to life.” When I design learning activities for courses, my goal is always that the learning activities I design not only support students’ learning and help them achieve success in their courses but that these activities also create a positive learning experience that the students enjoy. In the more than 20 years that I have been an instructional designer, I have found the most neglected part of the instructional design process is the final evaluation. This evaluation is not assessing student learning but assessing how well the design or intervention worked in helping learners meet the objectives of the learning and looking
critically and holistically at the design. While I am proud of the work that went into the design and development of the animated cases used in this study, and as a designer, my goal is that I have made the best design decision for each situation, I truly was invested in the evaluation of this work. This research allowed me to look critically and holistically at the use of animated case-based learning.

**Generalizability and Limitations**

This study was designed to examine the learning experiences and perceived self-efficacy of preservice teachers at a mid-sized public university in a trauma-informed instruction course. The results are not generalizable to other populations, courses, or case-studies. I used a self-efficacy scale to examine preservice teachers’ perceived self-efficacy. As a result of class absences, I was unable to analyze the quantitative self-efficacy data in the ways that I intended. Thus, the quantitative data was used descriptively but inferential statistics techniques were not applied.

There are limitations in using a repeated measures design, Jhangiani et al. (2019) noted that carryover effects, practice effects and fatigue effects can occur in repeated measures designs due to participants being asked to repeat the same task multiple times. The authors define practice effects as a condition where participants getting better at the task from the act of repeating it multiple times and fatigue effects as a condition where participants grow tired of a completing a repeated task and score worse with subsequent tests (Jhangiani et al., 2019).

**Summary**

This study utilized an intrinsic case-study research design. Phase one of the study was broken up into two concurrent stages where I collected both qualitative and quantitative data
simultaneously. The analysis of the phase one data helped inform the qualitative data collection in phase two during semi-structured individual participant interviews.

   The first phase of the study included qualitative data from 40 participants through descriptive in-class class observations and small group discussion recordings. Quantitative data was collected from all 40 participants from self-efficacy scale surveys, but unfortunately only 22 participants completed all five surveys. In the second phase of the study, eight participants signed up for optional semi-structured interviews. The phase two interviews helped provide a clearer picture of the themes that emerged during the phase one data analysis.
Chapter 4: Results

The purpose of this study was to examine undergraduate preservice teachers’ learning experiences with different modes of case-based learning related to their perceived self-efficacy to provide trauma-informed instruction in their future classrooms. In the previous chapter, I described intrinsic case study research design, study participants and setting, instruments used for this study, data collection procedures, and data analysis. In this chapter, I will examine the collected data as it related to the learning experiences and self-efficacy of undergraduate preservice teachers with different modes of case-based learning.

To examine changes in participants’ perceived self-efficacy, I collected quantitative data using the preservice teacher trauma-informed instruction sense of self-efficacy scale based on the Teacher Efficacy Scale (Hoy & Woolfolk: Short Form) found in Appendix C. I gathered qualitative data on self-efficacy during participant interviews. Participants completed the self-efficacy scale at the start of the study, and after each of the four case-based learning activities as a post-test measure of participants’ perceived self-efficacy. To explore the learning experiences of participants while they were engaged in different modes of case-based learning, I collected qualitative data through in class observations, recordings of small group discussions of each case study, and semi-structured individual interviews. In the next sections, I will describe the case-based learning environment and the different sets of study participants.

Case-Based Learning Activities in a Special Education Course

I conducted this study in two sections an undergraduate special education course focused on trauma-informed instructional practices. Section A of the course met on Tuesdays and Thursdays at 9:30 a.m. while Section B met on Wednesday nights from 4:30 to 7:00 p.m. In observations, section A appeared to be much more engaged in the content of the course and had a
higher energy during class discussions than Section B. Participants in section B (the evening section) were absent more often than participants in Section A (the daytime class). Both classes took place in the education building on campus in similar classrooms with individual desks on wheels that helped facilitate group work. The professor planned the case-based learning activities for the second half of the class section. For each of the case-based learning activities, the course professor introduced the cases to the class, then participants watched the animated cases on the projection screen at the front of the room or read the written cases on their laptops through a link in the learning management system. After watching or reading the assigned case, participants broke up into pre-assigned groups to discuss the questions at the end of the cases.

Participants

In this study, I collected data from two sets of participants, classroom participants and interview participants. The classroom participants completed demographic and self-efficacy scale surveys at the start of the study and after each case-based learning activity. I observed this group of participants during case-based learning activities and recorded their small group discussions after each of the four case-based learning activities. The interview participants participated in 30-minute semi-structured interviews over Zoom. These two groups of participants were treated separately in the data; the larger group was used in phase one and the smaller group of interview participants (a subset of the large group) was used in the second phase of the study and took an in-depth look at the findings from the first phase of the study.

Classroom Participants

I identified 52 participants who were eligible for the study; of those, 40 participants consented to participate. Most of the participants in this study were undergraduate special education majors in their second-through-fourth year of their undergraduate program. Based on
participant responses to the initial survey, 27% were special education majors, 59% were special education and early grades education dual majors, 9% were special education and middle grades education dual majors, and 4% were early or middle grades education majors with a special education minor. Most of participants were third-year students (48%) while 34% of participants were fourth-year students in their final semester before student teaching, and 18% were second-year students. The majority of participants in this study identified as female (93%), while 7% of participants identified as male which is representative of the gender distribution of other special education courses at this institution.

As a result of absences from class, only 22 participants completed all five self-efficacy surveys (17 participants in Section A and 5 participants in Section B). Given these response rates, I was not able to compare the differences in self-efficacy between the two classes for each mode of case-based learning. However, I was able to use the survey data to look at the self-efficacy growth of individual students.

**Interview Participants**

At the end of the semester, I conducted one-on-one interviews with eight participants (see Table 2 for a description of participants’ majors, academic year, and prior field experience). I recruited interview participants through email and in class announcements from the pool of classroom participants who had completed all four case-based learning activities. Based on recruiting efforts, eight participants signed up for individual interviews. Two of the interview participants were enrolled in the evening section of the class, while the remaining six interview participants were enrolled in the daytime class. The participants demographic details are described in Table 2.
Table 2

*Interview Participants*

<table>
<thead>
<tr>
<th>Participant/ Pseudonym</th>
<th>Academic Year</th>
<th>Major</th>
<th>Previous Field Experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hannah</td>
<td>Second year</td>
<td>Early Grades/Special Education</td>
<td>Peer mentoring program in High School. Early field observational videos and in person observation.</td>
</tr>
<tr>
<td>Riley</td>
<td>Third Year</td>
<td>Middle Grades (Science Focus)/Special Education</td>
<td>Variety of field experiences in special ed, middle grades, and science education, K-20.</td>
</tr>
<tr>
<td>Ava</td>
<td>Fourth Year</td>
<td>Special Education/PK-12</td>
<td>Online and face-to-face field experiences in PK-12.</td>
</tr>
<tr>
<td>Emily</td>
<td>Second Year</td>
<td>Early Grades/Special Education</td>
<td>Early field observations PK-12. Online videos. Written Case Studies.</td>
</tr>
<tr>
<td>Hailey</td>
<td>Third Year</td>
<td>Early Grades/Special Education with an Autism Minor</td>
<td>Early field observations in person and videos, camp counselor for 7 years.</td>
</tr>
<tr>
<td>Isabella</td>
<td>Fourth Year</td>
<td>Special Education, Autism Minor</td>
<td>Special Education field experiences and early field experiences (observations and videos).</td>
</tr>
<tr>
<td>Olivia</td>
<td>Fourth Year</td>
<td>Special Education</td>
<td>In person and online field experiences in special education.</td>
</tr>
<tr>
<td>Emma</td>
<td>Fourth Year</td>
<td>Special Education</td>
<td>In person and online field experiences in special education. Video and written case study observations.</td>
</tr>
</tbody>
</table>

*Note:* This table describes the one-on-one interview participants.

The voluntary one-on-one interview participants represented a variety of special education majors and dual majors and academic years. These differences helped me get multiple perspectives about the case-based learning activities.
Overview of Qualitative Themes

For the first research question, *How do undergraduate preservice teachers compare the experience of learning through animated or written case studies?* two themes emerged: (a) group discussion dynamics and (b) student preference for animated cases. For the second research question, *In what ways do animated and written case-based learning activities inform preservice teachers’ perceived self-efficacy related to trauma-informed instruction?* one theme emerged regarding changes in participants’ self-efficacy.

Based on qualitative data analysis, participants viewed their learning experiences with the animated case studies more positively than the written case studies. Specifically, the results showed that participants engaged in more active discussions in their small groups when discussing the animated cases and had a better understanding of animated cases than written cases. When groups discussed the animated cases, they had longer and more collaborative discussions, and they focused on both the details of the case and collaborating on a solution to the questions posed at the end of the cases. In contrast, when groups discussed the text-based cases, they had shorter discussions that often-included periods of silence or typing, and they focused on finding the answers within the text of the written cases. I identified the differences in participants’ learning experiences in my observation notes and when I analyzed the small group discussion recordings and later confirmed what I found during one-on-one interviews. Each of these themes correspond to several subthemes which will be described in this chapter.
### Table 3

**Alignment of Research Questions, Themes, Subthemes and Data Sources**

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Theme</th>
<th>Sub-Theme</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do undergraduate preservice teachers compare the experience of learning through animated or written case studies? (Qualitative)</td>
<td>Group Discussions Dynamics</td>
<td>● Active Discussions</td>
<td>1:1 interviews</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Groups pulled answers to questions directly out of written case study.</td>
<td>Group Recordings</td>
</tr>
<tr>
<td></td>
<td>Benefits of Animated Cases:</td>
<td>● Able to visualize.</td>
<td>In-class observations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● More like a classroom observation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Reading pace</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Students processed information better with animation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Student Learning Preferences</td>
<td></td>
</tr>
<tr>
<td>In what ways do animated and written case-based learning activities inform preservice teachers’ perceived self-efficacy related to trauma-informed instruction? (Quantitative and Qualitative)</td>
<td>Changes in Self-Efficacy</td>
<td>● Refers to a strategy from an animated case.</td>
<td>1:1 interviews</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Applies course content to an animated or written case</td>
<td>Group Recordings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Participant expresses confidence in their ability to work with students who have experienced trauma or students similar to the ones presented in the case studies.</td>
<td>In-class observations Surveys 1:1 Interviews Group Recordings</td>
</tr>
</tbody>
</table>
### Table 4

**Overview of Qualitative Data Sources**

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations 1, 3, 5, 7</td>
<td>In-class observations of written case-based learning activities for Andy and Shari cases.</td>
</tr>
<tr>
<td>Observations 2, 4, 6, 8</td>
<td>In-class observations of animated case-based learning activities for Kate and Kalil cases.</td>
</tr>
<tr>
<td>Small Group Recordings 1, 3, 5, 7</td>
<td>Small group discussion recordings of group discussions about written case-based learning activities for Andy and Shari cases.</td>
</tr>
<tr>
<td>Small Group Recordings 2, 4, 6, 8</td>
<td>Small group discussion recordings of group discussions about animated case-based learning activities for Kate and Kalil cases.</td>
</tr>
<tr>
<td>Interview, Participant Pseudonym</td>
<td>One-on-one semi-structured interviews.</td>
</tr>
</tbody>
</table>

*Note: Overview of Qualitative Data sources referenced in this chapter.*

This table describes the data sources used in this study. I conducted odd numbered observations and small group discussion recordings (1, 3, 5, and 7) during written case activities and even number numbered observations and small group discussion recordings (2, 4, 6, and 8) during animated case activities. I conducted interviews during the second phase of this study and assigned each participant a pseudonym. I have cited each of the appropriate data sources in the following discussion of results.

**Data Triangulation**

To develop these themes, I triangulated three sources of data that supported each theme. I used a constant comparative approach to code the qualitative data from in-class observations, small group discussions, and one-on-one unstructured interviews. I completed three reviews of each data source and with each review I continued to refine and reorganize the codes. After coding was complete for all three data sources, I identified several common themes that appeared across each of the data sets. For example, the group dynamic discussion theme triangulates the code “active discussion of the solution amongst group members” from small group discussion
data, the code “group discussion quality” from one-on-one interviews, and the code “group was engaged in an active discussion” from in-class observations. I will share examples from different data sources as I describe each of the themes. I have organized the discussion of the data for this study by two research questions: (a) undergraduate experiences with different modes of case-based learning and (b) case-based learning and undergraduate preservice teachers’ perceived self-efficacy.

**Undergraduate Experiences with Different Modes of Cased-Based Learning**

To answer the first research question: “How do undergraduate preservice teachers compare the experience of learning through animated or written case studies?”, I examined the learning experiences of undergraduate preservice teachers while they engaged in different modes of case-based learning activities. Three themes emerged from the qualitative data that help answer this question: (a) group discussion dynamics, (b) benefits of animated cases, and (c) student preference for animation.

**Group Discussion Dynamics**

During this study, for both modes of case-based learning activities, participants worked in small groups to answer several questions at the end of the case that required participants to analyze case information and apply strategies from the course to the cases. The course instructor designed the case studies and follow up questions to help participants practice applying what they are learning in their courses to realistic classroom situations. The groups’ discussions after the animated and written cases had several differences that changed the flow and quality of the discussion.

During animated cases, participants focused on the animation on the projection screen. While the animation played, some participants took notes on a laptop or notebook while others
simply watched and listened (Observations 2, 4, 6, and 8). During the written cases, participants read quietly from their own devices, completing the reading at different rates (Observations 1, 3, 5, and 7). With both modes of cases, participants moved into their small groups to discuss the case after watching or reading the assigned case. Participants engaged in more active discussions when they discussed animated cases compared to when they discussed written cases; this trend was evident in small group discussion recordings, in-class observations, and one-on-one interviews. Two sub-themes emerged related to group discussion dynamics: (a) active discussions and (b) group tendency to pull answers directly from written cases.

**Active Discussions.** During small group discussions, the animated case discussions were longer and included more active discussion (Observations 2, 4, 6, and 8, and group discussion recordings for Kate case 1 and 2 and Kalil case 1 and 2) while the written case discussion recordings included a lot of dead air or typing (Observations 1, 3, 5, and 7 and Discussion Recordings for Andy case 1 and 2 and Shari case 1 and 2). For this study, I define active discussions as discussions where participants engaged in a natural conversation pattern with an exchange of ideas related to the question they were answering. Participants in some of the active discussions engaged a debate about the solution or worked together to find an agreeable solution to the problem. In contrast, inactive discussion segments did not involve a give and take of ideas or conversational flow but instead centered around re-reading the case trying to find an answer or a single student typing and verbalizing and answer they found. For example, this active discussion segment was part of a discussion about Kate’s strengths and needs. Kate’s case involves a fifth-grade student (Kate) who appears to be experience neglect. In the case, Kate has no reports of problems at her current school, but she has been isolating herself at school, and spacing out in class sometimes not responding to her teacher. In this example, Group 9 had the
following active discussion while they worked on answering a question about Kate’s strengths and needs (Discussion Recordings Kate, Group 9):

Participant 37: “She’s a good reader, right?”

Participant 38: “Yes. Yes, [but] they’re not sure because [she] just keeps reading the same book.”

Participant 37: “Yeah okay.”

The group started by recalling facts from the case as they work through answering the question about Kate’s strengths and needs, there was a natural flow and give and take in the conversation. At this point in the discussion, the group might have concluded that reading was one of Kate’s areas of needs, but another group member introduced helpful information to move them forward:

Participant 39: “Yeah, but, you know, at one point they say one of the subjects is above grade level.”

Participant 40: “Yeah, they said, she's on 7th grade reading [level].

Rather than move on, Participant 39 agreed with the facts her group members have presented, then added additional details from the case that documented that Kate’s reading level was above grade level:

Participant 37: “Okay. She [the teacher] said her memory was bad right? “

Participant 38: “Yes, she [the teacher] brought up the spelling tests, she [Kate] was struggling with those.”

