

How do our graduates affect student learning?

Abstract

In this research project we are investigating how our graduates affect student learning in their classrooms. Participants included graduates of our teacher education program who hold jobs teaching within driving distance of our university. Information was gathered through a classroom observation and interview with each graduate. Results will be analyzed when we can thoroughly and carefully code the data.

Keywords: CAEP accreditation; evidence of student learning; teacher education; teacher work samples; novice teachers

One of the challenging tasks of teacher education programs is to demonstrate whether their graduates are affecting p-12 student learning and to what degree the graduates are applying the professional knowledge, skills, and dispositions that we expect them to demonstrate. Traditionally graduates have been more influenced by the apprenticeship of observation than by their university studies (Lortie, 1975, p. 19) however researchers have recently found that graduates of schools that have successfully transformed their teacher education programs feel prepared for teaching, earn higher ratings from their supervisors, and contribute more to student learning (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Darling-Hammond, 2006; Darling-Hammond & Bransford, 2005). The purpose of this research project is to investigate to what degree our graduates are affecting p-12 student learning and to what degree the graduates are applying the professional knowledge, skills, and dispositions that we expect them to demonstrate.

Literature

Impact of Graduates on Student Learning

Designing quality teacher preparation programs matter because when novice teachers come from quality programs, they are more likely to be effective and they are more likely to remain in the profession (Darling-Hammond, 2010). However, it is difficult to measure the effectiveness of graduates once they are in field. Because the Council for Accreditation of Educator Preparation (CAEP) requirement to demonstrate the effects of graduates on P-12 learning is a relatively new requirement, there is little research that models ways to prove that graduates affect student learning. Norman (2010) cautioned researchers to remember that there is no perfect model, and advocated using a variety of methods, and, most importantly, reminded researchers that the purpose of assessment of graduates is “not distinguishing good from bad teachers, but rather helping all teachers improve (Norman, 2010, p. 211).

Feuer, Floden, Chudowsky, and Ahn (2013) identifies a number of teacher output measures that attempt to evaluate how well teacher education programs are producing effective teachers. Some of the most common include teacher licensure tests, data on hiring and retention, teacher performance assessments, surveys of graduates and employers, and value-added models such as students' standardized test scores. The authors caution that none of these models is without concern and that no one method should be relied upon for conclusive data. Heafner, McIntyre, and Spooner (2014) describe their model of assessing a clinical experience for pre-service teachers and concur that multiple measures provide more information to make decisions about the growth of students, pre-service teachers, clinical partners, and university faculty.

Teacher Work Samples

At this university, all preservice teachers in secondary social studies methods classes and elementary methods classes have been completing teacher work samples in their methods class for years. With the program changes implemented in Fall 2015, teacher candidates completed them in their methods classes and in their student teaching experience in starting in Fall 2015. Teacher candidates provide a description of the characteristics of their classroom, a unit plan, a lesson plan from the unit, the pre- and post-assessment instrument, samples of student work with analysis of error patterns, results of the pre- and post-assessment including the range and the overall average, a reflection on the results including an analysis of the error patterns or level of performance and an action plan for student who did not demonstrate an appropriate level of achievement.

While many universities are using the TWS framework, there are few studies of teacher candidates using the teacher work sample framework. Pre-service teachers in an early childhood program had "large and positive learning effects on their elementary school students" (Fenster & Judd, 2008, p. 19) and because the researcher analyzed the teacher work samples of 99 students,

they found the results to be statistically significant (Fenster & Judd, 2008). They noted that students showed smaller gains in learning goals for math and science than in language arts, social studies, and health but concluded that they found the teacher work sample to be an effective way to collect evidence and for teacher candidates to demonstrate student achievement (Fenster & Judd, 2008).

Other descriptions focused on particular aspects of the instructional decision-making process as illuminated by the teacher work sample. Kohler, Henning, and Usma-Wilches (2008) used teacher work samples with 150 student teachers in elementary and secondary programs and found that student teachers paid more attention to instructional decisions that they adjusted within classroom instruction but were less likely to ask students to self-assess or to use other formative measures of assessment. Similarly, these novice teachers had difficulty explaining why particular modifications might improve student learning (Kohler et al., 2008). Universities have also asked pre-service teachers to use a teacher work sample to investigate and learn about the social contexts of urban schools and then use that knowledge to teach (Brown & White, 2014).

Colorado State University implemented teacher work samples to investigate whether teacher candidates knew the subject matter, used pedagogy that met the needs of diverse learners, and cared about their students. Each teacher candidate completed them as part of their student teaching experience and researchers found the assessment to be meaningful, valid, reliable, and a helpful tool for assessing their program (Cooner, Stevenson, & Frederiksen, 2011).

