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Preparing Preservice Teachers for Residency Through Alternative Fieldwork Experiences

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This action research project investigates technology-enhanced forms of clinical experience in an online Master of Arts program in Teaching English to Speakers of Other Languages. The three research questions were as follows: (a) What representations of practice do preservice teachers (PSTs) notice while observing others teach via purposely selected video lessons; (b) how do PSTs make connections between the representations of practice they identified in these observations and pedagogical theories they have learned in their methods courses; and (c) how do PSTs decompose the teaching practices they view in video observations with others in online discussion forums? Analysis of the data revealed that PSTs most often noted teacher actions related to developing a positive classroom culture, classroom management, and best practices for English learner instruction. Through their asynchronous online discussions and written reflections, PSTs developed a better understanding of best practices for teaching English learners, in which they were able to conceptualize and actualize abstract constructs from their methods courses such as trust-building, culturally responsive teaching, the zone of proximal development, and funds of knowledge, while also making theoretical constructs actionable through their shared observation experience and online discussions. Findings indicate that the implementation of video-based fieldwork along with collaborative online discussion may help PSTs to better understand the complex constellation of actions and decisions that lead to effective pedagogy for English learners.

Educational fieldwork, in which preservice teachers (PSTs) observe experienced teachers' lessons, is an essential component of teacher preparation. PSTs complete in-person observations prior to student teaching to conceptualize what it means to teach and to connect theoretical constructs from methods courses. In March 2020, K-12 schools around the country closed for in-person instruction due to the COVID-19 pandemic, moving all teaching and learning to online settings. School closings had immediate effects on both teachers and students in K- 12 schools, but this abrupt change of programming also challenged PSTs and schools of education. Meaningful clinical experience is one of the most critical factors related to future teaching success (e.g., Darling-Hammond & Bransford, 2005; Grossman, 2010), but pandemic-related school closures made it difficult to offer these experiences to PSTs, creating the need for innovative learning experiences in alternative, online settings.

Despite lack of access to classrooms during the pandemic, teacher-educators attempted to provide relevant, authentic, and meaningful clinical experiences to meet certification requirements and ensure that PSTs graduate and enter the workforce well prepared. This study examines video analysis as an alternative fieldwork experience to reflect on and refine teacher education practices. Considering the Grossman et al. (2009) "pedagogies of practice" framework, this study aims to build understanding into the complexities of classroom teaching. Three research questions guided this inquiry (a) What representations of practice do PSTs notice while observing others teach via purposely selected video lessons; (b) how do PSTs make connections between the representations of practice they identified in these observations and pedagogical theories they have learned in their methods courses; and (c) how do PSTs decompose the teaching practices they view in video observations with others in online discussion forums?

Conceptual Framework

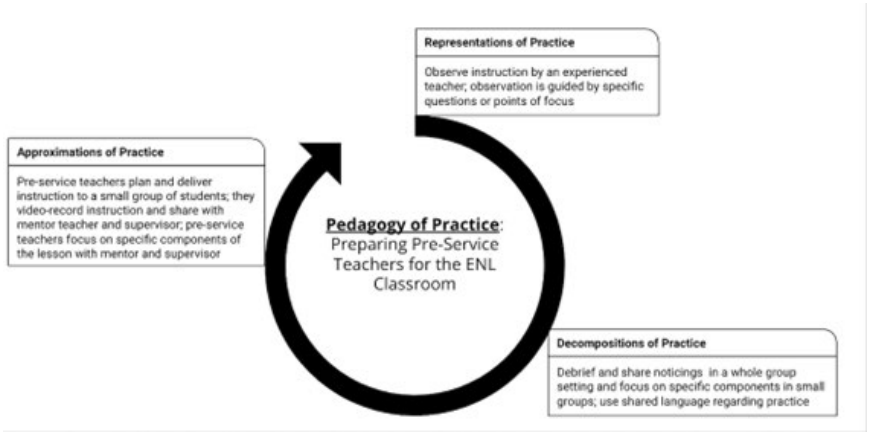
A sociocultural philosophy of teaching and learning grounds the work we do as professors in a graduate-level teacher preparation program. As such, we use a constructivist lens to investigate the ways that PSTs inquire, explore, and construct understandings of teaching and learning practices. For this project, in which we investigated PSTs' observations, reflections, and discussions of teaching videos, we built upon the Grossman et al. (2009) seminal "pedagogies of practice" framework, which identifies three components of pedagogical learning as "representations," "decompositions," and "approximations" of practice.

According to Grossman et al. (2009), representations make professional teaching actions "visible to novices," while decompositions of practice involve "breaking down practice into its constituent parts for the purposes of teaching and learning" so that PSTs can develop a "sense of the anatomy of the practice to be learned" (p. 2069). Approximations, which fall outside the scope of this paper but which were part of the larger study on alternative methods of fieldwork, are described as "opportunities to engage in practices that are more or less proximal to the practices of a profession" (Grossman et al., 2009, p. 2056).

Teaching is a complex act, and according to Grossman et al. (2009), "preparing people for engagement in complex practice is no easy task" (p. 2059). We used the Grossman et al. framework as a lens through which we conceptualized the study, looking at what "representations of practice" the PSTs identified in their observations and how they "decomposed" those practices through discussion with others.

The pedagogy of practice framework provided needed vocabulary to describe processes of observatory fieldwork, and through this lens we could examine video analysis as an alternative form of fieldwork. In practical terms as they relate to our study, "representations" are presented in the exemplar video lessons, "decompositions" occurred when PSTs discussed the lessons with one another, and "approximations" occurred when PSTs planned and taught lessons in their student teaching residencies. Figure 1 presents our application of the conceptual framework that informed this study.

Figure 1
Application of the Pedagogy of Practice Conceptual Framework (adapted from Grossman et al., 2009)



The Grossman et al. (2009) framework helped us to analyze retrospectively the tasks we assigned to our PSTs. It also allowed us to understand how these novice teachers made sense of the complexity of teaching, in which teachers apply knowledge of content, knowledge of students, and knowledge of pedagogy simultaneously. It provided a way to see the abstract decisions teachers made throughout a lesson and the actions they took in response that are often taken for granted by novices.

Klein and Taylor (2017) employed Grossman et al.'s (2009) pedagogies of practice framework to study the use of video to review student teaching episodes. These researchers found that video allowed PSTs to "see together," providing distance from their practice and the opportunity to reflect and coconstruct pedagogical knowledge. We built from Klein and Taylor's work to examine representations and decompositions of practice, specifically by observing and discussing exemplars of practice. While Klein

and Taylor used video to help PSTs see themselves in practice, we use video as a way for PSTs to see knowledgeable others, to decompose the complex practice of teaching.