Participant 39: “Yeah. And also, they said if [the teacher] asked her a question, it was like, nobody was there. If she [Kate] wanted to answer, she really was capable of doing it…”

Participant 38: “It's not like there was a language [barrier].
Participant 40: “Yeah, she understood.”

Participant 39: “Yeah, it just depends on the question.”

Participant 38: “Right, she's mostly, in terms of behavior, she's [seems like she’s] in outer space most of the time.”

After agreeing on Kate’s strengths, the group successfully recalled details from the case that pointed to Kate’s needs. When one participant raised Kate’s memory as an area of need, participant 38 agreed and added facts from the case that documented Kate’s memory issue (her spelling test performance). A similar pattern occurred when participants discussed Kate “zoning out” (Discussion Recordings Kate, Group 9):

Participant 40: “I guess the teacher, should know? I mean, now that the teacher does know what's going on at home. How she's actually alone most of the time. I think they also need to know more about like what she's seen, I guess because I don't, they don't really talk about that too much or like.”

Participant 39: “Yeah, yeah. I mean, they didn't [know], they [talked about] what will bring it out.”

Participant 37: “And [the teacher wondered] What, what can I do to help?”

The exchange of ideas and recalling facts from the animation, helped the group move forward towards an answer. In this discussion segment, participants in Group 9 successfully worked together to identify Kate’s strengths then moved on to discuss Kate’s needs referring again to facts from the case (Kate Discussion Recording, Group 9).

Another active discussion example was found in Andy’s written case. In Andy’s case, school personnel are meeting to discuss some concerns about Andy’s recent behavior. Andy is a ninth-grade student who has exhibited signs of ADD (attention deficit disorder) and EBD
(emotional behavioral disorders) since he was in first grade. In this written case study, Andy’s team is meeting to discuss their concerns about Andy after he attacked a cat on school grounds and hit another student who attempted to stop him. Both behaviors are out of character for Andy. In this case, teachers are discussing their concern about Andy hiding his drawings. While participants discussed the issue of forcing Andy to show his drawings to teachers, Group 4 engaged in an active discussion to come to consensus on a solution before moving on.

(Discussion Recording Andy, Group 4):

Participant 15: “I guess for the last question... I don't think the school should force Andy to share his drawings, but I think that, maybe if the counselor and him develop a better bond or if the aide is in the art class with him, [and] asks to see it [the drawing] [or] maybe one of the people that he trusts more and is close with, he'll show them, you know what I mean?”

Participant 16: “Yes. I think it would be beneficial to see them.”

Participant 17: “You know, I think definitely try to find a way to be able to see the drawings because that obviously he's hiding something.”

Participant 16: “Yeah. And that can be the trigger. But I think...you can’t... forcing him won't, will lose all the trust because I think some of the teachers have been good [at building] trust...the aide and [art teacher] work well with them. But I think forcing him to lose all of that, you lose that, you're going to be back at square one.”

Participant 15: “I agree. Does anybody have anything else?”

Participant 17: “Yeah that's good.”
Group 4’s discussion about forcing Andy to share his drawings was brief but active. In this segment, group members took turns sharing their thoughts and ideas while they worked to come up with a response to the question. They recalled some facts from the case (that the classroom aide and art teacher work well with Andy) and apply what they recall from the case to their answer while they come to an agreement on the group’s response.

In contrast to the examples above, a discussion segment for Group 2 about Shari’s written case lacked both focus and an active exchange of ideas. Shari’s case is about a 10-year-old child who has Down Syndrome. Shari attends fifth grade in a general education classroom but has been having tantrums about going to school even though she previously has enjoyed going to school. This discussion segment focused on answering the question, “Who else should be involved in Shari’s case?” The case study included details about Shari’s current team and a list of attendees at the meeting her team was having as a result of recent concerns about her behaviors (Discussion Recordings Shari, Group 2):

Participant 6: (reads the question from the case) “Who else should be involved in Shari's team at this point?”

Participant 7: “What? What? What? The tone starts with, like, they're all ‘I'm sorry for your loss.’ [Shari’s mom] needs help and talks about how it's been challenging and the changes because the grandparents who didn't...”

Participant 8 (cuts in): “…it started out there and people were fairly sympathetic towards Shari’s mom and not necessarily Shari herself.”

Participant 7, appeared to ignore the question Participant 6 asked and instead answered a different question while Participant 8 cut in also attempting to answer that question instead of the question that Participant 6 asked (Discussion Recordings Shari, Group 2):
Participant 6: “Yeah, who else should be involved in the team? Should we include the grandmother?”

At this point, Participant 6 tried to refocus the group’s attention on the question that she asked initially by asking the same question again without acknowledging the other group members’ responses (Discussion Recordings Shari, Group 2):

Participant 9: “Yeah. If she’s living in the house, they should probably be there at home, because she's living in Shari’s [house] and just playing a key role.”

Participant 6: (moves on to the next question) What are some strategies that the team could implement to support Shari?”

In contrast with Group 9’s discussion on Kate’s strengths and needs, Group 2’s discussion on who should be involved in Shari’s team lacked collaboration and seemed rushed. By the time the group got back around to trying to answer the first question that was asked, one group member answered but there was no discussion or follow up responses. The recording of Group 2’s discussion showed that group members appeared to be working on different questions simultaneously then moved on to new questions without any active discussion or give and take amongst group members (Shari small group discussion recording 1, Group 2).

While participants engaged in active discussions for both modes of cases, there was a difference in the frequency in which active discussions occurred. The code “Active Discussion Amongst Group Members” was applied 54 times to animated case discussions compared to 28 times during written case discussions. Analysis of small group discussion recordings show that participants engaged in more active discussions while discussing the animated cases compared to the written cases.
When participants engaged in active discussions of these complicated cases, they shared important facts from the case with each other and interpreted those facts based on their current and prior classes and field experiences which provided multiple perspectives. Those multiple perspectives were pulled together to come up with a collaborative solution. Without active discussion, groups lost the benefit of viewing these complicated cases through multiple perspectives and instead viewed the case through their own perspective. Interview participants comments support this finding.

Interview participants’ comments related to discussion differences corroborated what I had observed in class and heard in the small group discussion recordings. Most of the participants (Ava, Emma, Hailey, Hannah, Isabella, and Olivia) made comments that focused on the quality and ease of the group discussion when they discussed animated cases compared to their discussions about the written cases. Participants noted a trend where the group conversations after animated cases were easier and longer whereas participants focused on looking up answers in the case during the discussions about the written cases. Ava, a fourth-year special education major, spoke about the length of the discussion and the ease of recalling facts from the animated cases (Interview, Ava):

I think honestly, [with] the animations we took longer because we were more in depth, but we had the information quicker [be]cause we were jotting down notes. And I think, since it was what we had put down on the paper, it was more helpful because with the paper ones we were kind of scrolling through a little bit more to look back on things instead of our own notes and we kind of depended on what was on the paper to look back on instead of our own notes. (Ava Interview)
Ava’s comment supports the differences that I observed in the small group animated and written case discussions (observations 1-8, and small group discussion recordings 1-8). Ava cited the ability to take notes during animated cases and refer back to them as a reason the discussions were more in depth compared to the written case discussions where her group was scrolling through the case to find the details of the case. The difference in her group’s approach to answering questions based on the mode of the case meant a different in discussion quality for Ava’s group. In this group, the discussions related to animated cases were longer and easier because group members relied on their memories and notes they jotted down about the case rather than using their time to scroll back and hunt for details in the written case which detracted from the group’s ability to have a fluid in depth conversation. Ava’s comment about her group scrolling to find details in the written cases relates to the next subtheme of the group pulling the answers directly from the written case.

**Group Pulling Answers Directly from Written Case.** Participants discussing written cases had a higher tendency to look for and pull answers directly from the written case. This practice limited the potential for a group to engage in an active discussion of the questions as it interrupted the flow of the discussion and exchange of ideas (small group discussion recordings 1, 3, 5, and 7, in-class observations 1, 3, 5, and 7). For example, while discussing Andy’s written case, Group 1 appeared to struggle to come up with a response to a question about Andy’s behavioral intervention plan. Some participants went back to the case and read directly from the case, while another participant typed an answer while she partially verbalized the answer she typed. The resulting discussion appears to be disjointed and is difficult to follow (Discussion Recording Andy, Group 1):
Participant 1: “So first question, what are your thoughts on this discussion in relation to the changes in behavioral intervention plan or is there anything you would add?”

Participant 2: “So, did they talk?”

Participant 3: “I think they talked about adding in time with the school counselors.”

Participant 1: “They talked, I thought they talked about, um, having further testing done by the school counselor, but I don't think they talked about the counselor.”

Group 1 began their conversation about Andy’s case by trying to clear up some confusion they had over the details of the case. In this segment they were unsure if there was a recommendation in the case to add time with the school counselor for Andy (Discussion Recording Andy, Group 1):

Participant 3 (reads directly from case): “It said that the behavior plan doesn't allow for time with me, although I have not formed one on one relationships. He seems to work okay for me when I come into the class.”

Participant 3 scrolled through the case to find the details to clear up this confusion about what was already recommended for Andy (Discussion Recording Andy, Group 1):

Participant 1: (typing answer while talking): “if they're not already implementing that, that's something they can implement…” (stops talking, while still typing)

Participant 1: “time” (stops talking, while still typing)

Participant 1: (typing while talking): “And I think when he's with a school counselor or psychologist…(stops talking, while still typing)...you can go [to] art.”
After Participant 3 cleared up the confusion about the counselor’s role in Andy’s case, Participant 1 formed an answer for the group while she typed. At the point, the group has stopped having an active discussion or exchanging ideas.

Group 1’s choppy conversation style demonstrates how group members relying on looking for answers in the written case interrupt the flow and interactive exchange of their discussion. Group members began to attempt to answer the question but rather than rely on their memories of the facts of the case, they focused on pulling details directly from the case. After Participant 3 read directly from the case, rather than engage in an active conversation, Participant 1 began to type a response from the group while she partially verbalized that response, drifting in and out of speaking aloud and typing without speaking. In doing this, Participant 1 had inadvertently removed her group from the conversation and from collaborating on a response.

A similar example came up during a discussion about Shari’s written case about the tone of the meeting, Group 6 went back and forth between reading directly from the case and typing responses without engaging in an active discussion of the question (Discussion Recordings Shari, Group 6):

Participant 23: “OK, what is the tone of the meeting, do you agree with the tone of the meeting, why or why not?”

Participant 23: “Why? I think. (Lots of typing) I know...

Participant 24: “I think moving forward, she should be. But I know for me it was good that she wasn't there, so I think the tone was good.”

This segment provides another example of what happened when participants looked back at the written cases while attempting to have a group discussion. Participants 23 and 24 are attempting
to answer the same question but there is no fluid exchange of ideas between the two participants

(Discussion Recordings Shari, Group 6):

Participant 25: “It's just that the only thing that I thought was weird was when they said
(reading), ‘We're going to work really hard to get the old Shari back.’”

Participant 23: “Yeah...(typing)...I didn't like when she said that. And didn't it say...
(typing)...Yeah. Yeah.”

Participant 24: “Oh, yeah. Where was that? (reading case quietly)”

These three participants continued to focus on the tone of the meeting while expressing some
confusion about the facts of the case and looking back to the case for clarification (Discussion
Recordings Shari, Group 6):

Participant 25: “Yeah. Like, the general education teacher, yeah, it says, (reads Mrs.
Riley Shari’s teacher, just walks in and says hello to Shari and her family
and says "please know we will work very hard to get the old Shari
back…”"

Participant 24: “But she wasn't there for the whole meeting…”

Participant 23: “All right, (reads from case), "so then what are some strategies the team
can implement to support Shari both at home and at school?”

Group 6’s discussion about the tone of Shari’s meeting was similar in structure to Group 1’s
discussion about Andy’s case. Participant 23 can be heard typing an answer to the question while
partially verbalizing that answer, but the group never engages in an active discussion of their
solution and also failed to actually answer the question directly before moving on to their next
question. This pattern continued in their discussion for the remaining questions about Shari’s
case.
Interview participants confirmed that during the written case discussions, many groups were going back to find the answers in the cases. Hannah described how her group worked with the written cases, “I can remember with the readings especially, we had to go back and either finish reading or look at some of the key details in the text to answer the questions” (Hannah Interview). When asked about the differences in how her group worked with each mode of the cases, Ava also noted a similar trend, “With the paper ones we were kind of scrolling through a little bit more to find things [answers] instead [using] of our own notes” (Interview, Ava). Emily confirmed what Hannah and Ava shared in her comments about her group working with different modes of cases, “For the reading, I would just go look back at the reading when we were discussing it as a group because it was already written down and I could look back at it” (Emily Interview).

In addition, during the written case discussions, there was less discussion amongst group members to identify a final answer to some questions (Group Discussion Recordings, Andy Case Study and Shari Case Study). Participant comments during the group discussions indicate that the participant who volunteered to record the group’s responses was in some cases just answering the questions without collaboration often reading quietly while they typed the response without seeking input from their group. Interview participants also described differences in the way their groups worked together based on the mode of the case they discussed.

Several participants spoke about the differences in their groups’ discussion between the animated cases and written cases noting that the discussions were longer and more natural with the animations but that the discussions for the written cases focused more on pulling the answers
out of the written case document. For example, Hailey commented on the differences in the
discussions for their group between the animated and written cases:

I think our group was able to have more of a conversation, and we weren't busy looking
back at the paper like [we were with] the written text. When we had the video, we were
all, I think majority of us were able to think back easier to what the video said. But, when
we had the text [written case study] we would go back and then, be like, ‘oh, actually, it
was like he wasn't in seventh grade, he was in first grade.’ (Interview, Hailey)

Hailey’s comments mirrored small group discussion recordings when participants discussed the
written cases. When Hailey spoke about looking back at the written case for answers, her
comments explained the gaps in conversation that I observed during in class observations of
small group discussions (Observations 1, 3, 5, and 7). In contrast to the more active discussions,
Hailey talked about the problems that occurred when group members misunderstood the details
of a written case. Several groups struggled to maintain active discussions during written cases,
their struggles were evident in small group discussions (Discussion Recordings 1, 3, 5, and 7).

The small group discussions of the written cases included several quiet periods and
segments of that involved a lot of typing while one student quietly verbalized what he or she was
typing (Recordings 1, 3, 5, and 7). Isabella, a fourth-year special education major with an autism
minor, discussed the differences in her group’s discussion based on case mode. Her comments
confirmed these differences:

For the animated case, I think we discussed more, I think, because we couldn't go back
and reread. I mean, you could go back and re-watch a certain spot. But I think we were
all just discussing the video in its entirety. Whereas with the written case, you were just
pulling what you needed for the answers to the questions that were being asked.

(Interview, Isabella)

Isabella talked about the group going back to find the answers in the written text. This trend was also picked up in small group discussions of written cases where the discussion would become quiet while group members searched the case for an answer (Discussion Recordings 1, 3, 5, and 7). This contrasts with Isabella’s description of what occurred when her group discussed an animated case. When Isabella spoke about group discussions for animated cases, she pointed out that her group discussed the “video [animation] in its entirety” (Interview, Isabella). Small group discussions data mirrored Isabella’s observations (Discussion Recordings 2, 4, 6, and 8). In the small group discussion data, I applied the code “group member reads directly from written case” to excerpts from written case discussions 35 times. Even though the animated cases were available for participants to rewatch in the same way the written cases were available for participants to re-read, no groups went back to replay an animation in the middle of their discussion (Discussion Recordings 2, 4, 6, and 8).

Participant interview comments, small group discussion recordings, and in-class observations confirmed difference in the group discussion dynamics between animated case discussions and written case discussions. Based on the analysis of group discussion, participants benefitted in several ways from the animated case studies.