Kirchner, Evans, and Norman (2010) confirmed findings from Denner, Norman, and Lin (2009) that females outperformed males on teacher work samples and that teacher candidates in p-5 classrooms performed better than those in secondary classrooms, which they attributed to the greater number of opportunities to teach in elementary classrooms. In addition, their research

found teacher work sample scores to correlate with ACT scores and Praxis Principles of Learning and Teaching scores (Kirchner et al., 2010). In analyzing teacher work samples from their program, Stobaugh, Tassell, and Norman (2010) found that preservice teachers in their program struggled most with assessment and analysis of data and planned to take steps to address the concerns.

New Teacher Beliefs

Asking novice and pre-service teachers about the source of their beliefs and practices is common way to illuminate the instructional decision-making process. Studies of preservice teachers provide interesting insight into how new teachers react to questions and challenges relative to their beliefs. Chant (2001, November, 2002) followed three secondary social studies teachers from their preservice experience, in which they wrote personal practice theories, to their first year of teaching. Three common themes emerged: each teacher tried to enact his or her personal practice theories, the teachers' personal practice theories influenced their curricular decision-making, and each teacher refined his or her personal practice theories throughout the year. Chant (2001, November, 2002) also found that two teachers successfully implemented their personal practice theories and one teacher developed a new set of personal practice theories in response to the difficulty she had implementing the original personal practice theories. She changed her personal practice theories because she found the students less capable than she expected and colleagues at the school shared concerns about the capability of students (Chant, 2001, November, 2002).

Van Hover and Yeager (2007) selected a graduate (Charlotte) from a master's and initial licensure program in secondary social studies because she could "articulate a sophisticated conception of historical thinking and historical inquiry and appeared to possess exemplary pedagogical content knowledge" (p. 671). In analysis of classroom observations, interviews, unit

planning documents, and a reflective research journal, van Hover and Yeager concluded that this second-year teacher demonstrated consistency in her sense of purpose, her beliefs about history, her beliefs about her students, and her teaching (2007, p. 686). Charlotte saw history as a way to make students better people, and this “trumped other possible influences of her teaching, particularly that of her methods course with its emphasis on historical inquiry” (van Hover & Yeager, 2007, p. 686). Sometimes preservice teachers who demonstrated beliefs in a methods class do not translate those beliefs into classroom practice.

Hawley’s (2010) study of three first-year secondary social studies teachers also illustrated the complex interaction between theory and practice. All three novice teachers in the study articulated their rationales about teaching, but each faced difficulty putting their beliefs and goals into practice. In their first year of teaching, all three reverted to a traditional style of teaching that facilitated classroom management. These three studies show the complexity of teaching good practices in the university classroom but then having beliefs challenged and sometimes dropped in the face of field experiences.

Bauml (2011) asked 5 novice early childhood teachers about their curricular decision-making and in particular how they drew from their university experiences and found that participants adopted, modified, imitated, or avoided what they learned in the teacher education programs and reminds us that new teachers are still evolving. Similarly, over four years Caudle and Moran (2012) studied a cohort as they moved from early preservice teachers to practicing teachers. The preservice teachers were initially unstable in their beliefs but over time strengthened the correlation between beliefs and practice and by the end researchers saw practice and beliefs evolving and informing each other.

Methods

Participant Selection

To study the effects of our graduates on p-12 learning and also to learn to what extent our graduate employed the knowledge, skills, and dispositions we taught them, we used a collective case study method in which researchers uses multiple case studies to study an issue (Stake, 1995). We invited graduates from our Teacher Education program from the 2015-2016 school year who teach in schools within a reasonable distance. Researchers invited graduates by email. In our first pilot study, one researcher focused on graduates of the elementary education program, one researcher focused on graduates of the secondary English education program, and one researcher focused on graduates of the secondary social education program. For both the English education and social studies/history education programs there were fewer than five graduates teaching within reasonable distance who were in their second year of teaching. All graduates in the area were invited to participate and 3 English education graduates agreed to participate and 2 social studies education graduates agreed to participate. Around 15 elementary graduates found jobs within a reasonable distance. The researcher elected to study graduates teaching in fourth, fifth, and sixth grade as documenting evidence of student learning is assessed more formally in those grades. The researcher selected a man and woman, both teaching in a public school as well as woman teaching in a private school for contrast. All three of the graduates who were contacted agreed to participate. The researchers working with the elementary education and secondary social studies education graduates both had taught their participants at the university while the researcher working with the English education graduates had not. The Field Placement Office had no concerns about the participants from their practicum or student teaching. All of the graduates entered the program before the university implemented required clinical experiences to accompany course in the teacher education core.