Literature Review

The use of video for teacher preparation has been extensively researched. The aim of this review was to determine how and why video has been used in teacher education programs and how video paired with online discussion has been implemented. Baecher et al. (2018) conducted a systematic review of international research on using classroom videos in teacher education and teacher professional development. Their meta-analysis focused primarily on clarifying how teacher educators facilitate video analysis and uncover gaps in the research related to the use of video for teacher education. The findings and implications of their review included that (a) greater transparency is needed in research on video for teacher education, and (b) increased detail and specificity in reporting will advance the research on the use of video. Our study was responsive to the findings of the Baecher et al. (2018) review, as we aimed to provide transparent details about how and why video was used to advance teacher education and preparation, and the outcomes of our design.

The Use of Video in Teacher Preparation Programs

The literature base provides a plethora of examples of how video has been used in teacher preparation programs. For example, video can be used to show examples of abstract pedagogical constructs, such as classroom management and learner engagement, modeling what it looks like in real classrooms (e.g., Cuthrell et al., 2016; van Es et al., 2017).

Other empirical studies have shown benefits of novice teachers viewing videos of themselves teaching and reflecting upon what they noticed about themselves and their own students (e.g., Baecher et al., 2013; Baecher & Connor, 2016; Endacott, 2016; Gibbons & Farley, 2021; Santagata & Yeh, 2014; Sydnor, 2016). Techniques that encourage PSTs to reflect on their teaching practice, such as "video stimulated recall" (Endacott, 2016) and "analysis-based practice" (Santagata & Yeh, 2014) have yielded positive impacts on PSTs' preparation for the profession.

One of the most complex aspects of teaching is related to decision-making. Using video for PST education has been shown to help PSTs evaluate and analyze teacher decision-making related to planning and instruction, as well as pedagogical moves (e.g., Hougan et al., 2018). Video can help PSTs to develop their decision-making ability over time (e.g., Klein & Taylor, 2017; Santagata & Yeh, 2014; vanEs et al., 2017), as it can be a way to "slow down" the teaching so that PSTs can analyze and decompose moment-to-moment pedagogical actions (Baecher & Connor, 2016; Santagata & Yeh, 2014).

These aforementioned examples show how videos of classroom instruction can be an integral part of many teacher preparation programs, and there are many different ways video can be used to prepare novice teachers. However, the mere incorporation of video, without an explicit

connection to theory or research, leaves a disconnect between university coursework and practical applications.

Beswick and Muir (2013) and Koc et al. (2009) highlighted the ways that purposeful and intentional use of videos can bridge this divide. Similarly, other researchers have shown how PSTs can develop their knowledge of core teaching practices by observing exemplary teaching videos (e.g., Hougan et al, 2018; Santagata & Guarino, 2011; Santagata & Yeh, 2014). Furthermore, video can be used to support critical reflection among PSTs (e.g., Baecher et al., 2015; Beltramo, 2020; Marsh et al,, 2010). This cross-section of the literature shows the multifaceted nature of using videos in teacher preparation programs to connect theory and practice.

The concept of noticing, or attending to all that is happening in the classroom setting, is prevalent throughout the literature and demonstrates one way to connect theory to practice explicitly (e.g., Roller, 2016; Rosaen, et al., 2008; vanEs & Sherin, 2002). Van Es et al. (2017) documented the deep literature base on noticing as an aspect of teacher education, noting that more expert teachers have an increased capacity to notice and react to classroom situations and interactions.

When PSTs are asked to notice, they are asked to document the interactions they have read and learned about. Class vignettes from textbooks and descriptions of pedagogical methodology can seem abstract to students; video clarifies and makes actions more concrete and relatable. Using teacher-noticing as a theoretical framework, van Es et al. (2017) found that PSTs' noticing skills develop over time, with the support of coursework guiding them through their observations.

Video Paired With Online Discussion

As demonstrated in the aforementioned literature, video can be used in teacher preparation programs to analyze one's own and others' practice, to evaluate teachers' decision-making, to notice pedagogical concepts, and to identify examples of best practice. A sociocultural approach to teaching and learning involves dialogue and discussion as part of the instructional design to advance reflection and understanding of the shared experience offered by video. As noted by Beltramo (2020), making sense of a shared experience through oral or written dialogue provides a pathway to critical reflection.

The pedagogical practice of cogenerative dialogues (cogens) provides examples of how educators use discussions based on shared experiences and focus on improving teaching and learning (Roth & Tobin, 2001; Tobin et al., 2003). This type of discussion has been studied as a pedagogical tool for creating learner-centered instructional environments (e.g., Boss & Linder, 2016) and as a conversational tool for people to reflect on their collective experiences (e.g., Bertamo, 2020; Hsu, 2018). Tobin and Roth (2005) described cogens as powerful because "all participants refer to the same set of events… and that the views and understandings of all of the participants are valued," and they note that "cogenerative dialogues can be used by new and inexperienced teachers to learn from their experiences and other participants" (p. 315).

Others have studied the use of cogenerative dialogues in PST education. In one such study, video analysis was paired with dialogue to help PSTs notice and interpret the actions they saw (Siry & Martin, 2014). These researchers found that "video and cogenerative dialogue were central to the process of noticing, reflecting, and acting" (p. 501), demonstrating how cogenerative dialogues can be an effective tool in PSTs' preparation and induction into the profession.

In summary, the literature reviewed here allowed us to identify our unique contribution to the field in terms of fieldwork and the place of video. Our goal was to connect the dots between video analysis, noticing, and online discussion, to determine both the challenges and the benefits of using video as part of PST preparation.

This study contributes to the existing scholarship related to the value of video analysis in teacher preparation, particularly for PSTs preparing for teaching English to speakers of other languages (TESOL), and helps support how video can be used for high-quality instruction, especially in a time of crisis; that is, the unexpected disruption to in-person learning that resulted from the COVID -19 pandemic.

Methods

An action research approach was taken to determine the impact of video-based fieldwork in our teacher education program. Mills (2018) explained the purpose of action research as "gaining insight, developing reflective practice, effecting positive changes in the school environment (and educational practices in general), and improving student outcomes and the lives of those involved" (p. 10).