Benefits of Animated Cases

Several subthemes emerged that point to the benefits of learning from animated cases over written cases. While previous researchers have shown that case-based learning has positive benefits for learners (Florez, 2011; Gravett et al., 2017; Gunn & Williams, 2015; 2007; Shin et al., 2019), the animated cases had additional perceived benefits in this study. During small group
discussions and one-on-one interviews, participants indicated that they had an easier time processing information from the animated cases, were better able to visualize the case with animated cases and did not have to worry about different group members rates of reading when viewing animated cases (Discussion Recordings 2, 4, 6, and Hailey, Emma, and Hanna Interviews). I will describe each of these subthemes in further detail in the next sections.

**Processing Information in the Cases.** While answering questions at the end of a case study, participants were able to recall facts from the animated cases easier than from the written cases. This was evident during small group discussions for both modes of case-study. During animated case discussions, participants had more collaborative discussions where they recalled facts from the animated case from memory and actively discussed the questions (Discussion Recordings, 2, 4, 6, and 8, Observations 2, 4, 6, and 8). In contrast, participants often struggled to recall case details from memory and relied on reviewing the written case to look for answers, during the written case discussions (Discussion Recordings 1, 3, 5, and 7 and Observations 1, 3, 5, and 7). For example, during Group 1’s conversation about the Shari written case, group members expressed confusion about who should be involved in Shari’s case (Discussion Recording Shari, Group 1):

Participant 1: “Yeah, I don't know. And the details of it...(pauses)...so talking to, an actual therapist, licensed therapist - would probably help more just because she is going through a lot of change in her life.”

Participant 2: (agrees) “Yeah, right.”

Participant 1: “Yeah. It's not even really introduced in the beginning, if the counselor was even, like, seeing Shari.”
Participant 3: “Yeah, I was just a bit confused on that. Yeah, he's there, but it's not indicating, ‘I've talked to your daughter about this. Your daughter's come to see me about this.’”

Participant 2: “Yeah. I feel like she's [the counselor] there just to fill the spot. That's why I feel like we're, like, missing parts of this meeting. Because I don't know, if that's how it ends off [sic].”

In this discussion, participants were trying to answer a question about Shari’s case and make a recommendation, but they got stuck on what they perceived as confusing details about the case. In the recording, they can be heard quietly going back to re-read the case and look for answers but their response to the question centered more on their confusion about the case than recommendations they had for who should be involved in Shari’s case (Discussion Recording Shari, Group 1).

Participants in Group 7 had similar confusion when discussing what should happen when Andy (written case) returns to school. Rather than focus on a solution, the discussion focused on group members trying to recall the details of the case (Discussion Recording Andy, Group 7):

Participant 29: “Did they talk about adding in time with the school counselors?”

Participant 30: “They talked, I thought.”

Participant 31: “I know they talked about, um, having further testing done by the school counselor, but I don't think they talked about any other time with the counselor.”

Participant 29: “I think they should have said that it's not [part of his plan].”

In this example, a member of Group 7 did eventually go on to suggest an answer to the question, but the group as a whole was unsure of the details of the Andy’s case (Discussion Recording
Andy, Group 7). Similarly, a participant from Group 3 could not recall if Andy’s classroom aide identified as a woman or a man, questioning, “Was it Miss Ho or Mister Ho?” (Discussion Recording Andy, Group 3, Participant 14). While the gender identity of the classroom aide did not impact the case or the discussion, the character Mr. Ho was a key character in Andy’s case and was referenced by name eight times in the case text. Participants’ confusion about case details appeared more frequently in the written case discussions compared to the animated case discussions even though it was easier to go back and check the details of the written cases. Participants discussing Shari’s case expressed similar confusion over the roles each character played in the case. For example, in Group 2’s discussion about Shari’s case, group members could not remember who had calmed Shari down when she was upset (Discussion Recording Shari, Group 2):

Participant 6: “I thought it was her grandmother? Is it her mother?”

Participant 7: “I think it says it’s her mother?”

Participant 6: “Oh, does it?”

Participant 7: “Sorry. No, the question says ‘grandmother’, but in the case study, I think it says her mother.”

Participant 8: (quietly reading from the case), “I think it's says, "My mother eventually calmed her down...."

Participant 7: “Ohhhh, you're right!”

The participants in Group 2 could not remember who calmed Shari down which impacted their ability to answer the question from the case, “Why does Shari’s Grandmother’s strategy work to calm Shari down?” To answer that question, participants needed to recall what Shari’s grandmother did to calm her down and apply what they have learned in class to answer the
question. In the written case, Shari’s mother indicates that Shari’s grandmother is the only person who can calm Shari down and that she does this by rocking Shari (Shari’s case text, Appendix H). The group’s discussion got side-tracked over confusion about who calmed Shari down. Rather than answer the question about why Shari’s grandmother’s strategy worked, they tried to figure out who calmed Shari down (Discussion Recording Shari, Group 2). After clearing up their confusion, group members made some suggestions about why Shari’s grandmother’s strategy worked (Discussion Recording Shari, Group 2).

During a one-on-one interview, Emma, a fourth-year special education major discussed the differences in how she learned with the animated case studies compared to the written case studies. She highlighted that that she had an easier time identifying strategies to answer questions with the animated case studies:

So definitely, the videos [animations] again … I was able to see how the process went, starting from when an issue got brought up with the student, and then how they went through everything and what they did rather than just reading it. And I felt like it was a little bit easier when watching the case studies, being able to figure out strategies after and answering the questions was easier for me with the videos. I was still able to answer them with the written case studies, but it was just easier after seeing it in front of me.

(Interview, Emma)

Emma’s comment about how animated cases helped her to see the case more easily than the written cases even though she was able to answer the questions for both supports that she was able to process the information better in the written case.
When asked about her personal learning style, Olivia, a fourth-year special education major, discussed her preference for hands-on experiences and explained why she preferred the animated case studies:

So, I do really like hands-on experiences, like watching the videos [animations] like we did in class. The [animated] case studies those I thought were great, but then I found it harder when it was the [written cases]. So, when I watch videos [animations], that's much easier for me than [written cases] I don't know why, but I think it's [be]cause, if I read something, it kind of goes in one ear, and out the other. (Interview, Olivia)

Olivia was direct in her comments about why she preferred the animation. She indicated that her personal learning preference was for hands-on activities, and she spoke about having trouble understanding the cases when she read them (Interview, Olivia). Olivia’s learning preferences represent the majority of participants learning preferences in this study. In the initial survey, participants were asked to identify their preference for content format based on the following choices: reading a physical text, reading a digital text, listening to an auditory text, watching a video, or other, please describe. Based on participants’ responses, 72.5% of participants selected “watching a video”, 12.5% of participants selected “reading a physical text”, 7.5% selected “reading a digital text”, 5.5% selected “listening to an auditory text”, and 2.5% selected “other” indicating a combination of video and text. Participant responses indicated they had a strong preference for video-based content (Survey).

Emma and Olivia’s interview comments demonstrated that participants perceived they had an easier time understanding, or processing, the case details when they watched animated cases compared to when they read written cases (Interviews, Emma and Olivia). Participants confusion over case details caused problems in group discussions; this may be connected to
participants’ preference for video content over written comment that was identified in the initial survey (Survey, Discussion Recordings, Andy and Shari). The examples above highlight a trend in the small group discussions of written cases where confusion about one or more of the case details changed the focus of the discussion away from answering questions. In some instances, the group did attempt to answer the question that was asked, while in other instances the group simply moved on to the next question. For small group discussion data, the code “confusion about case details” was applied to excerpts from written cases 19 times but only applied to excerpts from animated cases 6 times.

Participants Were Able to Visualize the Case. Participant comments highlighted the benefit of the animations helping them visualize the case and one participant noted that the watching the animations were similar to observing a class. In response to an interview question about how the differences in learning from animated cases and written cases, Hailey, a third-year dual major in early grades education and special education explained:

[with the animations we were] being able to see what's going on. And then, in a class not that it's in a real classroom, it's a virtual one, but it's like, ‘Oh, like this does happen in a classroom.’ It's easier to connect it because you're like seeing it in like the school walls.

(Interview, Hailey)

Hailey spoke directly to the animated case studies helping her picture what the case would be like in a school setting noting that even though it’s a virtual classroom.

When asked if she had a preference for either mode of case study, Emma, a fourth-year student reflected on her ability to visualize the case when she was answering questions in her group at the end:
I'm better with watching the video [animated case] because I didn't need to take notes because I was seeing it happen. That's at least how that's how I am. I know some students have to take notes on the video [animated case], but I was able to visualize it in my head when looking at the question. (Interview, Emma)

Emma noted that the animated case studies helped her visualize the case in her head while she was answering questions in contrast to her needing to take notes with the written cases to help her remember what was happening and help her answer questions.

When asked if there were any differences in the way she learned with the animated cases and written cases, Hailey spoke to why the animated cases were easier for her to process:

For me with video [animated cases] specifically, I think it's because they're voiced differently, each character has a different voice [and] I'm able to recall, oh, that one said this, this one said that rather than like with writing, I [would] have to go back and read it a couple of times. It's the audio that kind of sticks in my head for a little bit longer.

(Interview, Hailey)

Both Hailey and Emma’s comments point to the benefit of the animations in helping them visualize the case in a real-world context and process what is happening in the animated cases easier than with the written cases.

In contrast, comments related to the first written case (Andy) highlighted participants’ struggles to visualize what was happening in the case. In Group 3’s discussion on Andy’s case, participants grappled with how to answer a question about the case. Group members’ comments in the discussion demonstrated that it was hard to keep track of the people in the case (Discussion Recording Andy, Group 3):
Participant 11: “Yeah. You know what? I feel like it was hard to remember which person was which.”

Participant 12: “Yeah, every time I was reading, I was like, ‘I don't know which one was that?’”

Participant 13: (agrees with participants 11 and 12) “Yeah, so I was just trying to figure out who was who, you know.”

For that part of the discussion, Group 3 failed to come up with an answer to the question and simply moved on to the next question. If Andy’s case was animated, based on interview participant comments the ability to see and hear the characters in the case, could have helped group members focus on the details of the case, and answer the question. (Interviews, Emma and Hailey)

**Differences in Rate of Reading.** During observations, participants finished reading the written cases at different rates (Observations 1, 3, 5, and 7). Some participants appeared to read quickly then would shift their focus to their phone, or to quiet conversation with a friend while others continued to read. Participants engaged in limited notetaking while reading the cases (Observations 1, 3, 5, and 7). Group discussions that require students to read a case-study or article can create a situation where some members of the group may require more time than others to read and process the material. Hannah spoke to this issue during her interview when asked if she had a preference for either mode of case-based learning:

I would definitely say the videos, the animations were more helpful. Personally, reading a certain amount of pages in a given time; I don't always get to comprehend everything that I read [be]cause I feel like I have to stay at a certain pace to get through it. So, I definitely
thought that the animation helped me understand those certain components that we needed, and I did clearly understand the [animated] case study. (Interview, Hannah)

My in-class observation notes supported Hannah’s comments about trying to get through reading materials in a certain amount of time (Observations 1, 3, 5, and 7). While the course instructor did not impose a set time limit for students to read the case in class, there were clear differences in participants’ reading paces (Observations 1, 3, 5, and 7). Those differences may create the illusion of an unofficial time limit for participants who read at a slower pace than other group members. My observation notes indicated that the room was quiet as participants read cases, some participants took notes while they read, while others focused quietly on their laptops (Observations 1, 3, 5, and 7). Participants who completed the reading early or who had possibly only skimmed the reading shifted their focus to their phones (Observations 1, 3, 5, and 7). As additional participants completed the reading, quiet conversations popped up around the room while the remaining participants continued reading. As the conversations grew, the course instructor let the class know that when they had finished reading the case, they should move into their small groups and begin the discussion (Observations 1, 3, 5, and 7). The small group discussion recordings point to varying differences in participants’ understanding and remembering of the details of the written cases which could be a result of participants not getting through the full reading or rushing to try to keep up with other group members (Discussion Recordings Andy and Shari).

**Participant Preference for Animated Cases.** As mentioned above, 72.5% of participants in the initial survey indicated a preference for learning from video content over other forms of content (physical text, digital text, or audio text). In this study, participants indicated that they preferred the animated case over the written cases. Participants’ preferences were
evident in interview comments and in their small group discussions where participants appeared
to process the information from the animated cases better than they processed information from
the written cases.

Riley, a middle grades education and special education dual major discussed his
preference for animations in a one-on-one interview (Interview, Riley). When asked if he had a
preference for either mode of case-based learning, Riley said the following:

So, I enjoyed the animations better. I feel like in the real world or like in the classroom.
You're gonna [sic] be sitting there observing things as they're happening. You're not
going to be reading about them. So, I found that [they] could be more realistic. And I felt
like I gathered more information from the animations than the readings. Sometimes I feel
like I'd reread it several times, just to make sure I caught everything. Whereas [with] the
animations? Is mostly. Just watch it once, and I got everything. (Interview, Riley)

Riley’s answered highlighted several ways the animated case studies were a better fit for his
learning preferences. Riley compares the experience of classroom observation to either watching
an animated case or reading a written case noting that you are in the classroom observing things
live not reading about it. He also spoke to being able to process the information better with the
animated case, “I felt like I gathered more information from the animations” (Interview, Riley).
In his last comment, Riley made note of another difference he had in processing or understanding
the case when he mentions having to reread a written case several times compared to when he
watched the one time and “I got everything” (Interview, Riley).

Riley’s final comments provide a rationale for his preference for the animated cases.
Riley compared the differences in his ability to process information for both written and
animated cases noting that with the animated cases that he got all of the information he needed at
once. In post-case discussions, participants’ abilities to process the information more easily the first time through could help foster a stronger more active group discussion.

Emily, an early grades education and special education dual major, also indicated a preference for the animated cases over the written cases, when she answered a question about her preferred learning style:

I do prefer visual learning in that case because it’s more fun to see and understand what’s going on when I can actually visualize it instead of reading. The one I don't like the most is probably just audio; I have to have something else than just audio. So, I did prefer the videos [animated cases] and preferred them because you kind of got to see it, acted out instead of just kind of reading a play script. You got to see each character and what they kind of like, and you would [see], the home and the classroom and like how the students would act as well. (Interview, Emily)

Emily first talked about her personal preference for visual learning activities then explained why she preferred the animated cases. Emily pointed out that the animations helped her see the characters and their actions compared to having to read it which she indicated made it harder to visualize the case (Interview, Emily).

Ava talked about learning best from scenarios and real-life examples. She shared that she was somewhat surprised that she preferred the animated cases:

So, I normally would say I'm a hands-on learner, but I think in college I've benefited most from like scenarios and real-life experience. I don't do well with PowerPoint presentations and note taking. I mean, it gets the information in but for me to retain it normally like I do best when teachers are putting in examples of like what's done in the classroom, I would say. I think I ended up preferring the animations more. I thought I
wasn't going to but since we were able to take notes while we were watching them, that helped me a lot more because I could see what was going on. (Interview, Ava)

Ava’s preference to learn from scenarios and real-life experience made the animated cases a better fit for her than the written cases. She added that her ability to take notes during the animation in combination with being able to see what was happening helped her process the cases. During group discussions, Ava was able to use the notes she took during the animated cases to better contribute to the discussion efficiently. Like Riley and Emily, Ava’s ability to learn better and process the information better during the animated cases spoke to her overall preference for animated cases over written cases.

While the majority of interview participants expressed a preference for the animated cases over written cases, one student suggested the two modes combined would be best. When asked if she had a preference for either mode of case-based learning, Isabella expressed a preference for a combined approach where she could see the animation and read the text (Interview, Isabella):

I think the video [animation] itself was more engaging for sure. I think maybe I'm just like old school, where I like to just be able to read it, but I think both together would have been great, because then I would have had the best of both worlds. I can, listen and pay attention. But then I can go back and be like [sic], ‘Oh, okay, this is where I heard this like this is the answer to this question.’