Data Collection

For collection of data we used a case study approach (Stake, 1995) and collected data through observations and interviews. Participants gave some form of pre-assessment to the students, and then each researcher observed the participants teaching a lesson in the unit once. Observations ranged from 30-50 minutes depending on how long the lesson lasted. In all classroom observations, researchers took detailed field notes either on a computer or by hand and then transcribed and revised them immediately after the observation (Emerson, Fretz, & Shaw, 1995). Data collection is a balance of the practical and the ideal (Marshall & Rossman, 1995; Merriam, 1991) and in an effort to complete the project we each observed the participants once.

In addition, researchers evaluated the teachers using the Student Teacher Observation Tool, a rubric for evaluating student teachers developed by a committee with representatives from all the teacher preparation institutions in the state. Researchers filled out the rubrics immediately after observing the participants. See Appendix A for a copy of the instrument.

At the end of the unit, researchers interviewed each participant once and the interviews lasted from 10-30 minutes. Participants were interviewed in their classrooms or in the office of the researcher after school or during a preparation period. Some participants brought charts with data about the performance of students in their classrooms or provided scores for the researchers. Researchers asked questions about the planning and goals of the unit, how teachers decided whether their students met the goals, how students performed on the assessments, how lessons were differentiated, and how the teacher might revise the unit in the future. See Appendix B for a list of interview questions. Researchers transcribed all interviews.

Data Analysis

In order to prepare this report, researchers described the graduate, described the classroom and described the interview. Our next steps are to read and re-read the transcripts of the classrooms, the interviews, the assessment provided by the teachers, the evaluation with the

student instrument, and the data provided by the teachers. We will code information from our teachers as well as code information from the other researchers using inductive and deductive coding. We plan to code them line by line, writing notes in the margins (Emerson et al., 1995). Then we will develop an initial list of codes and re-read the documents again, looking for patterns. We anticipate that our questions and even procedures will need revising for further candidates will need revising once we have done an initial analysis of the information (Creswell, 2007; Glesne, 2006).

Description of Data

Ms. Jana Hoosier

Ms. Hoosier is in her second year teaching secondary English in a rural school. The school facility houses both an elementary school and a high school, with a couple very modern areas of the physical plant resulting from renovations to meet the demands of a growing population in the area. Ms. Hoosier is the primary English teacher in the high school, teaching eighth through twelfth grade, and a colleague teaching the seventh grade English class in addition to courses in another content area.

Ms. Hoosier's classroom is arranged in rows, four or five desks in each of five rows. The walls are adorned with posters that define and provide examples of "Alliteration," "Idiom," "Onomatopoeia," and other literary terms. Windows run nearly the entire length of one wall, and a low, three-shelf bookshelf runs the length of the opposing wall. A laptop remains open on Ms. Hoosier's desk, which sits in the back of the classroom, exactly opposite the white board and teaching station at the front of the room.

The day I observed Ms. Hoosier teach a lesson from her unit on *The Crucible*, her eleventh graders were presenting political cartoons about McCarthyism. The previous day Ms. Hoosier had assigned a cartoon to groups of two, three, or four students. During my observation,

each group of students placed their cartoon under the document camera and then described to their classmates the meaning of the political cartoon. One group, for example, showed and discussed a cartoon of a car running over people and crashing into people and things. The car is labeled “Committee on Un-American Activities” and the caption at the top of the cartoon reads, “It’s Okay – we’re hunting Communists.” The students, group after group, explain to their peers the meaning of their cartoons, with Ms. Hoosier asking questions and seeking clarification from the group members. On occasion, Ms. Hoosier added commentary about the cartoon after the group had presented. Once all of the groups had presented their political cartoons, the teacher asked students to open their literature books to Act II.

Once students had all opened their books to the appropriate page, Ms. Hoosier asked, “Who can tell me what happened in our reading yesterday?” Students responded with varied answers, and Ms. Hoosier proceeded to read a review of Act I from the literature book. The class then read Act II, each part of the play being read by a different student. During my subsequent interview with Ms. Hoosier, she explained that every student was assigned a part, some as the primary reader of the character’s part and some as an understudy in case of a classmate’s absence. The class read Act II for the remainder of the period, during which Ms. Hoosier would occasionally stop the class and ask review or clarifying questions regarding the reading. As the time for the end of class crept closer, Ms. Hoosier informed the class that they could use the last few minutes to work on their packets (study guide).

The assessment tool Ms. Hoosier used as both a pre-assessment and a post-assessment was a nine-question test with exactly the same questions. It solicited answers regarding the material from *The Crucible* (e.g. “When was the play, *The Crucible*, written?”), questions regarding the subject of the play (e.g. “The Salem Witch Trials were caused not by actual witches but by a climate of fear and uncertainty caused by what factor(s)?”), and questions which

attempted to make the play and the subject matter applicable to students’ lives (e.g. “Describe what it means in modern terms to ‘go on a witch hunt’?”). The questions on the test all required short to medium-length answers. Table A shows the results of the pre- and post-assessment. Twenty-two students in the class completed both the pre- and the post-assessment as shown below. Two students are not represented on the chart as they did not complete one (either pre- or post-) of the assessments.