In this project, the research team set out to analyze the practice of using video to enhance clinical fieldwork to determine both the benefits and the challenges when implemented in a teacher education program systematically. The research literature on the use of video in teacher preparation and video paired with class discussion provides strong evidence that video-based learning experiences can provide positive outcomes for novice and preservice teachers. Contributing to this literature base, we conducted a qualitative analysis of PSTs' written observations of video-lessons, online discussions, and reflections, to answer the following research questions: (a) What representations of practice do PSTs notice while observing others teach via purposely selected video lessons; (b) how do PSTs make connections between the representations of practice they identified in these observations and pedagogical theories they have learned in their methods courses; and (c) how do PSTs decompose the teaching practices they view in video observations with others in online discussion forums?

Context

This study was conducted with PSTs in a graduate program leading to a Master of Arts in Teaching English to Speakers of Other Languages (MATESOL). All MATESOL students in this cohort took summer courses to prepare them for their year-long student teaching residency, which

began in the following fall semester. The summer courses, all fully online and asynchronous, included Foundations of Teaching English to Speakers of Other Languages (ESOL), Curriculum and Methods of Teaching ESOL, and Teaching Practicum. In response to Baecher et al.'s (2018) call for more transparency and detail regarding the design of video-based research, a description of the alternative fieldwork program follows.

Typically, PSTs are placed in summer school settings where they would work in person alongside a mentor teacher for their teaching practicum to meet certification requirements, including a minimum of 100 hours of observations split evenly between the elementary (K-6) and secondary (7-12) levels. However, due to the COVID-19 pandemic in the summer of 2020, regional summer school programs were fully online and were not accepting graduate student observers for their modified online summer programs. Therefore, the first two authors of this paper (Gregory and Oliver), professors of the teaching practicum course, devised a plan for an alternative teaching practicum in which MATESOL students would, instead, view videos of 45- to 70-minute classroom lessons found on the platform Teaching Channel Plus (TCP; https://www.teachingchannel.com).

After careful review of other online video platforms, it was determined that TCP would provide PSTs with various classroom scenarios across grade levels and content areas that would serve as examples and, perhaps, nonexamples of best practices for teaching English learners (Els). This plan was submitted for review and approved by the state education department.

TCP has a library of over 1,400 videos, many of which are specific to teaching ELs and dozens of which feature uncut (complete and unedited) classroom lessons. A TCP manager responded to our request for information about the video selection process, writing,

The videos were largely funded through grants from foundations and organizations, e.g., Gates, Hewlett, Helmsley, Stuart, Overdeck, Getty, Carnegie Corp of New York, Boeing, NEA/AFT, and NSF. As such, each video goes through a rigorous review process with content and educational experts before being included on the site. (T. Gould, personal communication, September 11, 2022)

The educational goal was for the PSTs to observe uncut classroom videos of complete lessons so that they could see a class from beginning to end, including behavior management issues and lulls in activity, in which the sequence of learning activities could be viewed from start to finish. These uncut videos were not edited by TCP or course professors, nor did they include commentary from teachers in the videos. Instead, they provided a realistic look at a whole class lesson with all of its ups and downs.

To give PSTs the broadest view of teaching ELs, five 1-week learning modules were created: (a) The Value of Observation; (b) Math Instruction for ELs; (c) Science Instruction for ELs; (d) Social Studies Instruction for ELs; and (e) Integrated English Language Arts. In each module, PSTs were assigned two uncut video lessons to watch, from 40 to 70 minutes in length, at the elementary and secondary levels.

PSTs completed an observation protocol for each video and then participated in online discussion with classmates. The observation protocol was developed by the professors of the course, requiring students to record time-stamped notes on teacher actions, student actions, and observer reflections. Instructions asked students to "record what you observe in the first two columns. Record your thinking about what you observe in the third column. Write the time for each major activity you observe." The videos were linked to the online learning management system site (Moodle) in a discussion forum with prompts.

It should be noted that this study focused on the first module of video observations and discussions, as it was the only module in which all participants in this study watched and discussed the same two videos. Through this shared experience of completing semistructured observations of two video lessons and discussing their observations in an online discussion forum, PSTs participated in cogenerative dialogue with peers and professors. A brief summary of the two videos PSTs viewed in Module 1 is presented in Table 1.

Table 1
Teaching Channel Plus Videos Viewed by PSTs in Module 1

Details	Video 1	Video 2
Video length	42 minutes	45 minutes
Grade level	Grade 4	Grades 9- 12
Summary	Ms. Y leads a diverse class of fourth graders, in a collaborative investigation of the aloe plant.	Mr. M. leads a literacy lesson focused on Frida Kahlo to high school newcomers.
Note. Video 1 = Groupwork in the Multilingual ELL Classroom; Video 2 = Foundational Literacy Skills for ELLs.		

Participants

Ten PSTs were enrolled in the teaching practicum course, and all were invited to participate in this research study at the start of the class. Author 3 (Rivera), not an instructor of the course, sent PSTs a detailed description of the study and a consent form, resulting in six who agreed to participate. Each was asked to choose a pseudonym, which was not shared with the two authors who were instructors of the course. Rivera conducted all correspondence with participants for this study to ensure confidentiality and to reduce any potential concerns about participation affecting grades. Gregory and Oliver were not aware of which students agreed to participate in this study until after the course was completed.

Data Collection Procedures

Three data sources were collected and analyzed for this study: (a) observation protocols, (b) online discussion posts, and (c) what we termed course "exit tickets" (written reflections in response to a prompt). Participants watched video lessons assigned by professors and recorded

teacher actions, student actions, and reflections on the observation protocol. After completing the observation protocol, participants responded to the following prompt in the Module 1 online discussion forum for this class:

> Watch *Foundational Literacy Skills* and *Group Work in the Multi-language ELL Classroom*. Then, write a reflection sharing your take-aways from these first two videos. What did you notice? What are you curious about? Write at least two paragraphs, but no more than four.

In the exit ticket at the end of the class, participants were asked to respond to this prompt:

> In a one-page Word document, complete a 3-2-1 Statement: 3 big ideas from watching the videos and participating in discussions, 2 new understandings as they relate to key elements in teaching ELs, and 1 immediate action that you will take to prepare yourself for your next steps in the MATESOL program.

Observation protocols were combined to form one transcript for analysis; online discussion posts and responses were combined to form a second transcript for analysis; and participants' exit tickets were collected and combined to form a third transcript for analysis. All data were collected during the 5-week summer session and analyzed once the course ended. The data sources analyzed in this study are summarized in Table 2.