While she indicated that the animated case was more engaging, Isabella’s comments provided a helpful recommendation for future case-based learning activities to make sure the closed-captions are on and also to provide a written transcript within the LMS for students who prefer to
read content rather than watch a video. Isabella’s initial survey response indicated that her learning preference was “other” and that she preferred both written and video content.

**Preservice Teachers’ Perceived Self-Efficacy**

For the second research question: “In what ways do animated and written case-based learning activities inform preservice teachers’ perceived self-efficacy related to trauma-informed instruction?” I examined qualitative data from observations, small group discussions, and interviews from preservice teachers while they engaged in different modes of case-based learning activities and quantitative data from pre and post activity self-efficacy scale surveys. Two themes emerged from the data that help answer this question: (a) student feels prepared to teach students who have experienced trauma and (b) changes in self-efficacy. I will describe each of these themes in detail in the next section.

**Participant Feels Prepared to Teach Students Who Have Experienced Trauma**

Prior teacher preparation researchers have drawn important ties between preservice teachers having a strong self-efficacy and their future success in the teaching profession (Gurvitch & Meltzer, 2009; Martins et al., 2015; VanLone et al., 2022; Woolfolk Hoy & Spero, 2005). In this study, participants displayed self-efficacy when they employed a strategy, they observed in one of the cases and when they applied course content to their solutions.

**Participant employs strategy from case.** Three participants referred to specific strategies employed by teachers in the animated cases when they were asked to describe how confident they were in teaching students who have experienced trauma in their future classrooms. All three participants express confidence in their ability to teach students experiencing trauma in their future classrooms and include a strategy used by Kate’s teacher in Kate’s animated case study. Isabella indicates that she would be “fairly confident” in her ability
to teach students who are experiencing trauma. While Isabella spoke about her confidence, she cited a strategy used in Kate’s animated case:

I think I'd be like fairly confident. I think I would probably go to somebody [on] my first try, like my colleague, or something, and run ideas by them and see what they have to say and do. That's not always a great outlet, though, because maybe they're not trauma trained. But that would be my first thought. (Interviews, Isabella)

Isabella indicated that she is “fairly confident” in her ability to teach students who have experienced trauma. In describing her confidence, she clarifies her answer adding that she would talk to a colleague about the situation and noted that her approach could be a problem if the colleague is not trauma trained. In Kate’s animated case, Kate’s teacher when faced with Kate’s unusual behaviors approaches a more seasoned teacher for advice. Isabella’s adaptation of this strategy and awareness that not every teacher may be trauma trained shows some confidence in both knowing when to ask for help as a new teacher and also recognizing that there may be limits to the type of advice she would get depending on who she asked.

Hailey, a fourth-year special education student with extensive experience as a camp counselor, spoke to some concerns she had about getting too attached in trauma situations but expresses confidence in her ability to teach those students and cites the same strategy Isabella cited in her response:

I would feel that I would be able to teach them [students who have experienced trauma] very well. I feel, personally, I might get a little too attached, and try to do more than I really would be able to do for them, [be]cause I feel I just even like my campers, they leave for the summer for the school year. I just think that I would be able to help them, but I feel like I would get almost too involved and try to do more than I really in reality
could do with having an entire class to worry about. But I do think I'd be able to ask for help from like the guidance counselor, or from like other teachers in the building, and [say], hey, here's what's going on. What can I do and what resources have you found that I may not have found yet to give this student, or to help out, just to make sure that I can at least try to give them everything, even if I can't do everything for them. (Interviews, Hailey)

Hailey expressed confidence about her ability to teach students who have experienced trauma while expressing a concern about getting too personally involved. After noting this concern, she talks about asking the guidance counselor and other teachers in the building for advice similar to what Kate’s teacher did in that case study. She acknowledges that other teachers may have resources that she does not know about as a new teacher. Hailey’s ability to recognize her limitations as a new teacher and apply a successful strategy from Kate’s case, illustrate her self-efficacy in working with students who have experienced trauma.

Ava cited the strategy used by Kate’s teacher in the case study when she talks about her confidence in teaching students who have experienced trauma.

I feel confident. But I do think that I would need to still use professionals in that field. So, going to whoever in the school would be best fit like for dealing with that. I think I'm comfortable, like more comfortable doing just [be]cause I know I'm not a professional. I know I can implement what they give me, but when it comes to figuring out everything like I'm not supposed to do that, and I'm also not comfortable doing that. So, I feel confident in using, trauma-informed education in the classroom. But working with students, I would definitely need to utilize other professionals in the school. And I think the [animated] cases sort of helped - if anything, they probably added more to it than
what I was doing in my head. I feel like we were provided actual examples, and like the framework to do it. (Interview, Ava)

Ava expressed her confidence to teach in a trauma-informed classroom while also demonstrating that she was aware of her limits as a new teacher citing the need to seek out appropriate professionals in the school rather than try to handle the situation on her own. As she discussed her confidence, Ava cited the animated cases in helping her by providing her with examples rather than relying on what she was envisioning based on the content alone.

**Refers to course content in proposing solution.** The case-based learning activities in this study allowed participants to practice what they were learning in their class prior to experiencing it in the field as student teachers or classroom teachers. Participants were not specifically directed to apply classroom content to these situations during any of the activities but simply presented with each case and instructed to work on the follow up questions in their small groups. All four of the cases involve difficult situations related to K12 students who are exhibiting symptoms of trauma. The situations are troubling and complex. For example, Kate’s case involves a child who is experiencing neglect, and includes a question about calling Child Protective Services, Kalil’s case deals with cyber bullying that racially motivated, Shari’s case involves with some emotional neglect and grief, and Andy’s case involves the abuse of animals. The content in the cases is emotionally heavy so it would be natural for participants to get lost in the somewhat shocking details of the case. I believe the participants’ ability to analyze these complicated cases and apply content and trauma-informed practices that they learned in class without being directly instructed to apply course content to their responses, displays a level of confidence and self-efficacy as future educators.
While discussing Kate’s case and answering a question about whether Kate’s teachers should have called child protective services, Participant 15 referenced content that they learned in class:

We’ve learned about that. Like how some kids, when they're reliving a traumatic experience or just in their own head, totally zoned out. Of course, not everyone's going to know that, but I feel like I would have taken that as a sign. (Group 4, Participant 15)

Participant 15 directly noted that the class has learned about children exhibiting dissociative behavior due to trauma in the class and mentioned that not all teachers would be aware that a child daydreaming in class in the way Kate does in the case could be a sign of trauma but that she would have identified Kate’s zoning out as a sign of trauma (Discussion Recording Kate, Group 4, Participant 15). Participant 15’s ability to apply course content to Kate’s case demonstrated her confidence to apply what she is learning to a real-world classroom situation and her choice of words, “Not everyone’s going to know that…” showed that she felt confident in her solution.

In another discussion related to Kate’s case, Participant 3 in Group 1 also referenced content from class when she described Kate’s behavior and why it was troubling (Discussion Recording Kate, Group 1, Participant 3), “Obviously, it seems like she's displaying dissociative behaviors. So, I mean, that would be the daydreaming and stuff and like, why she doesn't want to write.” In this example, Participant 3 recalled content from her class that helped put a specific label on Kate’s behaviors as “displaying dissociative behaviors.” In Group 1’s discussion, Participant 3 appeared confident in making this suggestion. Her application of course content to Kate’s case helped her identify trauma as a possibility for Kate’s behaviors. As a future teacher, being able to identify Kate’s dissociative behaviors as a possible sign of trauma could help
Participant 3 narrow down appropriate solutions that could help Kate get the help she needs quickly.

**Changes in Self-Efficacy**

The course instructor included case-based learning to help provide preservice teachers with opportunities to observe K-12 situations related to students who have experienced trauma. These cases allowed participants to practice what they were learning in their classes to prepare for their future classrooms. When asked how confident they would feel in teaching a child who had experienced trauma in their future classrooms, all eight interview participants indicated that they would feel confident. While participants mentioned the benefits of the case studies when they talked about their levels of confidence in teaching students who have experienced trauma, it is difficult to separate that change from their experience in the class wholistically. Although the participants did not point to one mode of case-based learning, they did express an increase in self-efficacy and tied it to the inclusion of the cases. One interview participant, tied her confidence to both the course content and the case studies:

> I think that the case studies helped a lot like with situational things. So now I know I can. I liked seeing an example of it. So, I could know what I could apply what I learned in those situations. So yeah, definitely, [be]cause I didn't know a lot of the stuff going into this class that I know now, especially relating to like aces and trauma. So, I definitely feel more confident than I was, I would probably need to just refresh my memory on strategies. Strategies, I've learned, but I think initially I wouldn't be as overwhelmed with the situation if I was. If I had a student in my classroom, I would be able to navigate that better. (Interview, Emma)
Emma talked about how the case studies helped see how she could apply what she is learning in classroom situation. She noted a likely need to refresh strategies she had learned but added that she would no longer be as overwhelmed facing a student in her classroom who experienced trauma.

Another participant, when asked if her confidence in her ability teach students who have experienced trauma had changed over the course of the semester responded positively:

I would say it [my confidence in my ability to teach students who have experienced trauma] definitely has. I know that ‘Oh, if a student has this going on, this is how they might react.’ Here's a bunch of different ways that you can help this student like you can do like the calm down corners, or you could just give them like a time to like journal to let everything out, [and put it] on paper you don't even have to collect it. But I think it's given me a lot of different ways to [work with] not even students that who have experienced trauma, just students who like need a minute to regain [and] regroup and then go back to learning. (Interview, Hailey)

When she responded that she would be more confident, Hailey explained how she benefitted from the content in the class then recalls some strategies from her group’s discussion about the Kalil animated case. When identifying strategies, they could use in the classroom to address the racist bullying incident that occurred in the case, Hailey’s group suggested using writing for students to express their feelings and to also try to elicit empathy (Group Discussion Recording, Kalil Case).

Two participants spoke about how the case-studies and group helped them increase their confidence in teaching students who experienced trauma in their future classrooms. When Emily
indicated that she would be confident in working with students who have experienced trauma, she also noted that discussing the cases with her group was helpful to her learning:

I would feel pretty confident because those cases really did show a proper way to handle the situation. And even if it didn't show exactly what to do, it was nice to be able to sit down and talk to other group members and be like [sic], ‘Oh, well, this is what we could do if we didn't want to do it this way’, or if we needed to find a different way to do things. (Interviews, Emily)

Emily noted that in some instances the cases modeled what a seasoned teacher might do in different situations. She further explained that while the cases did not show her what to do, working with her group to brainstorm a solution was helpful to her in gaining confidence.

Hannah, a second-year special education and early grades education dual major, also indicated an increase in confidence:

I would definitely feel more comfortable or confident than I had before I had [gone] through this class and the case studies. I feel like they were very helpful in the sense that they gave a specific example of something we could see in the classroom and brought about like questions to help brainstorm, different ideas or different things to think about when you are in your own classroom, experiencing something like that. (Interview, Hannah)

In her interview, Hannah also noted that she benefitted from being in a group with more advanced students who were able to share examples from their prior field experiences. In her response about her confidence, Hannah explained that having examples of something they might see in the classroom and brainstorm with her group helped her feel more confident than she was before.
Quantitative Self-Efficacy Data

The quasi-experimental quantitative phase of this study was originally designed to examine preservice teachers’ self-efficacy changes when learning from two different modes of case-based learning using repeated measures survey data from a self-efficacy scale. Participants completed a pretest prior to engaging in any case-based learning and completed a post activity self-efficacy scale after each case-based learning activities. Unfortunately, as a result of class absences, only 22 participants completed all five self-efficacy scales.

Table 5

Score Mean and Standard Deviation by Section

<table>
<thead>
<tr>
<th>Course section</th>
<th>Section A (N=17)</th>
<th>Section B (N=5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Pretest</td>
<td>43.94</td>
<td>8.88</td>
</tr>
<tr>
<td>Case1</td>
<td>41.94</td>
<td>5.27</td>
</tr>
<tr>
<td>Case2</td>
<td>41.76</td>
<td>6.74</td>
</tr>
<tr>
<td>Case3</td>
<td>42.65</td>
<td>5.70</td>
</tr>
<tr>
<td>Case4</td>
<td>40.88</td>
<td>6.05</td>
</tr>
</tbody>
</table>

Note: Self-efficacy score mean and standard deviation by course section.

This table shows the self-efficacy score mean and standard deviation for each section of the class. Unfortunately, when I compared the sections for each mode of case-based learning, I found no statistical significance was found. The lack of statistical significance was not surprising given the small sample size (N = 22) and the differences between the daytime class full responders (N = 17) and the evening class full responders (N = 5). Based on the low number of full completers, I do not believe any responsible statistical conclusions can be drawn from the survey data therefore I will be using this data descriptively.
Of note, in both sections the mean self-efficacy score decreased after the pretest based on survey responses. Previous researchers have found teacher self-efficacy decreased during their first year of teaching. In their study on preservice and in-service teacher efficacy, Hoy and Spero (2005) found that while preservice teachers’ efficacy tended to grow during student teaching, in-service teachers’ efficacy declined during their first year of teaching. The authors mention new teacher mentoring programs as a way to provide support to teachers during their first year and help maintain self-efficacy. In another study focused on preservice teacher self-efficacy, Pendergast et al. (2011) noted that preservice teachers self-efficacy declined in the final semester of their program, suggesting that participants potentially overestimated their initial self-efficacy and may have experienced a “reality shock” in their practicum experiences.

It is possible that in the current study, preservice teachers indicated an initial higher sense of self-efficacy on the pretest based on the content they were learning in class: but after watching or reading the cases, their self-efficacy dropped when faced with reality. The cases used in this class were realistic and complicated cases and participants were tasked with recommending solutions in small groups. Participants may have experienced a decrease in confidence when confronted with these cases which could have caused them to rate their self-efficacy lower after the cased-based learning activities.

**Summary**

This study explored preservice teachers’ learning experience with two modes of case-based learning and their perceived self-efficacy. In this chapter, I described the results of both phases of this intrinsic case study. I used constant comparative coding to code three sources of qualitative data: (a) in-class observations, (b) small group discussions, and (c) semi-structured interviews. Based on these codes, I triangulated data from in-class observations and small group
discussion recordings gathered in the first phase of the study with data from one-on-one interviews in the second phase of the study to identify themes. I collected quantitative data through pre and post activity self-efficacy scales. Unfortunately, due to class absences, I was not able to determine statistically significant self-efficacy changes. While the quantitative data was not able to support a significant difference in preservice teachers’ perceived self-efficacy, the qualitative data from small group discussions and participant interviews did support an increase in self-efficacy.

Through both phases of the study three main themes emerged: (a) group discussion dynamics, (b) participants’ preference for animated cases, and (c) changes in self-efficacy along with several sub-themes supported each of the main themes. These themes and sub-themes helped paint a picture of preservice teachers’ learning experiences with animated and written case studies and how those case studied influenced their self-efficacy.
Chapter 5: Discussion

In this study, I examined preservice teachers’ learning experiences and perceived self-efficacy using different modes of case studies in an undergraduate special education course focused on trauma-informed instruction. Participants engaged in two modes of case-based learning in the course: (a) animated case studies and (b) written case studies. Over the course of eight weeks, I conducted eight in-class observations, recorded small group discussions for four case-based learning activities, administered a self-efficacy scale prior to case-based learning activities and after each activity, and conducted semi-structured interviews. Triangulation of the qualitative data revealed three themes: (a) participants preferred the animated cases over the text-based cases, (b) groups had longer and more in-depth group discussions when they discussed the animated cases, and (c) participants expressed higher self-efficacy with case-based learning. As a result of inconsistent attendance issues in the evening section of the course, I was unable to make a comparison between sections on their perceived self-efficacy as it related to each mode of case study. However, I was able to use the quantitative data descriptively to strengthen the findings of the qualitative portion of this study.