Table A. Results of the pre-assessment and the post-assessment administered by Ms. Hoosier to her eleventh graders.

	Question 1		Question 2		Question 3		Question 4		Question 5		Question 6		Question 7		Question 8		Question 9		Total Correct	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Student 1					X		X	X											2	1(-11%)
Student 2		X		X		X	X	X		X	X	X		X		X		X	2	9(+78%)
Student 3		X			X	X	X	X		X		X			X			X	2	7(+56%)
Student 4		X		X		X		X		X		X		X		X		X	0	9(+100%)
Student 5		X				X		X		X		X		X			X	X	1	7(+67%)
Student 6		X		X		X		X		X		X		X		X		X	0	9(+100%)
Student 7	X	X		X		X	X	X		X		X		X		X		X	2	9(+78%)
Student 8	X	X		X	X	X		X		X		X						X	2	7(+56%)
Student 9		X		X	X	X	X	X		X		X		X					2	7(+56%)
Student 10		X	X	X		X		X		X									1	5(+45%)
Student 11		X		X	X	X		X		X		X		X					1	7(+67%)
Student 12	X	X	X	X	X	X		X				X		X		X		X	3	8(+56%)
Student 13	X	X		X	X	X		X		X		X		X	X	X	X	X	4	9(+56%)
Student 14		X			X	X		X		X		X		X		X		X	1	8(+78%)
Student 15		X		X	X	X	X	X		X		X		X		X		X	2	9(+78%)
Student 16		X		X	X	X		X				X			X			X	1	7(+67%)
Student 17				X		X		X		X		X		X		X		X	0	8(+89%)
Student 18	X	X		X		X	X	X				X		X				X	2	7(+56%)
Student 19		X		X		X	X	X		X		X		X					1	7(+67%)
Student 20	X	X	X	X	X	X	X	X	X	X		X		X		X		X	5	9(+44%)
Student 21	X	X		X		X	X	X				X		X		X		X	2	8(+67%)
Student 22						X	X	X										X	1	3(+22%)
Totals	7	19	3	17	11	21	11	22	1	16	1	19	0	16	1	13	2	17		

With the exception of Student 1, all students showed improved test scores between the pre- and the post-assessment. That is, 95% of the students who had taken both the pre- and the post-assessment improved as a result of the instruction provided by Ms. Hoosier in the interim. Two students earned a zero on the pre-assessment, but earned 100% on the post (Students 4 & 6). Other students, while improving, did not improve as much; Student 22, for example, had only one correct answer on the pre- and answered only three questions correctly on the post-assessment. Overall, the scores on the post-assessment were on average 62.4% better than the scores on the pre-assessment. Furthermore, substantially more students answered correctly each post-question than they did on the pre-questions. This is indicated by the totaled numbers at the bottom of each column.

Ms. Hoosier planned the unit based on the way she had taught it the previous year, and used some of the same materials and pedagogies from that initial experience – her first year in the classroom. She stated, “...I think last year I found some articles about the Salem Witch Trials and then found some articles about McCarthyism and we read those. Use the literature book. I try not to use a ton of questions from the literature book because I don’t love them, I guess. I use Teachers Pay Teachers a lot.” Her planning of the unit and finding materials, corresponds with the content she wanted her students to understand at the end of the unit. When asked about her general learning outcomes, Ms. Hoosier said, “I wanted them to make the connection between McCarthyism and what he is trying to say about it using the analogy of the Salem Witch Trials.” Ms. Hoosier reiterated again and again her intention that students would read Miller’s *The Crucible* and understand the time period of the work of fiction and its connections to the time in which Miller was writing.

Throughout the unit Ms. Hoosier used a myriad of varied assignments, in addition to the pre- and post-assessment, to monitor student learning. She had assigned a newspaper assignment

to her students in which they could pretend they were a reporter and interview the judges in the play. Or they could write a feature piece on a character, and some students wrote on John Proctor, one of the main characters of *The Crucible*. She also used the political cartoons as a way to aid students' understanding of the connections between the storyline of the play and the modern political landscape at the time the play was written. She had assigned a study guide to complete as students read, and she had assigned a "quote hunt." Every day Ms. Hoosier engaged her class in discussions over what was read.