Table 2
Data Collected and Analyzed

Data Source	Description
Observation Protocols	Transcripts of compiled observation protocols for module 1 videos with the prompt, "Note teacher-actions, student-actions, and reflections."
Online Discussion Posts	Transcript of compiled online discussion threads related to both videos with the prompt, "What did you notice? What are you curious about?"
Course Exit Ticket	A self-assessment given in August, asking students to identify three big ideas they took away from the videos, two new understandings they developed as a result of their observations and discussions, and one immediate action they planned to take when they entered their student-teaching residency.

Analysis

Analysis of the data was conducted through an inductive approach aligned to action research methodology. We employed Creswell's (2009) qualitative data analysis framework, which includes the following steps: (a) organize and prepare raw data for analysis; (b) read and engage with all data; (c) code data; (d) determine themes, codes, and descriptions; (e) interpret meaning (p. 185).

The data from observation protocols, online discussions, and exit tickets were deidentified and then combined to create three separate transcripts. The Grossman et al. (2009) framework worked as a starting point and a lens through which we conceptualized the study. The first coding cycle, therefore, was guided by the three research questions, in which representations (first, what did PSTs notice, and second, how did this connect to pedagogical learning?) and decompositions of practice (how did PSTs make sense of what they saw in collaboration with others?) were independently coded from the observation protocols, online discussions, and exit ticket transcripts.

This deductive coding of representations and decompositions revealed themes within and across the data sources (as in Miles et al. 2014; Saldaña, 2016) that added nuance and detail to the Grossman et al. (2009) framework. Responses to the open-ended prompts on each of these data sources revealed that students most frequently discussed (a) classroom culture, (b) classroom management, and (c) instruction for ELs.

Since these data were collected from only the first module of the course, in the 1st week of class during which PSTs responded to open-ended prompts asking what they noticed and how they interpreted it, there was no influence from the professors on the PSTs' observations and discussions. The instructors did not prompt or encourage PSTs to discuss specific topics, but rather allowed PSTs to share their most significant noticings. This particular course did not include specific teacher-led lectures or reading assignments, but instead offered PSTs the opportunity to complete fieldwork requirements in a structured setting and discuss their observations with peers. See the appendix for examples of how each of these themes was evident as a representation of practice and a decomposition of practice.

In the ensuing coding cycles, an iterative approach to analysis was used, returning to data sources to continuously identify patterns and compare themes and patterns between data sources. For each of the three main themes, the research questions were considered in terms of representations and decompositions of practice. For example, in terms of classroom culture, data were coded according to the following questions: What did PSTs see teachers and students doing to develop the classroom culture and how did they understand this practice in terms of pedagogy (representations of practice). Then, how did they develop a deeper understanding of what they observed through discussions with others (decompositions of practice)?

For each round of coding, we wrote memos independently and then met to discuss the themes emerging from the data and the attributes of those themes. Throughout the analysis, we continuously diagramed the connections between thematic categories and the attributes of the theme (as recommended in Creswell & Poth, 2016, pp. 193-197). Our diagram allowed us to flesh out the three thematic categories with attributes of each that were discussed in the data. The coding scheme is depicted in the appendix.

An example of how data were triangulated across three data sources is presented in Table 3. In this example, PST Brian noted the use of home

languages (L1) in instruction in his observation protocol, he discussed it in the discussion board, and he also mentioned it in his course exit ticket. Each excerpt is coded according to its theme and attributes.

Table 3
Example of the Triangulation of Data on the Use of Home Languages

Observation Protocol: Brian	Discussion Board Post: Brian	Exit Ticket: Brian
Teacher Action: Teacher explains a word first in English and then Spanish. Observer Reflection: Using L1 and L2 to explain something is more effective for English development. [INSTRUCTION]	"As you mentioned, in the video of newcomers, the teacher lets students use their L1, which is a great technique in terms of making students feel welcome no matter what cultural or language background they have." [CULTURE]	"One of the new understandings is using students' L1 in our lessons. We don't have to speak their language, but even asking that a word can mean in their native language can help them understand the concept better. [INSTRUCTION] That will also create a classroom culture where everybody respects each other's cultural diversity." [CULTURE]

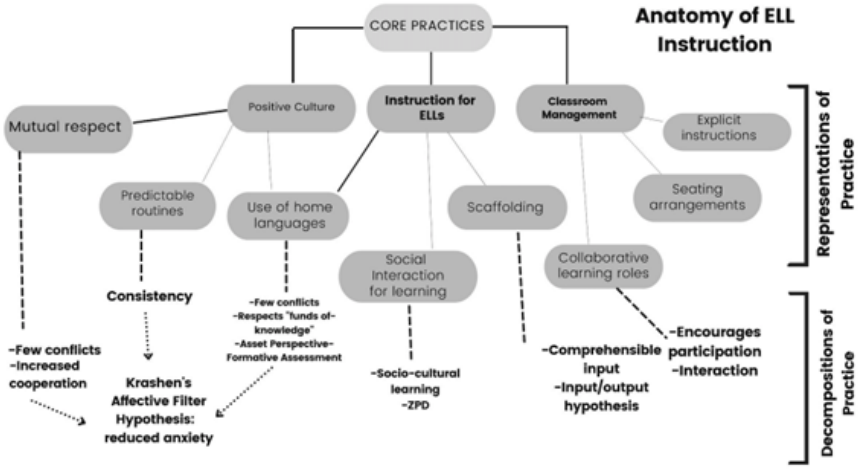
In the next section, details are provided to show how the data were interpreted in relation to the research questions.

Findings

Through our analysis and diagramming, we found that the process of watching full-length classroom videos, then reflecting and discussing observations with peers in an online forum, supported PSTs' ability to decompose complex pedagogy into its component parts. PSTs most commonly and frequently noticed and discussed core practices related to the classroom culture, classroom management, and instructional practices for teaching English language learners.

Grossman et al. (2009) described decompositions as the "anatomy" or "grammar" of practice" (p. 2069), allowing the complexity of pedagogy to be broken down into more visible parts. This study found that representations and decompositions can, indeed, work together to create a full "anatomy" of teaching practice, which was developed by diagramming our analysis of PSTs observations, discussions, and exit tickets, as shown in Figure 2. In relation to our research questions, the diagram helped us to see what PSTs noticed in the video lessons, how they applied theory to practice, and how they understood what they saw when discussing with others.

Figure 2
Anatomy of the Complex Practice of Teaching ELs Developed Through This Study



The section that follows will briefly elaborate on each core practice with representative evidence from PSTs' observation protocols, discussion posts, and exit tickets.