Summary of Study

This intrinsic case study utilized a two-phase design to answer one research question: How do different modes of case-based learning activities inform the learning experiences of undergraduate preservice teacher candidates in an introductory special education course? This primary question was addressed through two sub-questions:

(a) In what ways do animated and written case-based learning activities inform preservice teachers’ perceived self-efficacy related to trauma-informed instruction?
(b) How do undergraduate preservice teachers compare the experience of learning through animated or text-based cases?

I collected qualitative data from classroom observations, small group discussions, and one-on-one interviews to answer my first question and survey data and qualitative data to answer my second question.

In the first phase of the study, I collected demographic information, learning preference information, and an initial perceived self-efficacy scale rating from participants followed by classroom observation data, and small group discussion data, and post activity self-efficacy scale data. This data was analyzed in preparation for the one-on-one semi-structured interviews. Three themes emerged: (a) group discussion dynamics, (b) benefits of animated cases, and (c) changes in self-efficacy. In the second phase of the study, I conducted one-on-one semi-structured interviews to further examine the themes that were identified during the first phase of the study. The participants’ interview responses helped confirm and solidify the themes that emerged in the first phase of the study.

Application of Theoretical Framework to Findings

In Chapter 2, I described the two theories that made up the theoretical framework that guided this study: Bandura’s (1977) Self-Efficacy Theory with Lave and Wenger’s (1991) Situated Learning Theory (see Figure 1). These theories complement each other well when applied to educating preservice teachers. Bandura (1977) described self-efficacy as an individual’s belief in their ability to succeed in a given activity. Existing teacher education research underscores the importance of having a strong sense of self-efficacy in preservice and in-service teachers success and longevity in the field of education (Gurvitch & Meltzer, 2009; Martins et al., 2015; VanLone et al., 2022; Woolfolk Hoy & Spero, 2005). Lave and Wenger

**Self-Efficacy Theory**

According to Bandura (1977) four key experiences contribute building self-efficacy: (a) observational or vicarious experiences, (b) mastery experiences, (c) receiving social or peer confidence in an individual’s ability (verbal persuasion), or (d) having positive or energizing emotional or physical reactions to an experience. Bandura (1977) identified mastery experiences as having the most influence on self-efficacy development.

In this study, participants were enrolled in a special education course on trauma-informed instruction that did not include a practicum experience in the field. Wertzberger (2019) noted that technology can help preservice teachers with access to hard-to-reach populations that may be otherwise unavailable. Due to the wide variety in placements, there is no guarantee that preservice teachers would gain direct experience implementing trauma-informed practices in their placements.

In the absence of video-based observation or in-person practicum, case-based learning provided participants with the opportunity to apply what they were learning in class to real world situations. In this study, animation helped bring the cases to life and while this cannot replace an in-person practicum experience it allowed preservice teachers the opportunity to see and hear a real-world classroom situation and respond to it based on what they learned in class. The cases in this study also appeared to have given participants a reality check on their trauma-informed instruction skills. In this study, participants gained access to vicarious experiences through the
case-based learning activities and insight into their efficacy in implementing trauma-informed practices. Self-efficacy theory was a useful lens for this study as it shaped the focus of the learners’ experiences as it relates to their confidence in their ability to implement what they learned in a future classroom.

**Situated Learning Theory**

According to Lave and Wenger (1991), learning occurs best when it is embedded in authentic environments and situations within a community of practice. They described a continuum within this community of practice where a learner enters as a novice and progresses towards expert. In the novice stage, learners are immersed in the environment while they observe an expert. As they progress, learners take on additional responsibilities until they are fully independent in the task (Lave and Wenger, 1991). Another key component of Situated Learning Theory is that students are given the opportunity to practice the skills they are developing in an authentic environment (Lave and Wenger, 1991).

In this study, participants were unable to be immersed in a physical classroom but began their novice stage through the use of case-based learning. The activities in the study, while not a replacement for experience in a real-world classroom, allowed students to be digitally immersed in a contextually appropriate environment while they practiced applying what they learned in their class to authentic classroom situations. The practice they gained also appeared to serve as a reality check for what to expect in a real classroom.

Like Self-Efficacy Theory, Situated Learning Theory was an effective lens for this study as it focused the data analysis on participants’ learning experiences with the cases. When these theories are combined, the contexts that Lave and Wenger (1991) identified as most helpful in the learning process are closely aligned with the conditions that Bandura (1997) suggested
contributed to the development of self-efficacy. In this study, the case-based learning activities took the place of classroom observations in order to provide a targeted “observation” which provided a practice experience for participants who were studying trauma-informed instruction.

Figure 5

Theoretical Framework

Note: This diagram provides a visual representation of the revised theoretical framework for this study.

The theoretical framework for this study combined Self-Efficacy Theory with Situated Learning Theory. I have updated the theoretical framework based on the results of this study. In this revision, I have added learning in a community of practice under situated learning theory. Lave and Wenger (1991) noted that situated learning occurs in a community of practice. When I designed this study, I did not anticipate the importance of the group discussions or the influence the mode of the case study would have on the quality of the group discussions. These theories pair well and provided a framework that helps build a learning approach that supports preservice
teachers as they prepare for their futures as classroom teachers by providing vicarious and mastery learning experiences in authentic context to help them build self-efficacy.

**Discussion of Results**

While previous researchers have identified case-based learning as a helpful addition to teacher preparation studies in closing the theory practice gaps (Keefe, 2020; Willems et al., 2021), only a few have explored animated cases (Aaron & Herbst, 2015; Herbst & Kosko, 2014; Moreno et al., 2008). This study aimed to explore the learning experiences of preservice teachers with animated case. In this section, I will describe the key results as they relate to each of the sub-research questions.

**Group Discussion Dynamics**

In this study, participants had longer and more in-depth active small group discussions when they talked about animated cases compared to when the same small groups answered questions about the written cases. Prior research has shown the importance of collaborative and active discussion patterns in helping small groups come to a common understanding of a concept (Bungum et al., 2018; Hamann et al., 2012; Williams & Svensson, 2021). This finding was mirrored in by participants in a study on simulation-based learning. In their reflections of their learning experiences and during interviews, participants noted that the group discussion helped them learn more from difficult teaching simulations (Levin & Flavian, 2022). These findings supported two of themes that emerged in the data which showed that the mode of the case appeared to influence quality of the discussions.

**Active Discussions.** During animated case discussions, there was a greater tendency for groups to engage in active collaborative discussions compared to when they discussed written cases. Prior research has shown that students gained more benefits from video cases more than
written cases (Gold et al., 2021; Heemsoth et al., 2022; Yadav et al., 2011). An earlier study that compared the use of video case studies to written case studies, found that the use of video case studies generated discussions that were more focused, suggesting that the video cases “allowed the participants to see the complexity of the classroom teaching in greater detail than a written case possibly allows” (Koc et al., 2009, p. 6). Within this study, participants discussing animated cases were able to rely on their memory of the animated cases which enabled them to have a more natural collaborative discussion about the case. The previous findings and results from this study support the use of video or animated case studies to help foster active group discussions.

Group Pulling Answers Directly from Written Case. During small group discussions about written cases, participants were more likely to pause the conversation to look back for answers directly in the written case rather than discuss the case with their groups. This trend may be connected to participants’ reading comprehension strategies. Raphael and Au (2005) noted that students struggled to answer questions about written passages by looking for the answer directly in the written text to questions that required them to synthesize and analyze what they read with their prior knowledge. They described how reading comprehension strategies such as QAR (question-answer relationships) can help readers learn to analyze the question before they attempt to form an answer (Raphael & Au 2005). It is possible that in the future, reinforcing reading comprehension strategies prior to written case-based learning activities could help students take a more critical look at the questions in the written cases which might lead to more active discussions.

Self-Efficacy Changes

Previous researchers have found positive benefits in preparing preservice teachers for their future classrooms. Klassen et al. (2021) noted that scenario-based learning can be helpful in
preparing preservice teachers for real world classrooms pointing out that reality shock is a common experience for preservice teachers during their first classroom experiences as a teacher. Similarly, at the start of the study, participants rated their self-efficacy relatively high compared to their self-efficacy after the case-based learning activities on self-efficacy scale surveys. It is possible that prior to engaging in the case-based learning activities, participants’ perceived self-efficacy was based on their understanding of course concepts. In contrast, after reading or watching the case-studies they may have realized how complex these cases were as future teachers and as a result their perceived self-efficacy was lower. Participants in another study also experienced self-efficacy drops based when they experienced a new teaching situation. VanLone et al. (2022) found that preservice teachers who had a change in their field placement during the COVID-19 pandemic experienced a drop in perceived self-efficacy, while those who remained in their original field placement had no self-efficacy changes. Previous research on case-based learning has shown a positive relationship between case or scenario based learning and preservice teacher self-efficacy (Klassen et al., 2021; Yerdelen et al., 2019). While the limited quantitative data in this study showed a decline in self-efficacy, participants’ comments during small group discussions and in interviews showed evidence of participants’ self-efficacy. It is possible participants first exposure to content on trauma-informed instruction through the case studies contributed to this drop in self-efficacy. Additional research on the use of animated cases in traditional teacher preparation methods courses may help provide additional insight on these differences.

**Benefits of Animated Cases**

Participants’ comments in small group discussions and interviews revealed some key benefits of viewing the animated cases compared to reading written cases. There is limited
existing research in the use of animated cases in teacher preparation programs, but the existing research showed positive benefits (Aaron & Herbst, 2015; Herbst & Kosko, 2014; Moreno & Ortegano-Laynem, 2008). Herbst & Kosko (2014) noted that animated cases allowed instructors the flexibility of designing a classroom scenario to meet the needs of their students. They also found that preservice teachers felt more comfortable providing a critique of an animated teacher than a teacher in a video (Herbst & Kosko, 2014). The benefits of animated cases in this study focused on the learners’ experiences.

**Participant Preference.** The most straightforward benefit of the animated cases was that participants preferred the animated case-based learning activities over the written case-based learning activities. This preference may be linked to students’ preference for video-based content. Prior studies have documented students’ preferences for video-based learning materials (Alpert & Hodkinson, 2019; Le Roux & Nagel, 2018). These studies mirrored the participants’ learning material preferences they selected in the pretest survey for this study. The participants’ preference for animated cases in this study may also relate to how the animated cases helped them process information in the cases and visualize the case better.

**Processing Information in the Cases.** Participants’ discussion comments during small group discussions showed that participants had an easier time processing the information presented in animated cases than in the written cases. Conflicting results were found by Baier et al. (2021) who suggested that text-based case studies were easier for preservice teachers to analyze without the distractions that might occur with a video-based case study. While Baier et al. (2021) supports written cases over video cases, several other studies mirrored the results of the current study (Gold et al., 2021; Heemsoth et al., 2022; Shin et al., 2019; Yadav et al., 2011). Shin et al. (2019) showed that video case studies increased student motivation to participate in
class discussions and that the post-case discussions helped students better process and understand the information from video cases. Other studies support those findings, (Gold et al., 2021; Heemsoth et al., 2022; Yadav et al., 2011) all found that video-based case studies were more beneficial to learners than written case studies. Within this study, participants needed to review written cases but not animated cases which suggests that participants were able to process the information better with the animated cases than with the written cases. When participants processed the information in the case better, their discussions were active and more productive than when they struggled to understand the facts of the case and had to return to the case to clarify information.

**Visualizing the Cases.** The animated cases helped participants visualize the cases which may explain why participants expressed more confusion about written cases. In a prior study that compared students’ experiences with video case studies to written case studies, Herron et al. (2019) found that students gained more from the video cases because they were able to visualize the situation better than they were with the written case study. Kurz and Kokic (2012) noted that students in their study indicated that the video case studies gave them a real-world view of classroom teaching. In the current study, interview participants shared that the animated case studies helped them visualize the cases. Being able to visualize the cases may have helped participants engage in more productive conversations after animated cases. Discussions recordings and interviews showed that during written cases students had a higher tendency to get characters and events mixed up which impacted the quality of their discussions.

**Individual Differences in Reading Rates.** One of the unexpected benefits the animated cases had was that participants all completed the case at the same time. Prior studies have explored differences in college students’ reading comprehension abilities and rates of reading.
Hebert et al. (2018) confirmed that college students with a prior history of reading difficulties read at a slower rate and answered questions related to the reading slower than their peers without a history of reading difficulties. In the current study, in-class observations showed that there were differences in individual students reading paces. During her interview, Hannah identified this as her reason for preferring animated cases noting that she struggled to read the cases quickly enough to be prepared for the group discussions (Interview, Hannah).

**Summary of Results**

My goal in this study was to examine preservice teachers’ learning experiences using different modes of case-based learning and their perceived self-efficacy. As an instructional designer, I design and develop learning activities for university courses but rarely have the opportunity to look deeply at the learners’ experiences. This study enabled me to take a closer look at the use of case-based learning and specifically at the use of animated cases through several hours of in-class observations of case-based learning activities, small group discussions, and interviews.

While the quantitative data was not as strong as I had hoped when I planned this study, the qualitative data painted a clear picture of the participants’ learning experiences. The three main themes that emerged in this study were (a) group discussion dynamics, (b) participants’ preference for animated cases, and (c) self-efficacy changes. Of those themes, the strongest and clearest difference between the two modes of cases occurred during group discussions. Participants’ discussions during animated cases were more active and more collaborative than when they discussed the written cases.
**Limitations of the Study**

This study had some limitations in the following areas: (a) methodology, (b) analysis, and (c) generalizability. In the next section, I will describe each of these limitations as they relate to the study.

**Limitations in Methodology**

The population in this study was limited to students in two sections of an undergraduate special education course. There were 50 students enrolled in these courses, and of those students, 40 consented to participate in the study. The quantitative phase of this study was designed to compare difference in participants perceived self-efficacy between the two sections where each class participated in alternating modes of case-based learning. This phase of this study required participants to complete one pre-test survey and four post-test surveys on their perceived self-efficacy. As a result of class absences, only 22 participants completed all 5 surveys. Of these participants, 17 were enrolled in the daytime section of the course and 5 were enrolled in the evening section. To participate in the study and complete the surveys, participants were required to read or watch a case study in class and discuss the case study in small groups which meant if a participant missed class, there was no way to make up the activity or complete the survey.

**Limitations in Analysis**

In phase 1 of the study, participants were asked to respond to 5 surveys which rated their perceived self-efficacy. Data collected through these surveys were dependent on participants perceptions of their own efficacy and confidence in teaching students who have experienced trauma. Of note, participants rated their self-efficacy highest prior to engaging in any of the case-based learning activities. This drop in self-efficacy may be a result of participants feeling more
confident based on the content knowledge they gained in the course. The quantitative analysis was difficult given the low number of participants in each class who completed all five surveys.

In the phase 2 of the study, the participants (n = 8) who opted into the individual interviews may have had a stronger preference for case-based learning activities. While their responses helped support the themes from classroom observations and small group discussions, those responses might not represent the views of the non-interviewed participants.

**Limitations in Generalizability**

I conducted this study in two sections of a special education course focused on trauma-informed instruction at a mid-sized public state university. The participants in this study were all preservice teachers in their second through fourth years of their programs. The animations and cases utilized in this study were developed specifically for the students in this course. The results of the study are not generalizable to other populations, classes, or cases. Additional research could help increase the generalizability of this research.

**Implications for Future Educational Research**

Few researchers have explored the use of animated case studies for learning. Additional research in the use of animated case studies may help support and strengthen the findings in this study. In the current study, group discussion quality was higher when participants watched an animated case study compared to when they read a written case study. Based on participant comments, future research could explore the difference in discussion quality between groups who read in class and groups who read prior to class for homework. However, one concern about having students pre-read the cases is that they may answer the questions individually which could also negatively impact the discussion dynamic. This potential issue could be alleviated by providing a more structured format for the small group discussion that included clear
expectations for students. During this study, the qualitative data showed that during written case discussions, participants had a higher tendency to answer questions independently for their group which eliminated the need for discussion. At the same time, participants’ interview comments supported a benefit in working through difficult cases with their peers and learning from a variety of prior experiences.