Despite these varied means of teaching the play and assessing their understanding, Ms. Hoosier recognized that some students in her eleventh grade English class were more successful than others in meeting her general learning outcomes. She identified that perhaps some of her students didn't do well as she would have liked on the post-assessment. She explained, "So some are not great test takers. But I think it helped to have the pre-test. It was exactly the same as the post-test. There were a few who didn't do well on the test, but did really well on the paper. They got really creative with it. So it was good." She also identified a few students who didn't enjoy the creative aspects of the newspaper assignment, but who did well on the post-assessment.

When asking about student performance throughout the unit generally, Ms. Hoosier identified the students' activities, disinterest in English class, and the general antsy nature of high school juniors as possible reasons their academic performance suffered. For example, regarding student activities, she explained, "...we have volleyball, and now we're into basketball. So we'd have those days where a third of the class was gone." Additionally, she stated, "I also have some who are like English is the last place they wanna be. They'd rather be in shop or at home." Ms. Hoosier's sentiments like these permeated my discussion with her. However, she was also able to identify pedagogical practices that helped students who might otherwise have a problem with

this play and unit; having students read the play silently, for example, was not seen as a good option for her and her students.

Ms. Hoosier identified six students in the class who are on Individualized Education Plans (IEP). When asked, she was able to identify modifications she was able to do to help those students. She stated that some were offered a shortened assignment when there was abundant writing involved. She allowed others to go to the resource room to listen to the play on tape, and for one student with a visual impairment, she offered him a copy of the play in large print. That said, Ms. Hoosier does not believe that differentiation is her strong suit. She stated, “I kind of struggle with differentiation, I think. It’s just kind of tough to do with five preps and stuff like that. So that’s one thing that I would like to do more of.” As the interview moved towards future years and teaching the same unit, Ms. Hoosier was, however, able to identify some things she might do differently to help all students learn better. She identified that her current students never fully understood what the term “witch hunt” means, and that was something she would focus on in future years. She also felt that students did not understand the time period of the setting of the play and how that related to McCarthyism – a political part of the time period in which Miller wrote the play.

Mr. John Taylor

Mr. Taylor earned a B.S.Ed. in English from Minot State University and is in his second year of teaching English in a small rural school surrounded by farmland. Years ago, two separate school districts combined into one school district and currently 85 students attend school in the district. He is the only English teacher and has seventh graders through seniors.

In the center of his classroom, five tables face each other in a “U” formation. Each table has two chairs. Along one wall is a long bulletin board which Mr. Taylor has separated into different sections. One section has a list of rules and expectations, and another section has small

posters with literary terms. It is a large classroom, with a cavernous feel resulting from the very few tables and desks needed to seat no more than ten students at a time. The white board at the front of the room is opposite a row of windows, and Mr. Taylor's desk, next to the Smart Board, is sitting at an angle facing the students' tables.

The day I observed Mr. Taylor teach a lesson from his unit on pronouns, he began the class with a warm-up activity. He told his combined seventh/eighth grade class that the activity had been activated, and they dutifully completed it on their laptops. Mr. Taylor began his lessons on pronouns by reviewing the previous day's lesson, and then put up a PowerPoint slide on personal pronouns. The students were all instructed to take notes, and they all typed onto their laptops. As they were copying notes, Mr. Taylor commented on the present slide, and then asked "What do singular and plural mean?" as preparation for the next slide. The next slide appeared on the screen with more notes on singular and plural personal pronouns.

Mr. Taylor interspersed his lecture and note-taking routine with practice time for students. He instructed them to use their white boards (small boards on which the students write with dry erase markers) as he put practice sentences on the screen. They would hold up their answers for Mr. Taylor to see, and he would check each student's board to verify correct answers. After a few practice problems, he returned to notes on new information. For the class period, he orchestrated these two activities, bouncing between practicing finding and labeling pronouns on their white boards and providing notes for students to copy on personal pronouns, singular and plural personal pronouns, antecedents, subject and object pronouns, and pronouns as direct and indirect objects.

The pre- and post-assessment tool Mr. Taylor used was not identical. He explained, "Well, they covered the same content, but for some of the sections, I changed how the questions were. Like, for example, in the pre-test...interrogative pronouns, I just asked them to write the

interrogative pronouns...and then for the (post-) test, rather than just pointing at it, I had them choose which word is correct...like who or whom, who's or whose.” I asked if the post-test was actually more difficult than the pre-test, and Mr. Taylor confirmed that was indeed the case. That said, he also allowed his students to use the notes they had taken throughout the unit on the post-test, but they had not taken notes yet at the time of the pre-test.

The pre- and the post-assessment each contained ten sections (Part 1: Pronouns and Antecedents, Part 2: Personal Pronouns, Part 3: Subject and Object Pronouns, Part 4: Pronouns in Compound Subjects and Objects, Part 5: Possessive Pronouns, Part 6: Interrogative Pronouns, Part 7: Demonstrative Pronouns, Part 8: Indefinite Pronouns, Part 9: Reflexive and Intensive Pronouns, Part 10: Writing Clearly with Pronouns). Each section had varying numbers of possible points. Table 2 shows the results of the pre- and the post-assessment. Eight students completed both the pre- and the post-assessment, six of them seventh graders and two of them eighth graders.