Noticing a Positive Learning Environment/Classroom Culture

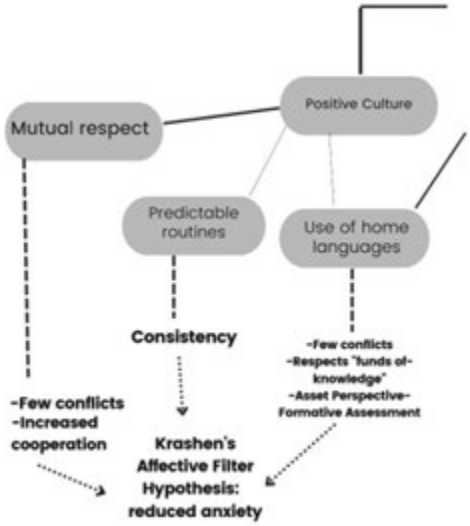
After watching the two videos, all of the PSTs noticed the classroom culture and discussed their noticings with peers. They determined that several teacher actions worked in tandem to create a comfortable, safe learning environment for ELs. They also noted differences between the classroom cultures in the two video lessons they observed and discussed the contrasting styles of the teachers. Figure 3 shows the part of the anatomy of practice that was created after analysis of the data in relation to the theme of classroom culture.

In identifying aspects of a positive learning culture, PSTs highlighted teacher actions such as demonstrating and cultivating mutual respect amongst class members, establishing predictable routines, and using home languages, as shown in Figure 3.

Mutual Respect

In their observations of the two videos, PSTs noticed specific actions that built or demonstrated mutual respect, such as polite language, shaking hands at the end of a lesson, pronouncing students' names correctly, and providing student autonomy. They reasoned that these actions led to a positive classroom learning environment.

Figure 3
Developing a Positive Classroom Culture: Representations and Decompositions



Predictable Routines

In their observations, reflections, and discussions, PSTs most often mentioned routines for the start of class, for managing materials, and procedures related to learning materials. They noticed that students knew the routines well, such as where to pick things up, where to place their papers, and what they could expect to happen during the class. For example, several PSTs noticed how Mr. M. (Video 2) demonstrated a routine for the start of the class in which his high school newcomer students recited the date, the learning objectives, and the vocabulary for the lesson. They also noted that Ms. Y. (Video 1) demonstrated routines around group work.

PSTs reasoned that well-established routines help reduce students' anxiety by creating stability, consistency, and predictability. For example, Sean wrote in a discussion post, "I can tell by how orderly her routines and the classroom environment are together that her students have a strong sense of consistency. This, as we know, lessens the anxiety that ELs feel on a daily basis." Brian noted the same in his observation protocol: "Having classroom routines is important for creating stress free classes."

Jane connected predictable routines with efficiency, writing in her discussion board post, "The students knew exactly what to do and as a result, the timing was fast paced, and the teacher and students were able to move quickly from one task to another." Several PSTs connected these episodes with Krashen's (1982) Affective Filter Hypothesis, noting that language acquisition occurs in lower anxiety environments.

Home Languages

PSTs proposed that the use of home languages, as seen in both videos, enhanced the classroom culture. PSTs wrote that the teachers' use of home language demonstrated a respect for students' home cultures and also reduced anxiety by allowing students to use their home languages to better understand the academic content. Sean described how the teachers' use of L1 can help "students with interrupted formal education (SIFE)" specifically:

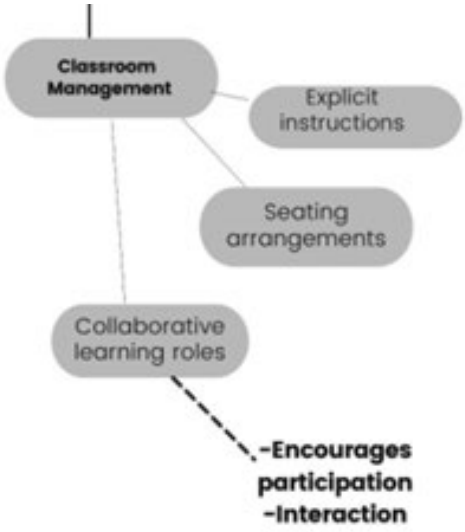
> ...I saw how L1 usage can be an asset for SIFE students, making them feel safe and welcome within a classroom. The reduction of student anxiety cannot be overstated and the teachers in that module (immigrants themselves) took an asset perspective to what these students had to offer rather than their lack of formal education. (Exit Ticket)

In this statement, Sean connected to several theoretical concepts that had been discussed in class, such as "asset perspective" versus a deficit perspective and the Affective Filter Hypothesis (Krashen, 1982), related to reducing anxiety for language learning.

Noticing Classroom Management Strategies

All participating PSTs identified practices that supported teachers' classroom management in both videos. They observed and discussed practices related to teachers' clarity and the structure of the classroom learning environment. Figure 4, below, shows the anatomy of practice that was created after analysis of the data in relation to the theme of classroom management.

Figure 4
Classroom Management: Representations and Decompositions



PSTs reflected on the importance of strong classroom management skills and strategies of the teachers featured in both videos. Through reflection and discussion, they recognized that creating safe spaces for learning is an essential component of teaching English as a second or new language. Teachers do this, PSTs noticed, by making instructions clear and comprehensible and by structuring learning activities and the classroom itself in purposeful and careful ways. All PSTs also noted the differences between the two teachers' classroom management styles.

Explicit Instructions

All six PSTs noted that Mr. M. (Video 2) managed time on task effectively and gave clear, explicit instructions. They noted how the use of TPR (total physical response) helped ELs to understand the requirements and expectations of learning activities. PSTs reasoned that giving explicit and clear instructions was an important part of classroom management, exemplified by George's discussion board post: "In this video the teacher assigns roles to students and gives clear directions on how students can complete the activity and how they can ask for clarifications and sets clear expectations for everyone." George then concluded, "The benefits of good classroom management are quite obvious in this classroom." PSTs noticed that both teachers made their instructions clear with gestures, slowed speech, and clarifying questions.

Collaborative Learning

PSTs observed that giving explicit instructions classroom during collaborative learning activities was an especially important classroom management practice. They noted that teachers need to teach group roles and responsibilities so that students could work independently without much intervention on the part of the teacher. All PSTs noticed that each group member was assigned a role, and the expectations for each role were explained. Several students noticed that the teacher in Video 2 spent time reviewing the roles as well. Marie observed, "Students are in groups and begin working. They seem to know exactly what to do." Sean wrote in a discussion post, "They also know exactly what is expected of them and so course correction is generally easier."