While not included in this study, the use of audio cases as an alternative to written case studies might have a positive impact on the group discussion dynamic. Teacher preparation faculty members could create audio cases for their classes faster than they could create an animated case study. The use of audio cases could eliminate the issue of individual differences in reading paces which would enable all group members to be ready for the discussion at the same time. Additional research is needed as is not clear that an audio only presentation would provide the same benefits as animation. In their literature review on audio and print books and reading comprehension, Singh and Alexander (2022) identified conflicting results in studies that examined the effectiveness different modes of reading had on reading comprehension. Additional research could explore this mode of case-based learning.

**Implications for Educational Practice**

While participants indicated a preference for the animated cases over the written cases, their perceived self-efficacy increased with both modes of case-based learning indicating that there is value in both modes of case-based learning.

**Recommendations for Using Written Case Studies for Group Discussions**

The qualitative data showed that participants’ self-efficacy appeared to increase with both animated and written cases. In contrast with the qualitative data, the quantitative data could not be used to document a significant change, it did point to preservice teachers’ self-efficacy
decreasing after case-based learning activities. As noted in Chapter 4, I believe this decrease in quantitative self-efficacy scores may be a result of preservice teachers expressing an initially higher self-efficacy before they were exposed to realistic cases. Participants’ comments during interviews and small group discussion show evidence of self-efficacy gains through the case-based learning activities regardless of the mode of the cases. These findings support the use of written case studies as a useful instructional tool. While there were marked difference in discussion quality between the animated case discussions and written case discussions, it is possible that many of the discussion issues were connected to how thoroughly participants read the case prior to their discussion.

Based on the differences in discussion quality between animated and written case discussions and timing issues with differing reading paces, teacher preparation faculty members who use written case studies in class may want to consider assigning those cases as a reading assignment prior to class. Allowing participants to read the case study at their own pace prior to engaging in a group discussion may help them process the details of the case better and be better prepared to discuss the case with their peers.

One potential problem with assigning a written case to read prior to class is that some students may come in with an answer in mind which has the potential to limit group collaboration and discussion in the same way reading the cases in class did in this study. To avoid this situation, I recommend that faculty members set up group discussion guidelines and expectations surrounding individual members contributions. Gillies (2016) discussed the benefits of group collaboration and suggests that teachers play a critical role in helping students get to a point of productive collaboration. The process of coming to consensus on a group answer to a question appeared to have instructional benefits for participants in this study. The participants in
this study noted a benefit in learning from their peers who had more course work or different practicum experiences than their own.

Another alternative that may help avoid one-sided discussions is shifting the entire case-based activity and discussion to an online format. In a prior study, Hambacher et al. (2018) utilized a discussion framework they called “first responder/connector” for asynchronous discussions based on a community of inquiry model. The researchers found that their model provided an opportunity for every participant to engage in the discussion and helped generate a deeper discussion than what they observed during in person discussions (Hambacher et al., 2018).

**Creating Animated Cases**

The process of creating animated cases studies is time consuming (see Table 6). I started the animation process by adapting to a script-based format. Based on these scripts, I created a visual storyboard of the case using simple graphics to help the professor review the case before I invest too much animating the case. After the course professor approved the script and storyboards, I developed an alpha or first draft of the animation using Vyond (animation software). In the alpha version, I utilized the text-to-speech tool to bring the characters to life with digital voices for reviewers. For this project the reviewers included the course professor and three experts in trauma-informed instruction to validate the authenticity of the animated cases. The expert reviewers provided helpful feedback that allowed us to make small but meaningful edits to the script to increase the authenticity of the animations. After I made the final edits to the script, theatre students recorded the final audio which was then added to the animation.
Table 6

*Overview of animation process*

<table>
<thead>
<tr>
<th>Materials</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Case</td>
<td>Course professor wrote written cases based on years of experience in special education and trauma informed instruction.</td>
</tr>
<tr>
<td>Written Case</td>
<td>The details of the written case study are transitioned into a script with different roles and settings.</td>
</tr>
<tr>
<td>Transitions to Script</td>
<td>The approved script was developed into visual storyboards. The storyboards provide a richer representation of the future animation and allow reviewers to more easily identify visual elements that require modification.</td>
</tr>
<tr>
<td>Script to visual</td>
<td>The alpha or first draft animation was developed in Vyond and included text-to-speech audio. This version was used to solicit feedback from trauma informed instruction expert reviewers and faculty reviews.</td>
</tr>
<tr>
<td>Script to Alpha Animation</td>
<td>Based on the feedback from the Alpha animation review, the script was edited and finalized. Theatre students recorded the final audio for the project.</td>
</tr>
<tr>
<td>Script edits and audio recording</td>
<td></td>
</tr>
<tr>
<td>Alpha to Beta Animation</td>
<td>Audio segments are imported to the animation and attached to individual characters in each scene.</td>
</tr>
</tbody>
</table>

*Note:* Description of steps in animation development process.

This table provides a high-level view of the animation development process. While every step in the process was important, I found the expert review step to be the most critical in ensuring the final animations were authentic and representative of a real-world classroom situation.

**Can AI Help?**

At the time of this study, faculty in higher education, are engaged in debate and discussion about the use of Artificial Intelligence in education (Selwyn, 2022; and Zhang, &
Aslan, 2021). As an instructional designer, I have heard faculty concerns begin to shift from “How do we prevent students from cheating with ChatGPT?” and “Did ChatGPT write this?” to looking for ways AI can help both faculty and students. In teacher preparation programs, faculty must also become knowledgeable on how K-12 teachers and students are using AI in their learning environments. While AI can help students cheat, there are also emergent ways AI can be used to help both teachers and students.

Based on my tests using different prompts in Chat GPT, I found that AI has the potential to speed up the script writing process for animations. I believe AI tools will continue to evolve and improve but at this point in its current level of development and with the free version of tools that are available, AI can provide a solid starting point for script development for these cases. I have been testing AI for case-based animation script writing for several months and have found that a well-constructed prompt will generate a good starting point for a script. For instance, this is an example of a recent prompt I used in Open AI’s Chat GPT:

I want you to act as a senior instructional designer who has ten years of experience writing and developing animated scenarios for teacher education students. Write a 1-minute scenario about an elementary school student who appears to have experienced neglect and is exhibiting signs of trauma in her 4th-grade classroom where her teacher is unsure how to best help her in the classroom. Please include the following characters: a student who has experienced neglect, a new classroom teacher who is not trained in trauma informed instructional practices, a school counselor who is trained in trauma-informed instructional practices, other students in the classroom, a PE teacher who teaches the student’s favorite class, and the student’s parents.

Based on my prompt, Chat GPT provided the following script based:
[Scene: A vibrant 4th-grade classroom with students actively participating in various activities. The new teacher, Mrs. Rodriguez, notices a change in one of her students, Lily, who has been showing signs of neglect and trauma.]

Mrs. Rodriguez: [thinking] Lily seems distant lately. Her energy has shifted, and I'm not quite sure how to address it.

[Scene: During a class project, Lily isolates herself from the group.]

Mrs. Rodriguez: [approaching Lily] Hey, Lily. Is everything okay?

Lily: [looking down] I guess.

[Mrs. Rodriguez senses Lily's hesitation and decides to involve the school counselor, Ms. Martinez, who is trained in trauma-informed practices.]

Mrs. Rodriguez: [consulting Ms. Martinez] Lily is showing signs of distress. Can you guide me on how to best support her?

[Ms. Martinez observes Lily and recommends involving the PE teacher, Mr. Johnson, who teaches Lily's favorite class.]

Mrs. Rodriguez: [approaching Mr. Johnson] Lily seems to connect with you in PE. Can you keep an eye on her and provide any insights?

[Mr. Johnson notices Lily's withdrawn behavior during PE class and shares his observations with Mrs. Rodriguez.]

Mrs. Rodriguez: [calling a meeting with Lily's parents] Lily's well-being is our priority. Let's work together to provide her with the support she needs.

[Lily's parents attend the meeting, and a collaborative plan is developed to address Lily's needs, involving counseling sessions and support from both school and home.]
While the script Chat GPT wrote would require several edits to correct important details, it does provide a quick starting point for developing a new animation which can help speed up the process of developing animated cases.

Beyond script writing, there are AI tools that generate images based on a prompt. As the AI graphic creation tools continue to improve, they could be used to develop visuals to match a specific case. AI animation tools are also quickly evolving. As the animation tools improve, I can see how in the near future creating animations for case-based learning could become a quick and relatively easy process for teacher preparation faculty to use in their courses.

Summary

In this chapter, I reviewed and discussed the results of this study by (a) summarizing, analyzing, and discussing the results and limitations of the study, (b) applying the theoretical framework to the results, (c) providing recommendations for practitioners based on the results, and (d) making suggestions for additional research based on the results of this study.

Both self-efficacy theory and situated learning theory support authentic immersive learning experiences. In an ideal world, preservice teachers would have access to in-person classroom experiences that match all the content, pedagogy, and methods they are learning in their courses. These experiences would allow them to apply their content knowledge to real-world situations starting with early observations and continuing through student teaching. In the absence of being able to provide a perfect match from course work to field work, case-based
learning can help bridge the gaps. Teacher education programs have used written case-studies to help bridge these gaps for years by allowing preservice teachers a chance to apply what they are learning in the classroom to real world cases (Florez, 2011; Gravett et al., 2017; Shin et al., 2019). There is limited research on use of animated case studies in teacher preparation (Aaron & Herbst, 2015; Herbst & Kosko, 2014; Moreno & Ortegano-Laynem, 2008), but past results and the results of this study showed there are benefits to the use of animated cases in teacher preparation.

This study showed the importance of providing vicarious experiences to allow preservice teachers an opportunity to practice what they are learning in their courses. Preservice teachers’ initially rated their self-efficacy higher prior to any of the case-based learning activities, then adjusted their perceived self-efficacy on subsequent surveys. While their self-efficacy scores dropped, they demonstrated self-efficacy in their discussions about the cases and during interviews. I believe giving preservice teachers low-stakes opportunities to practice in addition to in-person early field experiences prior to student teaching can help strengthen their self-efficacy.
References


[https://doi.org/10.1007/BF02319856](https://doi.org/10.1007/BF02319856)


https://doi.org/10.1007/s11423-006-9027-0


https://doi.org/10.1598/RT.59.3.1


Willems, P. P., Gonzalez-DeHass, A. R., Powers, J. R., & Musgrove, A. (2021). The Role of authentic teaching cases and mastery approach goals in online pre-service teachers’ self-


Appendix A: Institutional Review Board Approval

Aug 8, 2023 10:49:14 AM EDT

To: Michelle Fisher
Col of Education & Social Work, Literacy

Re: Expedited Review - Initial - IRB-FY2023-307 Animated Case Based Learning in Preservice Teacher Education

Dear Michelle Fisher:

Thank you for your submitted application to the West Chester University Institutional Review Board. Since it was deemed expedited, it was required that two reviewers evaluated the submission. We have had the opportunity to review your application and have rendered the decision below for Animated Case Based Learning in Preservice Teacher Education.

Decision: Approved

Selected Category: 6. Collection of data from voice, video, digital, or image recordings made for research purposes.

Sincerely,
West Chester University Institutional Review Board

IORG#: IORG0004242
IRB#: IRB00005030
FWA#: FWA00014155
Appendix B: Initial Demographic Survey and Pre-Case Self-Efficacy Scale

1. Academic Program:
   a) Early Grades Education
   b) Middle Grades Education
   c) Special Education stand-alone
   d) Double Major in Early Grades Education and Special Education
   e) Double Major in Middle Grades Education and Special Education
   f) Double Major in Secondary Education and Special Education
   g) Major in Early Grades Education with a minor in Special Education
   h) Major in Middle Grades Education with a minor in Special Education
   i) Major in Secondary Education with a minor in Special Education
   j) Secondary Education
   k) University Studies
   l) Other: Please describe_____________________ 

2. Academic Year:
   a) First Year
   b) Second Year
   c) Third Year
   d) Fourth Year
   e) Fifth Year
   f) Graduate Student

3. Gender Identity (optional):
4. Racial/Ethnic Identity (optional):

5. What is your preferred learning style:
   1. reading a physical text
   2. reading a digital text
   3. listening to an auditory text
   4. watching a video
   5. Other:
      Describe:__________

6. What is the highest level of field experience you have had for either your courses or through a job, select all options that best describes what you did in your placement:
   a) Virtual observation
   b) In-person observation
   c) Interaction with students in person
   d) Interaction with students in a virtual environment
   e) Planning and instruction responsibilities for an in-person setting.
   f) Planning and instruction responsibilities for a virtual setting

7. In your previous field experiences were you aware of students in the class who experienced trauma based on the ACES (Adverse Childhood Experiences Scale - for example, children of immigrants, students who have experienced homelessness, students from a single-parent home or with a parent in prison, etc.). Check all the apply.
   a) Observation only
   b) Interaction with students
c) Planning and instruction responsibilities

d) None

Previous Content knowledge:

1. I have had prior coursework in Trauma Informed Instruction (brief definition of Trauma Informed Instruction)
   a) Yes
   b) No
   c) I’m not sure.

2. I have the following work or volunteer experience working with PK12 students in a classroom setting (check all)
   a) Part-time daycare teacher or assistant
   b) Summer camp counselor
   c) Head Start teacher or assistant.
   d) Paraprofessional

Other: __________

   Please describe:

Pre-Service Teachers Trauma Informed Instruction Sense of Self-Efficacy Scale

A number of statements about teaching and trauma informed instruction are presented below. The purpose is to gather information regarding your personal beliefs as pre-service teachers concerning these statements. There are no correct or incorrect answers. Your responses will remain confidential.
**Instructions**: Please indicate your personal opinion about each statement by selecting the appropriate response at the right of each statement

1. The amount a student can learn is primarily related to family background (for example: socio-economic status, geographic location, and history of trauma).
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
   d. Disagree slightly more than agree
   e. Moderately Disagree
   f. Strongly Disagree

2. If students aren't disciplined at home, they aren’t likely to accept any discipline in the classroom.
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
   d. Disagree slightly more than agree
   e. Moderately Disagree

3. When I really try, I can get through to most students including students with internalizing (dissociative) and externalizing (hyperaroused) behaviors.
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
   d. Disagree slightly more than agree
4. A teacher is very limited in what they can achieve because a student's home environment is a large influence on their achievement.
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
   d. Disagree slightly more than agree
   e. Moderately Disagree
   f. Strongly Disagree

5. If parents would do more for their children, I could do more.
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
   d. Disagree slightly more than agree
   e. Moderately Disagree
   f. Strongly Disagree

6. If a student is demonstrating memory challenges related to any classroom procedures or content, I would know how to increase their retention of information in the next academic lesson.
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
7. If a student is exhibiting signs of trauma, I would know how to implement trauma-informed practices.
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
   d. Disagree slightly more than agree
   e. Moderately Disagree
   f. Strongly Disagree

8. If a student in my class becomes disruptive and noisy, I feel assured that I know some trauma-informed practices to redirect them quickly.
   a. Strongly Agree
   b. Moderately Agree
   c. Agree slightly more than disagree
   d. Disagree slightly more than agree
   e. Moderately Disagree
   f. Strongly Disagree

9. If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.
   a. Strongly Agree
   b. Moderately Agree
c. Agree slightly more than disagree  
d. Disagree slightly more than agree  
e. Moderately Disagree  
f. Strongly Disagree  

10. If I really try hard, I can get through to even those students experiencing challenges.  
a. Strongly Agree  
b. Moderately Agree  
c. Agree slightly more than disagree  
d. Disagree slightly more than agree  
e. Moderately Disagree  
f. Strongly Disagree  

11. If I really try hard, I can get through to even students with a lack of motivation.  
a. Strongly Agree  
b. Moderately Agree  
c. Agree slightly more than disagree  
d. Disagree slightly more than agree  
e. Moderately Disagree  
f. Strongly Disagree  