The results of the pre-assessment and the post-assessment demonstrate that all of Mr. Taylor's students made significant gains in the interim between the pre- and the post- as a result of Mr. Taylor's instruction. It must be noted, however, that while the post-test was more difficult according to Mr. Taylor, the students were allowed to use notes they had taken throughout the unit as they completed the post-assessment. The significance of this is unclear. If the students had not been allowed to use their notes on the post-assessment, would they have shown the increases they did as represented in Table 2? When speaking about letting his students use their notes on the post-assessment, he stated, “I let them use their notes on the test. So, it's kinda like in the real world. Let's say you have a grammar question, you're always able to look it up.” Again, the implications of this decision on the amount and depth of student learning between the

pre- and the post-assessment are unclear presently, especially as it relates to long-term retention of the information.

At the bottom of each column, in the row marked “averages,” the percentages represent the average percentage of questions students correctly answered on that particular part of the assessment instrument. So, for example, on Part 1, on average students answered correctly 80% of the questions on the pre-assessment, and they correctly answered 98% on the post. On every part of the assessment, that percentage rose, indicating that Mr. Taylor’s instruction in the interim was effective. That students were allowed to use their notes on the post-assessment is a consideration for these percentages, as well.

Table 2. Results of the pre-assessment and post-assessment administered by Mr. Taylor to his seventh and eighth graders.

	Part 1		Part 2		Part 3		Part 4		Part 5		Part 6		Part 7		Part 8		Part 9		Part 10		Score on Pre	Score on Post
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
Student 1	5	5	2	5	2	4	4	5	1	6	1	3	0	2	0	4	6	5	0	3	46%	91% (+45%)
Student 2	0	5	5	5	2	5	3	6	0	6	3	1	0	3	0	4	5	6	0	3	39%	96% (+57%)
Student 3	4	5	3	3	2	4	3	6	6	6	3	3	3	3	0	4	5	6	1	3	65%	93% (+28%)
Student 4	4	5	5	5	2	5	4	6	5	6	2	2	3	3	0	4	6	6	2	3	72%	98% (+26%)
Student 5	5	5	3	4	4	5	2	6	5	6	0	3	0	3	1	4	6	6	2	3	61%	98% (+37%)
Student 6	5	4	3	3	2	5	2	6	6	6	2	3	3	3	3	0	6	6	2	3	74%	85% (+11%)
Student 7	4	5	3	4	2	5	3	6	3	6	2	3	3	3	0	2	6	6	0	3	57%	93% (+36%)
Student 8	5	5	2	5	5	5	5	6	3	6	2	3	2	3	0	4	6	6	2	3	70%	100% (+30%)
Averages	80%	98%	65%	85%	53%	95%	54%	98%	60%	100%	63%	88%	58%	96%	13%	81%	96%	98%	38%	100%		

In planning his unit on pronouns, Mr. Taylor recounted how he had planned his curriculum the prior year, the first year of his career. He stated, “Last year the school superintendent, principal and I kinda got together, and we decided what to use for the guide for the curriculum for the seventh and eighth grade. We’ve been working with particular

textbook...it breaks down chapters into pronouns, verbs, and nouns, and all of that.”

Furthermore, he said, “Basically for my unit I just went with what was in the book.” He continued by stating that each chapter in the book was broken down into lessons, and he followed those lessons as dictated by the book.

Mr. Taylor seemed clear about his philosophical orientation to teaching grammar generally and pronouns specifically. He explained, “I even tell them down the road it’s not really important that you know that’s a relative pronoun, that’s an indefinite pronoun. I just want you to be able to know how to use those words correctly.” As indicated earlier, he also attempts to replicate authentic use of grammar by allowing students to use their notes on tests; he views this as practice for what actually happens in the “real world.” During the interview with Mr. Taylor, beyond the pre- and post-assessment, he did not speak about using other formal assessment instruments to indicated learning. However, Mr. Taylor used formative assessment abundantly during the observed class period, asking kids to participate in some guided practice activities on their white boards – and then showing them to him for immediate assessment.