Seating and Room Arrangement

Several PSTs noticed and commented on the way teachers organized their classrooms, with students sitting in groups instead of rows, and one teacher using the table tops as white boards. PSTs reflected that the arrangement of the classrooms promoted positive teacher-student and student-student interaction, as it also provided access to all students for the teacher to manage behavior.

The first thing that I immediately noticed is that the seating arrangement in the classroom seemed to really facilitate learning. The teacher was able to move quickly, which enabled him to respond to requests for clarifications at the student tables without distracting the other students

and it also helped him to monitor students' progress during activities. (George, Discussion Board)

Classroom Management Styles

All six PSTs noted the distinct difference in classroom management style between the teachers in Video 1 and Video 2. Most often, they characterized Ms. Y. (Video 1) as "strict" and Mr. M. (Video 2) as "supportive" and "respectful." Sean responded to his classmates' critiques of the teachers' contrasting styles, highlighting the difference in teaching context as well as the limitations of video.

> I agree that elementary students tend to need more structure and reinforcement to stay on task. Ms. Y does come across as more forceful than Mr. M but what I think is important to remember is that she has a larger class and with a greater range of English proficiency. Obviously, it's also difficult to ascertain if this was just a more stressful day or if there is more going on, as we're only getting a snapshot of the classroom. (Discussion Board)

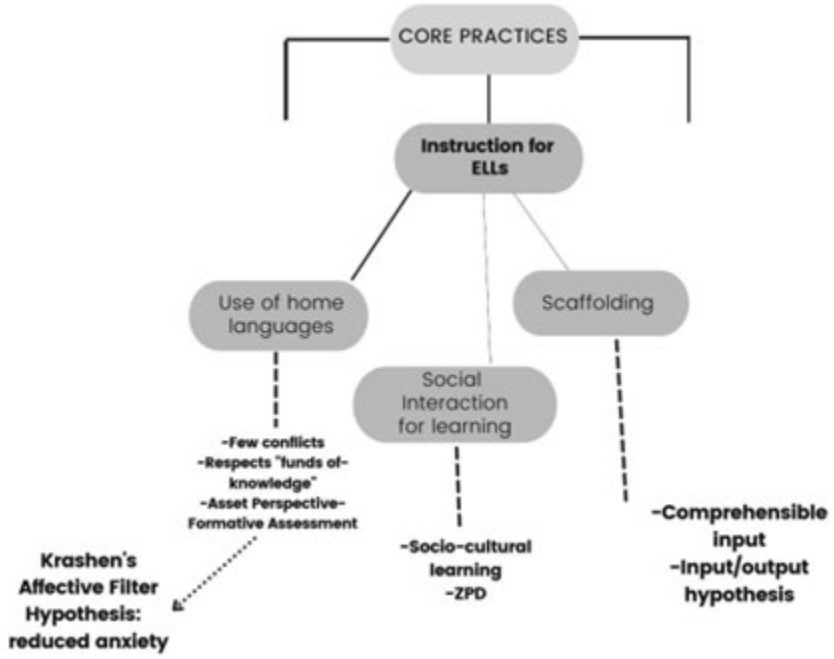
It was surprising that the PSTs focused on classroom management, as we had not addressed this topic in any prior classes. We can speculate that this may be related to PSTs' anxiety about student teaching, which was scheduled to begin after this class. The shared experience of watching two different teachers, combined with the opportunity to discuss this experience in an online forum, provided the PSTs with a unique opportunity to explore different classroom management styles and strategies prior to their student teaching experience.

Noticing Best Instructional Practices for English Learners.

All six PSTs devoted much of their discussion and observations to identifying the instructional actions that seemed most effective for teaching English learners. In both observation protocols and in discussion board posts, PSTs noted teaching strategies that worked well, and why that was so. Figure 5 shows the anatomy of practice that was created after analysis of the data in relation to the theme of instruction for ELs.

In PSTs' observations of video lessons, they noticed many aspects of best practices of instruction for English learners, but most frequently, they mentioned home language integration, scaffolding practices, and planned activities to support student interaction.

Figure 5
Instruction for ELs: Representations and Decompositions



Use of Home Languages

All six PSTs noticed the use of ELs' home languages (L1) by teachers to support their instruction in the observations of videos 1 and 2. They reported seeing teachers use L1 as a formative assessment tool, as a quick way to check for understanding, and as a way to help students think or process new concepts. In discussions and reflections, PSTs worked to understand the instructional practices they observed, thinking about connections to theory and what they had already learned about teaching English as a new language.

Jane's discussion board comments were representative of many regarding the use of home languages, and demonstrate her sense-making:

> Using their first language to help with their own learning can help the students to feel that they are a part of the teaching/learning process, it can make them feel less homesick, and it provides a formative assessment for the teacher.

Scaffolding Practices

PSTs noted several scaffolding practices that each of the teachers used in their lessons to help students understand and complete the academic tasks. They noted scaffolding for both productive (speaking and writing) and receptive language (reading and listening), including such strategies as using drawings, gestures, graphic organizers, and sentence frames. By

observing these strategies in action and discussing them with peers, PSTs could express their understanding of scaffolding as a way to provide access to the curriculum for ELs.

Many PSTs noted how one teacher drew on the desks to get students' attention and provide an immediate visual scaffold for student comprehension. In addition, several noticed that Ms. Y. gave students a real piece of an aloe plant to examine during her lesson, demonstrating how "realia," or real-life objects, can be used to support understanding and engagement.

The use of gestures was noticed by several PSTs as a practice that allowed teachers to provide comprehensible input to their students as well. For example, on his observation protocol, Sean noted, "… his use of Total Physical Response when explaining directions or the meaning of a word or phrase was very effective in getting his students to understand him."

To scaffold productive language, PSTs noticed Mr. M. used sentence frames to support ELs' collaborative conversations. In her observation protocol, Marie observed, "Teacher mentions discussion starters and encourages students to use them to talk about the plant," and then reflected, "This is a scaffold for students to communicate in academic discussions." In addition to using home languages, PSTs also saw the teachers supporting their ELs with visuals. In one exchange on the discussion board, George and Sean summarized what many had been discussing related to scaffolding and how various pedagogical practices can work together to support comprehension and communication, as shown in Figure 6.