12. When it comes right down to it, a teacher really can’t do much because most of a student’s motivation depends on the student’s home environment.  
a. Strongly Agree  
b. Moderately Agree  
c. Agree slightly more than disagree  

d. Disagree slightly more than agree

e. Moderately Disagree

f. Strongly Disagree

13. When it comes right down to it, a teacher really can’t do much because most of a student’s performance depends on the student’s home environment.

a. Strongly Agree

b. Moderately Agree

c. Agree slightly more than disagree

d. Disagree slightly more than agree

e. Moderately Disagree

f. Strongly Disagree

14. How well can you implement trauma-informed practices in your classroom?

a. Strongly Agree

b. Moderately Agree

c. Agree slightly more than disagree

d. Disagree slightly more than agree

e. Moderately Disagree

f. Strongly Disagree

Appendix C: In-person Observation Protocol

- Setting: Trauma Informed Instruction classroom
- Observer: Michelle Fisher
- Role of Observer: Observe students watching or reading cases, small group discussion of cases, and whole class discussion of cases.
- Length of Observation: Approximately 20 minutes
- Students who have opted out of the study will be placed in small groups together and will not be observed or recorded.
- Participants who have opted into the study will be placed in small groups with other participants. Group discussions will be audio recorded using portable audio recorders and transcribed.
- Descriptive notes will be taken while students watch or read cases.
Appendix D: Semi-Structured Interview Proposed Questions

- Questions for semi-structured interviews:
  - Tell me a little bit about yourself.
  - Describe any experience you’ve had working with K12 students either through your coursework at this university or an internship or paid position.
  - Describe yourself as a learner (secondary prompts if the student is unsure of what to describe: what do you like, what don’t you like, what types of learning activities do you enjoy, what types of learning activities would you rather skip)
  - Did you prefer one mode of case-based learning over another? If so, which mode and can you describe your experience in learning with each mode?
    - Did you have an emotional response to any of the cases? If so which case, and why?
    - Did the mode of the case influence the emotional response to the cases, in what way?
  - Please describe any differences in how your group worked together with the different modes of cases (written or animated).
    - Was there any difference in the level of participation amongst group members between written and animated case activities?
  - Which case stood out to you the most and why?
  - Has your confidence in your ability to teach students who have experienced trauma changed during the semester, and in what way?
o As a future classroom teacher, if you encountered students similar to the ones you learned about in the cases - how confident do you feel in your ability to teach those students?
Appendix E: Animation Script, Kate

Participants:

- Narrator
- Kate Jackson: 4th grade child
- Ms. Chelsea Morrisey: 2nd year, young teacher
- Kate’s mother, Ms. Jackson
- School Social Worker, Mrs. Donna Fisher
- Mrs. Jane Sullivan: Ms. Morrisey’s Mentor teacher

Opening Scene 1: Narrator standing outside of a school.

Narrator:

“This is the case of Kate Jackson, a fourth-grade child in a rural school district in Ms. Morrisey’s class. Ms. Morrisey is a new teacher and new to the area. She was excited to start her second year as she loved her first year in this district, it was so different from the urban area where she did her student teaching. Her mentor teacher, Mrs. Sullivan told her that her roster for her fourth-grade inclusive classroom would have six students with IEPs for Learning Disabilities, one student identified with emotional disturbance, two students in the gifted program, and one student diagnosed with ADHD. Mrs. Sullivan didn’t mention anything about Kate. In any event, Ms. Morrisey felt confident that this year would be challenging, but as successful as last year.

During the first weeks of school, Ms. Morrisey was excited and motivated to get to know all her students and form relationships with them. She prided herself on her ability to connect to students. However, she was surprised Mrs. Sullivan didn’t say anything about Kate. There
really wasn’t a diplomatic way to put it but Kate came to school smelling, and dirty. She was totally unsociable. Instead of interacting with any children, during unstructured times, she seemed to pick up the same book and get lost in it. Also, Ms. Morrisey noticed Kate had problems with memory when it came to directions and schoolwork and many other things throughout the day”.

Ms. Morrisey: “OK class, it is journal writing time. The prompt for this writing is on the board. Please do your sustained five-minute write”.

Narrator: “Ms. Morrisey notices Kate looking like she is “daydreaming” again with of course no writing going on as usual. She tries to prompt Kate”.

Ms. Morrisey: “Kate, it is time to write, look at the prompt”…

Narrator: “Kate seems like she doesn’t know where she is and of course the work does not get completed. She has noticed this at other times throughout the day. Ms. Morrisey knows she must meet with her mentor soon, she has tried to speak with Kate, but every time she asks Kate how she is doing and if she needs any support, Kate quietly says she is fine. Ms. Morrisey has been trying to handle things on her own since she is a new teacher and doesn’t want to cause any problems or draw attention to herself. However, she knows she needs some guidance and support from her mentor.

On Screen: Classroom scene faded in background with narrator in front of scene.

Ms. Morrisey to Mrs. Sullivan: “Jane is it possible to meet with you during my prep today or tomorrow? I am really concerned about Kate Jackson. She does not have an IEP, but I have some major concerns”.

Mrs. Sullivan to Ms. Morrisey: “Oh….Of course we can meet. I think we have the same lunch period on Wednesday and will have a good ½ hour to talk. Why don’t we meet in my classroom? It will be quiet.”

Narrator: “The next day Ms. Morrisey meets with Mrs. Sullivan”
Scene: Mrs. Sullivan’s 5th grade classroom

Ms. Morrisey to Mrs. Sullivan: “Jane thank you so much for meeting with me, I really appreciate it. Things have been going pretty well, but, I’m really concerned about Kate Jackson”.

Mrs. Sullivan to Ms. Morrisey: “No problem, that’s what I’m here for. I haven’t heard of Kate yet, maybe I will have her in 6th grade”.

Ms. Morrisey to Mrs. Sullivan.: “I haven’t met her parents yet but was wondering about asking for a meeting soon”.

Mrs. Sullivan to Ms. Morrisey: “What are you seeing in the classroom?”

Scene: Transition to scene in Ms. Morrisey’s classroom with Kate doing these things:

Ms. Morrisey to Mrs. Sullivan: “Let me first say that this doesn’t sound very nice, but Kate really smells; her personal hygiene is suffering greatly, she is dirty, and her clothes are dirty every day. I’m so glad the other children don’t tease her, as far as I can tell. They’re really a nice group of children this year...trying very hard. But it seems like Kate isn’t. She is puzzling. It’s impossible to get her to do anything.

Sometimes it seems like she’s in outer space! Daydreaming! It’s like she doesn’t hear me. But I know she can hear because when I can get her to respond she does. She is also totally unsocial. I guess on a good note, she seems to love to read. That is not completely clear though, since she picks up the same book every day. When I try to engage with her about the book, it’s almost like she doesn’t remember what she read.

Academically, I noticed the little bit I was able to prompt her to do showed that she is reading on grade level, and at a 7th grade instructional level, but her spelling quizzes are very low. It’s almost like she doesn’t remember the new words for the week. Also, because of her “daydreaming” she seems to be losing out on content in other subjects as well. I read that some children who look like they are daydreaming might actually be having small seizures”. Forget homework, it is never done!

What do you suggest I do? I cannot reach her, and it’s already the third week of school. I think I should call home and request a meeting and not wait until our first back to school night”.
**Mrs. Sullivan** to **Ms. Morrisey**: “That sounds right. I would also talk to Mrs. Fisher, our social worker before calling home. If Kate has been a student here since kindergarten, she may have some useful information and may know the family. After you talk to Mrs. Fisher, I would call Kate’s family to request a meeting”.

**Ms. Morrisey** to **Mrs. Sullivan**: “Of course, thank you I’ll get in touch with Mrs. Fisher as soon as possible. It always helps to talk to you”.

**Narrator**: “During recess, Ms. Morrisey, pulls Kate aside because she doesn’t want Kate to be surprised by a call home”.

**Scene: Recess Yard**

**Ms. Morrisey** to **Kate**: “Kate, I wanted you to know that Mrs. Fisher, the social worker will be calling home. You’re doing really well with your reading, and I want to help you and see if we can come up with a plan for all of your schoolwork”.

**Kate to Ms. M.** (without any tone or feeling): “OK, she is fine. Kate is fine”.

**Narrator**: “Ms. Morrisey finds it troubling that Kate is referring to herself in the third person. She immediately requests to meet with Mrs. Fisher, the school social worker during last period”.

**Scene: Ms. Morrisey. meeting with Mrs. Fisher in her office:**

**Mrs. Fisher**: “Hi Chelsea, I know you have some concerns about Kate Jackson. I did have a chance to look at her school record. She came to us in second grade from a neighboring district. It seems that the family at the time was connected with Children Protective Services. Luckily, I was able to reach the case worker and get some history on Kate’s family. It seems Kate has had a very tough start in life. However, there have been no problems reported in this school in second or third grade. Her record shows good attendance and average grades for the most part”.

**Narrator (off screen): Ms. Morrisey repeats what she has told her mentor teacher, Mrs. Sullivan**

**Ms. Morrisey**: Maybe what you learned about Kate’s early years, will shed some light on the present? I’m confused as to why there weren’t any reports though during second or third grade? Though, she is a very quiet and a well-behaved child”. 
Mrs. Fisher to Ms. Morrisey: “The fact that she is so quiet and well behaved could be the key. The caseworker from Child Protective Services said that they became involved when Kate was in kindergarten where the teachers also noticed that Kate came to school dirty and seemed pretty hungry. She sat in a corner and cried a lot and seemed to be very easily startled. It was noted that Kate’s father was incarcerated for community violence. The file shows he is an alcoholic, and the teachers clearly felt that Kate more than likely saw a lot of domestic abuse in the home, which Kate’s mother eventually confirmed. The father is no longer in Kate’s life. With support, Kate’s mother went back to school to complete a bachelor’s degree in social work. I’m wondering what’s going on now. I think I should request a home visit. What you’re describing sounds like neglect”.

Ms. Morrisey to Mrs. Fisher: “Oh, I didn’t think of that. I’m concerned. I’m not seeing any bruises on Kate”.

Mrs. Fisher to Ms. Morrisey: “Let me meet with Kate 1:1 to see if I can get some answers about what’s happening at home. It may take a couple of sessions so she feels comfortable with me, but that may help. Since you didn’t get a response from the family, let me try to speak with them and do a home visit. I did meet the mother a couple of times. She seems very friendly and concerned about Kate”.

Narrator: “Over the next week, Mrs. Fisher meets with Kate three times in her office. Kate warms up. She has met Mrs. Fisher around the school before and knows she’s the school social worker. During these sessions, Mrs. Fisher discovers a number of important things.

Scene: Mrs. Fisher’s Office

Mrs. Fisher to Kate: Kate what do you do after school when you get home?

Kate to Mrs. Fisher: (While coloring): “I play with my pet rat and dog, Rover. I’m good at taking care of myself, I can cook”.

Mrs. Fisher to Kate: “Oh, you’re lucky to have pets. What do you cook for yourself”?

Kate to Mrs. Fisher: “I can cook macaroni and cheese, and soup. Sometimes we have Oreos”.

Mrs. Fisher to Kate: “Is anyone home with you”?

Kate to Mrs. Fisher: Mostly no, my mother works a lot.
**Mrs. Fisher to Kate:** “Do you go outside and play? Do you have any friends near you’’?

**Kate to Mrs. Fisher:** “No, I just play with my pets”.

**Mrs. Fisher to Kate:** “I would like to come visit you at home sometime, is that OK”.

**Scene:** Narrator Outside of school building or Kate’s house

**Narrator:** Kate does not seem happy about that. Mrs. Fisher contacts Kate’s mother and tells her what they are seeing in school. She requests to visit the home. “Kate’s mother does not seem open to this, but she is aware that in the past Child Protective Services were involved and realizes that it’s best to cooperate with the school, and she is concerned about Kate. A home visit is set up for the following week when Kate’s mother has the day off. During the visit, Mrs. Fisher notes that the trailer was down a long, bumpy driveway, nowhere near any other houses. The trailer was old and needed a lot of work”.

**Upon entering the home Mrs. Jackson immediately began to anxiously tell her story:** “I’m sorry about the mess. I just got my degree and am working long hours at a residential setting for children in the next county. I have to leave before Kate goes to school and don’t get home most days until 7:30. By that time, I’m exhausted. Once I can get enough money together, we will be moving out of here. I know Kate is alone a lot but sometimes my boyfriend stops by. I don’t like him here too much because we have been having some arguments and that upsets Kate and she shuts herself in her bedroom. He does swing by occasionally to check on her”.

**Mrs. F to Mrs. Jackson:** “Kate didn’t mention your boyfriend when we talked. If you don’t mind me asking, how long have you been seeing your boyfriend?”

**Mrs. Jackson:** “Since June”

**Scene:** Mrs. Fisher’s Office

**Narrator:** “The next day, the social worker comes back to report back to Ms. Morrisey. She suggests a meeting with the principal, herself and Mrs. Morrisey to discuss next steps”.

**Scene:** Narrator outside of school:
Narrator:

Questions to Consider:

- Should the teacher have reported to Child Protective Services? Why or why not?
- How would you describe Kate’s strengths and her needs? How would you describe Kate’s behaviors? What does the teacher need to know about Kate’s specific challenges/needs?
- Based on what you know about Kate’s history, what might now be upsetting Kate? What are some possibilities?
- How should the school intervene academically, behaviorally, social and emotionally?
- Who should be involved in Kate’s care?
Appendix F: Animation Script, Kalil

Participants:

- Narrator
- Kalil Jones: 13-year-old black child
- Mrs. Jones: Kalil’s Mother (black parent)
- “3 Friends”: Tyler (a white child) Jose (a Hispanic child) and Malcolm (a black child)
- Homeroom/Special Education Teacher: Ms. Walters (a white teacher)
- School Counselor: Joe Washington (a black school counselor)

Narrator: This is a case of bullying that encompasses verbal, physical, and cyberbullying, that is racist. Kalil, a black student who has just started 7th grade at the new secondary school is in a special education class part-time for children diagnosed with emotional disturbance. Since Kalil has been doing better both academically and behaviorally, he is included in regular education for all his specials, Science, and Social Studies. Kalil has known two of his friends, Malcolm (another black child) and Jose (a Hispanic child), from his elementary school and neighborhood. There is a new student in the mix, Tyler (a white child) who has been primarily bullying Kalil. It is about a month into the new school year.

Jose: Hey guys, stop messing around, we’re going to be late.

Malcolm: Don’t worry, Ms. Walters won’t write us up.

Kalil: Are you guys up for gaming tonight?

Malcolm: I am, but I also have been texting Sheri and her friends, Sheri’s Lit.

Tyler: Awww…Malcolm’s in love. Kalil you’re not going to get a girl - you're too black.
Kalil: Knock it off Tyler, I’m sick of your mouth. (Kalil goes after Tyler and pushes him hard. Tyler falls down but is able to get back up quickly).

Jose: (trying to diffuse the situation). Tyler shut your mouth. Let’s go guys.

Scene: Entering Ms. Walters’ homeroom/class

Ms. Walters: You’re getting better guys, only a minute late today. Take your seats. You know you're responsible for being on time. We need to get organized for our day.

Narrator: Kalil, an only child, is at home in his room. His mother made dinner between her two jobs; she needs to leave for her second job soon. There is no male presence in Kalil’s life other than an uncle who sees him only occasionally when Ms. Jones asks for his help, and when he can get away from work.

Mrs. Jones: (yelling from downstairs) Kalil are you going to eat dinner anytime soon?

Kalil: No…. I’m not hungry. Leave me alone.

Mrs. Jones: Kalil what’s wrong? I have to leave for work. Come talk to me.

Kalil: Nothing, why do you always think something’s wrong with me?

Narrator: Kalil’s in his room on his phone scrolling through Snapchat, Tik Tok and group texts. In Snapchat, Tyler is posting pictures of Kalil distorted in a way that illustrates stereotypic racism. In the group text he sees that Tyler is posting threatening slurs. Kalil is getting more and more anxious and upset.