Mr. Taylor’s class is fairly homogenous in terms of academic skill level. There are no students on an IEP, and there are no students who receive modifications for a 504 plan or for another reason. In the interview, Mr. Taylor briefly discussed every student in the class in terms of academic performance. One he said was “overall a very good student.” One “works hard.” Another “asks for help when he needs it.” Yet another “didn’t take many notes for the test,” referring to Student 6. Generally speaking the seventh and eighth grade students in the purview of Mr. Taylor perform well academically, and he does not provide modifications regularly to any of his students. That said, Mr. Taylor attempted to provide instruction that varied, perhaps targeting the learning styles in his class. In reviewing for the test, he says, “I would actually make up questions similar to the test, cut them up, tape them up on the walls in the hallways so

they have to go running around to find all the questions and answer them.” He also taught them chants to help remember important information about pronoun usage.

Mr. Taylor indicated that he would like to incorporate more writing into the pronoun unit when he teaches it in the future. He stated, “I know when we first talked about this unit I wanted to incorporate more writing into it. And not much writing happened during this unit. I really wanted to do more of that.” He indicated that the textbook he uses provides writing prompts for students in which they are asked to use the particular parts of speech in a writing assignment.

Ms. Karen Putnam

Ms. Putnam is in her second year of teaching at a rural high school. This rural high school is connected to an elementary school, and, together, these two schools make up the school district. The high school is just a fifteen-minute drive from one of the more urban centers in North Dakota, but it mainly serves students who live on farms. Ms. Putnam is one of three English teachers in the school, each teaching a mix of grade levels. Ms. Putnam has two sections of eleventh graders, and this research used one of those sections.

In the center of the classroom, there are five groups of normal-sized desks and two groups of tall desks with tall chairs. Student work is hung on the back wall, opposite the Smart board and the teacher’s desk. On one side of the room windows run the full length of the room, with bookshelves containing various books and novel sets underneath the windows. Ceramic pumpkins and other Autumn decorations are displayed in clusters on top of the bookshelf. One area of the room has a sign that reads, “Ms. Putnam’s Picks” with books displayed. Inspirational posters abound throughout the room, one stating confidently, “Today is a good day.” A paraprofessional is seated at one of the tall desk groupings, overlooking one of the shorter groups of desks.

The day I observed Ms. Putnam teach a lesson from her unit on the literary device of theme, the bell rang and she walked around to each of the 10 students making sure that each student was in the right spot on their laptops. Once all students were in the correct place on their computers, she began by defining “Theme” and describing what it is not. She provided an example of a theme from *Legend*, a novel the class had recently read. This information was on a PowerPoint slide, and students typed the information as she talked. Ms. Putnam spent considerable time on the point that a theme is not merely a topic; a theme is a moral or lesson that the author is attempting to make in the story. Using the novel *Legend*, she then demonstrated how, starting with a topic (perfection), you can identify a theme (“Even though people/things are considered perfect, they still could have flaws”).

Ms. Putnam directed students to work with their groups to identify other topics from *Legend*. She walked around to each group and ensured they were finding four topics. Then instructing her students to pick one of the topics and write a theme, Ms. Putnam again stopped at each group and assisted as they collaborated on a theme. Once she had stopped at each group she announced their assignment for the next day: write two paragraphs which contain two different themes from *Legend*, as well as descriptions of parts of the novel that support that theme. The students were told they had the rest of that class period and 20 additional minutes the next day.

The assessment instrument used for the pre- and the post-assessment is identical. Four questions make up the instrument, and Ms. Putnam used a rubric to assess the students’ understanding of theme in a holistic manner. Two of the questions ask about the definition of “theme,” and the other two questions ask students to write themes based on recently-read literature. The rubric is simple, but it evaluates the students’ ability to both define and apply their knowledge of “theme.” Table 3 is the rubric used to evaluate the pre- and post-assessment. Only seven students submitted both a pre- and a post-assessment, and three students only

submitted one or the other. Table 4 represents the scores on the pre- and post- assessment for the seven students. The three who did not submit both were not used in the analysis of data or discussion.

Table 3. Rubric used by Ms. Putnam to evaluate students’ pre- and post-assessment

1	2	3	4
The student has little to no understanding of what theme is. They cannot use examples from the story.	The student has little understanding of what theme is, and uses some examples to back up their response.	The student understands the definition of theme and can use some examples to back up their statements.	The student clearly understands the definition of theme and can use relevant examples to back up their statement

As seen in the information provided in Table 4, six students improved their rubric score from the pre- to the post assessment. The one student who did not improve his/her rubric score (Student 6) received a “4” on the pre-assessment (signifying mastery of the concept) and a “4” on the post-. A general conclusion could be drawn that the instruction provided by Ms. Putnam between the pre- and the post-assessment was effective.