Figure 6
Discussion Between George and Sean on the Topic of Scaffolding

Theme: Instructional Practices

Decompositions of Visual Scaffolding

Discussion Board

George: The teacher used gestures to support student understanding, encouraged students to say the equivalent of the words in their L1.	→	Sean: What I think Mr. M. does really well is to make culture the actual way he communicates with his students. Having them incorporate their L1 and English into their answers acknowledges the two worlds these students are walking in at one time.

Planning for Student Interaction

All PST participants noticed how teachers planned learning activities that required student interaction for collaborative learning. PSTs noticed that encouraging social interaction among students increased their engagement and enhanced the lessons. Marie wrote about Video 2, "This learning is very social. Students are reading, writing, and speaking. Teacher prompts students to repeat the words in their home language showing value for their Funds of Knowledge" (observation protocol).

PSTs discussed both *how* and *why* interactive learning activities work in the classroom, determining that structure was important, as well as the purposeful pairing of students. For example, in a discussion board exchange Sean and Ann talked about the way teachers structured collaborative learning activities and the benefits of that structure, shown in Figure 7.

Figure 7
Discussion between Sean and Ann on the Topic of Collaborative Learning

Theme: Instructional Practices Decompositions of Collaborative Learning in Discussion Board postings		
Sean: In [Video 2], Mr. M. takes on the role of facilitator rather than doing his lessons through direct instruction. He partners the students through every activity but also acts as their partner throughout the lesson when they need additional support with understanding.	→	Ann: Like you, I was also curious about the groupings. It seems like both teachers had mixed levels in the groups / pairings, and that there was a more advanced student that helped his/ her peers. This is a nice way to have students work together and help each other.

Others noted the same and reflected on how the strategic pairing of students, one at a higher level of proficiency and one at a lower level of proficiency, could help to scaffold reading. Jane wrote, "When he has the partners read together, one student was more proficient in English than the other so that when their partner struggled with the reading, the stronger student could assist them" (Discussion Board). These reflections demonstrate how PSTs conceptualized Vygotsky's (1978) theory of Zone of Proximal Development in concrete and real-life terms.

Discussion and Implications

Effective pedagogy is a tightly woven knot of complex practices, and this study suggests that video-based fieldwork with collaborative discussion can be one way to untangle that knot. For example, best practices of instruction are intricately linked to a positive classroom culture and strong classroom management, each influencing the other and each contributing nuance to complex pedagogical practices.

This overlap was evident throughout the data, such as when George noted the use of teachers' gestures (Table 7). In this discussion board post, George mentioned scaffolding with gestures, using L1 for instruction, modeling, and providing clear instructions. Indeed, each of these teacher actions helped to create a positive classroom culture, helped to manage behavior, and demonstrated best practices of teaching ELs. They all worked together and in tandem, illustrative of complex pedagogical practice. This study suggests several implications of video-based fieldwork for PSTs, for teacher educators, and for schools of education, as well, which are presented in the following sections.

Implications for Preservice Teachers

The findings of this study highlight several affordances of video-based fieldwork for PSTs. Video-based fieldwork created a shared experience for a class of PSTs, so that they could all see and discuss the same lesson, which was purposely chosen for them by their professors. Through semistructured observation and subsequent online discussion, PSTs were able to operationalize abstract pedagogical theories and concepts and make connections to their coursework. Conducting observations and participating in discussions supported PSTs in identifying the intangible components of effective pedagogy, such as building a positive classroom culture, developing trust with students, establishing mutual respect, or scaffolding. Identifying these components made abstract concepts visible and actionable. Jane expressed this well when she wrote the following in a discussion post:

> In the texts [from previous methods course], when we read about autonomy and involving students in designing the curriculum, I couldn't really picture what that would look like. It never occurred to me that something as simple as asking students to decide how much time should be given for an exercise was a way of giving students that sense of autonomy and inclusion.

Likewise, through video-based fieldwork, PSTs had the opportunity to identify and decompose the theories they learned about in their prior methods courses, such as Funds of Knowledge (Gonzalez et al., 2005), Affective Filter Hypothesis (Krashen, 1982), Comprehensible Input (Krashen, 1982), Output Hypothesis (Swain, 1985), Zone of Proximal Development (Vygotsky, 1978), and Culturally Responsive Teaching (Gay, 2000). This was evident when Sean wrote in a discussion post, "The aloe vera plant allowed her to draw upon her students' funds of knowledge by having them draw on their background of the climates of their home countries," and when Marie reflected on her observation protocol: "The

teacher values their funds of knowledge by using Spanish for clarification when necessary."

Implications for Teacher Educators

As an action research project, we studied the use of video to enhance or replace fieldwork in consideration of how alternative, technology-enhanced fieldwork can impact our work as teacher-educators. COVID-19 forced us to consider new ways of doing things, and the forced innovation brought both benefits and challenges. Action research allows teacher educators to reflect objectively upon new ideas and innovations for the purpose of continued improvement. As such, we can reflect on the benefits and challenges of implementing video-based fieldwork to our teacher education program.

We found that using video for fieldwork provided several affordances. For one, we had greater control, as we were able to select the videos to be seen and the practices to focus on. In traditional in-person fieldwork, each candidate would observe lessons independently in local schools, so professors could not choose what they saw, nor provide any substantial quality control, nor discuss the experiences in a collaborative way since each experience is individual. Video provided the opportunity to create a shared experience and the online discussions allowed PSTs to collaboratively decompose what they had seen to determine the motivations and effects of the observed practices.

This study demonstrates that video-based fieldwork allows professors in a graduate education program to control and design the learning experiences more fully, so that the course readings can be matched to the video lessons, allowing the PSTs to discover the connections between theory and practice. Marie, a PST who was already certified in English language arts, articulated these affordances as she concluded in her exit ticket,

An apprentice is someone who learns under the tutelage of someone more skilled. The first step before the novice begins attempting to do the work on their own is they watch the master. When I got my initial certification, there was a process of observing, but I don't think it had the same learning value as I have gained from watching these videos. In the videos for Practicum, we get to see teachers actually modeling the very procedures and strategies we are learning about. When you go into a school to observe, there is always a chance that won't be the case. I have often found myself thinking that I wish I could see what the books and lectures are talking about, and this has given me the chance.

In addition to the affordances of using video-based fieldwork that have been discussed, we also found several challenges. The challenges of the alternative fieldwork experience are obvious: PSTs are not in the classroom experiencing the lesson live and in-person. With video, they are removed and cannot experience every aspect of the lesson, but only what the camera shows them. One participant, Brian, explicitly articulated this when he wrote in his exit ticket:

> I am someone who learns best by touching, seeing, feeling and finding solutions, I do not think watching videos gives you the same opportunity. It was good to see how different classrooms looked, because we were able to see various types of classrooms, but one or two videos related to it was not enough for me to have a deeper understanding how teaching occurs in those classroom settings.