Narrator: Kalil knows it must be Tyler who has printed out a picture of Kalil distorted in a way that illustrates stereotypic racism and taped it to Kalil’s locker. When Tyler walks by with a smirk on his face, Kalil goes after him with fists flying. Luckily Ms. Walters hears the fighting outside of her classroom and runs out to break it up.

Ms. Walters: (in a very loud voice): Tyler and Kalil, STOP, stop, what is going on????
Narrator: Ms. Walters physically pulls Tyler and Kalil apart and speaks to both. Tyler denies putting the photo on Kalil’s locker. Kalil says he knows it was Tyler that placed the photo on his locker because he can show what Tyler did last night on Snapchat. Knowing the students in her class have a diagnosis of emotional disturbance due to behaviors, she was able to get Tyler and Kalil apart this time before anyone got hurt. She feels this bullying and racism must be addressed immediately with the support of Mr. Washington, the school counselor. Luckily, she can keep the two boys apart until Kalil leaves for his first period science class. In the meantime, she calls Mr. Washington.

Ms. Walters on phone: Mr. Washington, can you come to my room immediately, I have a serious situation involving two students that I need to discuss with you. We can step in the hall while the aides in the classroom keep the students working.

Mr. Washington: Of course, give me a couple of minutes to finish my paperwork and I’ll be right there.

Ms. Walters: Hi Joe, thanks for your quick response. I am a bit shaken by this incident as it involves bullying and cyberbullying directed at race.

Mr. Washington: I understand, that would make anyone upset, what happened?

Narrator: Ms. Walters tells Mr. Washington what happened.

Mr. Washington: This is very concerning. Since it is only the second month of school, I am just getting to know all of the students, but I do remember Kalil very well from his transitional IEP meeting. I know he has been doing really well in school and his mother is very supportive. At the IEP meeting, she had some concerns about Kalil being placed into the emotional support classroom even part time. I don’t want to see him regress.

Mrs. Walters: He has made so much progress, I don’t want him to regress either.
Mr. Washington: I’m not as familiar with Tyler, but any bully concerns me on multiple levels. We know that the research has shown that a bully also may have some significant problems. Let me pull each student out of class and talk to them.

Ms. Walters: Thanks, I appreciate your help. I’m very upset by that photo. I can’t even imagine what Kalil must be going through.

Mr. Washington: I may not get anywhere with Tyler at first since he is denying the bullying to you, he may do the same with me. I want both students to know I am a safe resource, specifically Kalil as he is the one who is being bullied right now. Also, my gender and race may be supportive to Kalil. We’ll have to see what impact I can make with Tyler. As far as the fighting, I think since neither was hurt, I’ll review school policy with them and leave it at that for now.

Ms. Wandry: That sounds good. Please keep me in the loop and let me know what I can do? They are in my homeroom every morning so I’m usually in touch with what’s going on at school. I will update the IEP team, as well as all staff that Kalil and Tyler come in to contact with, so they are keeping an eye out for any problems. What can we do about the cyberbullying?

Mr. Washington: I need to do some digging on the social media aspect since this cyberbullying incident happened after school hours and was not on school technology. I will talk to the principal of course. He may need to contact school council. When I talk to Tyler, I will let him know that we are aware of this incident, but will not share that our hands may be tied.

Ms. Walters: Great, thanks!

Mr. Washington: No problem, I'll reach out to Mrs. Jones as soon as I get back to my office to let her know what is going on, as well as Tyler’s parents. I’m sure Ms. Jones will be very upset, so I will let her know we are on top of things here. We need to have all school staff reinforce our
antiviolence and antibullying policies in homeroom this week, including consequences. I’d like to come to your class and do some social skills lessons. This will be a start; I’ll be in touch.

**Ms. Walters:** Thanks Joe. Would it help if I talk to any of Kalil’s friends to see if they have seen anything? I know he’s good friends with Malcolm and Jose.

**Mr. Washington:** Let me come in by the end of this week to do a restorative circle lesson with your homeroom. That may open some dialogue about bullying and racism. I realize these topics can be very challenging to address, but having the students know we are on top of it, it may help.

**Questions for consideration:**

- What does Mr. Washington have to do to find out how to address cyberbully? Why?
  What does the law say about cyberbullying? Do you believe there are any laws being violated?

- What are some policies/strategies that schools have put in place to address bullying? To address racism.

- What are some lessons that could be included in restorative circle Lessons to address bullying? To address racism? Be specific/design an activity section of a less.
Appendix G: Andy Written Case

Participants:

1. Narrator
2. Mrs. Taylor - Andy’s special education teacher
3. Ms. Hence - District Supervisor of Special Education
4. Mr. Stimmler - School Counselor
5. Ms. Jones - Andy’s art teacher
6. Mr. Jason Ho - classroom aide

Narrator:

Andy is a ninth-grade student who has exhibited characteristics of a child with ADHD and emotional disturbance since the first grade. As a result, his academics were impacted, and he was held back in two of his primary school years. He was eventually placed into special education in second grade. In IEP meetings, his mother had reported that at times he has punched and kicked his younger siblings. Most recently he was caught trying to hurt a stray cat that had kittens on the school property and became physically aggressive with another child who had tried to stop him. Luckily, the classroom aides were able to stop him before any significant harm was done. Although Andy is already educated in a self-contained special education class in his local public school, after the most recent incident, the school team is discussing whether Andy should be recommended for a special education center for children with emotional disturbance, or if additional strategies can be implemented which would result in a change to his behavioral intervention plan and IEP. The following is the team’s discussion:
Mrs. Taylor, Special Education Teacher:

I’m so glad we could meet this morning. The most recent incident involving Andy has me and his classmates shaken up. There has always been a level of fear of Andy, but it has been contained by the fact that I have 3 aides in the classroom, and Mr. Ho has a good relationship with Andy, so we have been able to utilize that relationship to support Andy.

Mr. Stimmler, School Counselor to Mr. Ho, Classroom Aide:

I’ve seen you in the hall with Andy. Andy does seem to listen to you.

Mr. Ho, Classroom aide:

Most of the time, but I need to be very proactive with identifying Andy’s triggers and following his behavior plan. This time his behavior seemed to come out of nowhere, and hurting a defenseless animal is very troubling.

Ms. Hence, District Supervisor of Special Education:

This situation is very disturbing as attempting to hurt a defenseless animal then attacking a classmate that tried to intervene is certainly problematic. Mrs. Taylor, have you been in touch with Andy’s mother?

Mrs. Taylor, Special Education Teacher

No, not yet. He was sent home for a day and the assistant principal indicated that per school policy, Andy’s mother or father will need to come to the school when he returns, so we will be scheduling a meeting then. I just wanted to bring us together now so we can prepare for that meeting and talk about the next steps.

Ms. Hence, District Supervisor of Special Education:

We may need to recommend another placement based on Andy’s behavioral and academic progress this year, but we need to make sure that a more restrictive placement is really necessary.
I think we also need to review his present behavior plan to see making changes may help prior to recommending out of district placement as you all know that can be challenged for a lot of reasons. How has he been doing so far this year?

Mrs. Taylor, Special Education Teacher:

Andy’s behavior plan utilizes positive reinforcement. A menu of choices of incentives is presented to Andy when he refrains from verbal and/or physical aggression, and when he finishes his work. It is a very detailed behavioral plan including the amount of time Andy must follow his plan before the menu board is presented. He is very smart and knows his plan as well as we do. Generally, Andy selects art time. I invited Ms. Jones as Andy responds so well to art and she has agreed to allow Andy to come to her room for 15-minute intervals. Mr. Ho walks Andy to the art room but Ms. Jones can speak to how Andy is doing.

Ms. Jones, Art Teacher:

I try to give Andy a choice of two projects that take a few days. When he has finished one, he may start the other. Right now, he is working on textiles. He has never given me any problems, but I’ve noticed the last three times he’s come to art, he’s asked for colored pencils and paper. When I ask him what he is drawing he pulls his paper away quickly and won’t share. Perhaps I should have been more forceful, but I did not want to invade his privacy. He is really well behaved for me; however, this drawing is a first. He always likes attention from me and always likes to share his work. He puts the drawings in his backpack when he leaves my room.

Mrs. Taylor, Special Education Teacher to Jason Ho, Classroom Aide:

Jason, have you seen any drawings?

Mr. Ho, Classroom Aide:

No, I haven’t but I will keep my eyes open.
Ms. Hence, District Supervisor of Special Education:

What happens when Andy does not earn art time?

Mrs. Taylor, Special Education Teacher:

That has been so rare, the data shows only two days within the 45 days last marking period where he did not earn his menu board. But now that you are saying that about arts, Andy does seem to be “off” over the last couple of days. Very tired, on edge, he seems to have been keeping us on our toes jumping in before any of his triggers result in a behavior.

Mr. Ho, Classroom aide:

I would agree with that very much.

Mr. Stimmler, School Counselor:

His behavior plan doesn’t allow for time with me. Although I haven’t formed a one-on-one relationship with Andy yet, he seems to work ok for me when I come in the class to implement the social and emotional learning lessons plans. I am wondering if he is undergoing some psychological and/or emotional stress. I think a detailed conversation with Andy’s parents when they return him to school is necessary. Then perhaps before we consider a more restrictive placement, I would recommend Andy working with me on some Cognitive Behavior Strategies. I could work with him in identifying his difficult situations and how to implement appropriate responses. Also, Mrs. Taylor I could help you in setting up strategies to support self-regulation skills for Andy. Perhaps this will help. Although hurting animals is severe and may be connected to some significant setting event in Andy’s life, thankfully, he didn’t really get to carry anything out. We will need to monitor him more closely, specifically during unstructured times.
Mr. Ho, Classroom aide:
I agree, because he has had limited behaviors this marking period and his academics seem to be in the B/C range, I would not like to see him leave us at this time for a more restrictive placement until we have tried everything.

Mrs. Taylor, Special Education Teacher:
That sounds great. His attendance is good too, I generally think that he likes our class and school.

Ms. Hence, District Supervisor of Special Education:
That makes sense. We will need to draft the revisions to the Behavior Intervention Plan and then schedule an interim IEP meeting. It sounds like the art class would continue as that is incredibly reinforcing for Andy.

Ms. Jones, Art teacher
I agree.

Ms. Hence, District Supervisor of Special Education:
When is Andy due for a reevaluation?

Mrs. Taylor, Special Education Teacher:
Not for another year, but perhaps we should request a psychological evaluation at minimum?

Ms. Hence, District Supervisor of Special Education:
I will get the paperwork ready for that and discuss that with the parents tomorrow along with our planning on drafting a revision to his behavior plan. I also want to explore with them if Andy has been receiving outside counseling, and if so, have them sign a permission slip to release information considering this recent behavior. If not, I am going to recommend that he sees a community mental health provider as well.
Ms. Jones to Mr. Hence, District Supervisor of Special Education:

I am concerned about Andy’s secrecy around his drawing. What if the pictures are related to some form of trauma he has experienced? Or violence?

Mr. Hence, District Supervisor of Special Education:

That was my thinking too….

Andy’s Case Questions:

- What are your thoughts on this discussion in relation to the changes of the behavior intervention plan for Andy? Is there anything you would add?

- What are some possibilities that could have triggered Andy’s behavior?

- The school counselor indicates that he comes into the classroom and implements SEL lessons, what is some content that you would incorporate into those lessons?

- What should happen within the classroom/school when Andy returns to school?

- Should the school “force” Andy to share his drawings?
Appendix H: Shari’s Written Case

Meeting Participants:

- Shari Jones: Student
- Mrs. Jones: Mother
- Ms. Rollins: The school guidance counselor
- Mrs. Riley: Shari’s 5th grade teacher

Shari Jones is a 10-year-old student with a mild intellectual disability who was brought into the counselor’s office by her exasperated mother. Ms. Rollins, the counselor assigned to Shari’s grade level has set up the meeting at the 5th grade teachers’ request as Shari’s teacher has noted some concerns in school. Mrs. Jones, Shari’s mother has also been concerned as Shari has been exhibiting atypical behaviors over the last three weeks such as frequently crying, clinging to her, and refusing to come to school. She is very thankful for the school’s concern and support and was glad for this meeting with the school counselor.

The counselor began the meeting indicating that this meeting is to support Shari and the family; to essentially brainstorm some ideas that might help. Mrs. Riley, Shari’s 5th grade teacher will be able to pop in within 15 minutes at the start of her break. Mrs. Jones reported to Ms. Rollins that “she does not know how to deal with Shari’s emotional outbursts at home. She cries over minor things such as having a baked potato instead of frenching fries and misplacing a pair of socks and she is difficult to soothe. When Shari hits a certain point, she is inconsolable. Her whole-body shakes, and she gasps for air between sobs”. Mrs. Jones continued, “If am not present, Shari cries out for me. These outbursts are especially likely when it is time to go to school. Getting Shari into the car is such a problem that sometimes it is just easier to keep her home from school which I know is a major problem.”
Ms. Rollins indicated that, “Shari’s teachers are also concerned by her growing lack of attendance, and that they are observing some of the same behaviors that she is exhibiting at home, in the school setting. However, also in the classroom the teacher is noting a distantness and inattentiveness in Shari. She will avoid other children. This is of concern as she has always been able to keep up with her work, is bright and creative. At times, she will tantrum and cry which can become quite loud, and the teacher indicates that she has difficulty predicting when these behaviors will occur. This has been agitating the other students, and students that would normally interact with Shari in the past, are now moving away from her”.

Ms. Rollins listened patiently and then asked about both medical and developmental history (past and present). Mrs. Jones indicated that, “there were no known problems with early development even with Shari’s down syndrome. She has been seen ever since by The Children’s Hospital of Philadelphia and is in general good health. Of course, she and her husband were surprised by the diagnosis of Down Syndrome, but Shari has been included in many activities with typical peers both in and out of the school setting such as music, swimming, and soccer. There of course has been some slight delays in communication as well as motor skills but they seemed to have dissipated with time and the support of related services in early intervention and her schooling so far. As you probably know she has been in general education classes since starting school”.

Mrs. Jones continued, “I of course have been stressed at times with the death of my husband, as the school knows that Shari’s father dies because of a car accident two years ago. My grief seems to go in waves, that is the best way to describe it. I feel particularly needed right now and the holidays are just around the corner. I am not sure how I would have been able to
carry on without the support of my parents—Shari’s grandparents. (At this point, Mrs. Jones seems to struggle a bit to keep it together during the interview).

Ms. Rollins then asked how they were presently doing, adjusting since the loss of her husband and Shari’s father). Mrs. Jones responded, “It has been challenging. Of course, our life has changed as my parents have essentially moved in for all intents and purposes. However, Shari loves them very much and they are a great support to me. I have kept busy nonstop with work, school, and home. Things go better when I don’t have time to stop and think if you know what I mean. It’s been hard the last month or so though as my father has been very sick. He is home but he used to be able to do a lot with Shari, play music with her, kick around the soccer ball in the yard and take her to her activities. My mother has been trying to do it all, take care of us, my father and fill in where she can with Shari. She indicates that the other day, Shari’s cat, Sophie, left a dead bird on the steps and Shari started screaming, pulling out her hair and hitting herself. My mother eventually could calm her down, by holding and rocking her, something in the past she would not have thought to do as Shari is 10 and a bit on the heavy side due to the flaccid muscle tone with down syndrome. I have an appointment at CHOP next week to see if they can help as well. What do you think we can do? I am very concerned.”

At this point Mrs. Riley, Shari’s teacher walks in, says hello and notes, “we care so much for Shari and your family, please know that we will work very hard to get the old Shari back.”

**Shari’s Case Questions:**

- What could be triggering Shari’s behaviors?
- What is the tone of this meeting? Do you agree with the tone? Why or why not? Who else should be involved in Shari’s teaming at this point? Why?
• What are some strategies that the team could implement to support Shari both in the home and at school?

• Why did Shari’s grandmother’s strategy work to calm Shari down?