In our experience, preparing the alternative experience created more work than simply sending students into local schools to complete their observation hours. We needed to watch the uncut classroom videos in advance, create observation protocols, prepare the online discussion forums, and participate in the online discussions. However, we found that this experience allowed us to engage in more targeted discussions of what good teaching looks like with our PSTs and that the discussions were more robust than in the past when students simply reported back on what they had seen in their individual (live) classroom observations. This study provided the opportunity to explore the ways both in-person and video observations can be balanced going forward.

Implications for Schools of Education

For schools of education, more generally, this study suggests that integrating video-based fieldwork can provide ways to demonstrate best practices as well as opportunities to discuss more abstract pedagogical concepts collaboratively. In addition, video-based fieldwork can alleviate several problems inherent with traditional models of in-person fieldwork, such as the inconsistencies related to absent teachers, fire drills, and other unplanned events that are part of a regular school day. There is an aspect of quality control that can help teacher educators to unpack the complexities of teaching.

Last, adding a video component to traditional, in-person fieldwork can provide ways for faculty members to collaborate with one another, as video lessons can be discussed in multiple contexts in teacher preparation courses. This feature is especially important now, since schools are once again open to fieldwork and observations, and state education departments are readjusting to our changed educational context. In the state where this study was conducted, in fact, alternative video fieldwork was approved during the COVID-19 pandemic but has since been disallowed. Requirements for traditional in-person observations have been reinstated. This study calls such decisions into question, as we find benefits to adding a *structured* and *systematic* video observation program to traditional observatory fieldwork.

Limitations

This study only had six participants, and the findings represent what these six PSTs noticed and discussed as a result of an alternative, video-based fieldwork assignment. Given the moment in history when this study took place, in the 1st year of the COVID-19 pandemic, many graduate students were grateful not to be in schools and grateful to have opportunities to continue their study in preparation for their careers in education.

Therefore, participants may have been especially open to the possibilities of video-based fieldwork.

We recognize that a teacher-student relationship existed with our participants, which introduces the possibility for bias. We addressed this potential by conducting the study after students had already graduated from our program and also by using pseudonyms for confidentiality.

While we were participating in the online discussions with the PSTs, we were not aware of who had consented to participate in this study, and as such, we interacted with each in a similar manner. These limitations bring us to our conclusion, in which we report our determination of what was learned from this study and how it influences our work as teacher-educators.

Conclusion and Next Steps

Analysis of the data in this study revealed the anatomy of classroom instruction for ELs that our PSTs noticed through video observation and articulated through discussions. They saw representations of complex teaching practice related to abstract theories and pedagogical concepts and were able to name them, describe them, and decompose them for greater understanding. In retrospect, we realize that PSTs would benefit from seeing the anatomy of practice that came from their observations, reflections, and discussions. Completing a collaborative analysis of this type would affirm that students are noticing key aspects of instruction and the ways they all fit together in complex practice. In the future, this would be something to add to our coursework and instruction for PSTs.

We found the Grossman et al. (2009) pedagogy of practice framework to be a useful lens in considering the challenges and benefits of video fieldwork. This study supports one of the conclusions posited by Grossman et al., specifically that representations, decompositions, and approximations overlap and influence each other. To build on the pedagogy of practice framework, this study aimed to untangle the overlap between representations and decompositions by inquiring about what PSTs saw and how they understood it.

This study allowed us to analyze our own course design and our graduate students' reaction to it, finding that the video-based fieldwork assignments did, indeed, provide useful and informative opportunities to record observations and reflections and then discuss them with colleagues. In terms of the broader field of teacher preparation, and TESOL, this study suggests that further inquiry into the potential of video-based fieldwork is warranted.

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Appendix

Coding Scheme With Examples of Representations and Decompositions

Coding Theme	Pedagogical Practice (Attributes of the theme)	Examples of Representations of practice: What did PSTS notice?	Examples of Decompositions of Practice: How did PSTs understand their observations?
Classroom culture	Mutual respect	Shaking hands Expressions of gratitude ("thank you") Accurate name pronunciation Autonomy	"In the high school classroom, the teacher was doing a lot with his literacy students. He started the class by asking them to make predictions, and when he introduced a new word he explained it and even asked students to translate it into their first language. I was surprised by this, for in university-level ESL (which is where most of my experience is), most programs have an English-only policy. Now, I am questioning the effectiveness of those policies because telling students that the classroom is "English-only," does not stop them from translating. I wonder if we are actually doing them a disservice by not validating their first language. Mr. M. was very respectful to his students, and you could see how the students were respectful and kind to each other." (Ann, discussion board post)
	Predictable routines	Beginning of class routines Managing materials Procedures for learning activities (rules)	
	Use of home languages	Translation from L2 to L1 Formative assessment/ checking for understanding in L1 Welcoming students/ socializing in L1	
Classroom Management	Explicit instructions	Comprehensible input/ clear speech Gestures to clarify meaning. L1 translation of instructions	"The first thing that I immediately noticed is that the seating arrangement in the classroom seemed to really facilitate learning. The teacher was able to move quickly, which enabled him to respond to requests for clarifications at the student tables without distracting the other students and it also helped him to monitor students' progress during activities. It was obvious that the teacher was very familiar with students' abilities, responsive to their questions, and he divided his attention among students appropriately and kept them on task." (George, discussion board post)
	Collaborative learning	Assigning student roles. Collaborative learning roles firmly established .	
	Seating arrangements	Desks are in pairs, groups. Space for the teacher to circulate.	

Instruction for English Language Development	Use of home languages	L1 translation to express ideas. L1 translation as comprehensible input. Formative assessment.	"Using their first language to help with their own learning can help the students to feel that they are a part of the teaching/learning process, it can make them feel less homesick, and it provides a formative assessment for the teacher. When he asks a student what the word is in Chinese and the student responds, he knows that the student knows the meaning of the word." (Jane, discussion board post)
	Scaffolding receptive language	Visuals. Drawing. TPR. Realia.	
	Scaffolding productive language	Sentence frames/ starters. L1 translation. Lower proficiency- higher proficiency student pairings.	
	Social interaction for learning	Group work. Pair and partner work. Teacher- student interaction.	