Table 4. Rubric scores for Ms. Putnam’s students on the pre- and post-assessment

	Rubric score for pre-assessment	Rubric score for post-assessment
Student 1	2	3
Student 2	2	3
Student 3	1	2
Student 4	2	3

Student 5	2	4
Student 6	4	4
Student 7	3	4

Ms. Putnam explained that for this research project, she taught this unit on theme as a mini-unit, part of the larger unit on the novel *Legend*. She stated, “Well, they were reading the novel *Legend* and one of my biggest focuses with that was theme itself, so the lesson you saw was just an intro to what theme actually is. And then we applied that to the whole novel itself. Then they also did some larger writing responses based on themes, too.” The larger unit on the novel took four weeks, and Ms. Putnam indicated that the mini-unit on theme would have been done anyways, but perhaps without the more formal pre- and post-assessment.

Ms. Putnam had one primary learning objective that she framed in this way: “...I knew that they really didn’t have a grasp of what theme was. They got it confused with just topics they run into. I wanted them to grasp the idea that it was more of a lesson or moral you could take away from something.” In order to teach to that learning objective, she asked students to do a few writing assignments as part of the larger novel unit. As the students finished up the novel and completed additional assignments, Ms. Putnam was pleased with their understanding. She states, “But seeing them apply it to a larger work was good. And I definitely saw the change in them understanding that it’s like a moral or lesson that you learned...” She indicated that teaching and learning about theme is really never-ending – anything being read has a theme. Ms. Putnam said that after they completed that novel unit, the class started reading and studying a play; she viewed this new unit as another opportunity to reinforce the literary element of theme.

As shown on Table 4, six of the seven students earned either a “3” or a “4” on the post-assessment. The one student who did not receive a higher score on the post-assessment is the

only student in the room who receives regular modifications. Ms. Putnam describes the student, "...one girl who's on an IEP because her reading level is so low...and there's always one para in the room with her." When asked, Ms. Putnam indicated that she can and does modify assignments for this student. For example, on those longer writing assignments the students completed during the larger unit on the novel, Ms. Putnam said, "...the para and I kinda helped her think of a theme...described what that theme would be, and then she worked to find her own examples to back that up." The student does better when asked to respond orally versus putting it on paper, and Ms. Putnam indicated that working orally with the student on the pre- and post-assessment written instrument might have produced a higher rubric score in the end. As the class is now in another unit reading a play, Ms. Putnam seemed to think, based on formative, informal assessments in class, this student's understanding of theme was developing.

When asked what changes she might make in future years of teaching similar units on theme, she generally thought those changes would be minimal. That said, she reiterated over and over again that her students' understanding of theme was poor, and, therefore, this unit was very necessary.

Mr. Ben Daniels

Mr. Daniels found a teaching position in 5th grade at a nearby public elementary school shortly after graduating from the elementary education program at Minot State University. In his second year at the 5th grade classroom position, Mr. Daniels has already established a reputation for his love of science and the exciting classroom atmosphere. Images of the solar system and space exploration were all over the walls and hanging from the ceiling. When I observed Mr. Daniels, he was just beginning to teach a social studies unit about the historical Native Tribes from the southern regions of North America. Mr. Daniel's room included 24 students. While

most of the students were White, I also saw at least four students of color. There are no paraprofessionals or other adults in the room. All students appear to speak English.

According to Mr. Daniels, this unit precedes a unit about the American colonies, which is the main focus of the 5th grade social studies curriculum. Mr. Daniels hoped to convey to his students that these ancient cultures were dynamic and unique from one another, and, to this end, Mr. Daniels chose to especially focus on artistic traditions of these cultures.

In the following vignette, *Finding the Right Font*, I detail the day in which the students are learning to change font through Google Docs. The students have already chosen an animal to represent themselves on the totem pole, and now Mr. Daniels is giving them some directions about how to adjust the font so the words all fit on one page. While this particular observation does not deal with content directly related to totem poles, it does reveal an important aspect of Mr. Daniels' approach to student learning. Mr. Daniels models each step of the directions, and the students are given an opportunity to explore within the parameters of each step.

Finding the Right Font.

As I walk into Mr. Daniels' classroom, I can immediately feel this sense of energy. The students are mostly sitting in their desks, which are arranged in pods. Mr. Daniels has checked out laptops for all 22 for his students, and they are learning how to use Google Docs to create their totem poles. Mr. Daniels is using a document camera at the front of the room to model what he wants his students to do. "So, "I'm going to be using a hippo as my example; however, I want you to use your animal," Mr. Daniels begins his instructions. "Is there anyone in our group of friends that does not have an animal?" Four students raise their hands to indicate that they have not found their animal yet. Mr. Daniels responds, "Okay...that's fine. But, when we start working, you need to try to find an animal." The lesson continues with Mr. Daniels demonstrating how to add font and adjust font sizes, "so that everything fits." Next, Mr. Daniels

types the word “Hippo” at the top of the page and directs the class to either type the name of their animal or, if they do not have an animal yet, they should also type “Hippo.” The directions continue step-by-step.

The students appear universally engaged as they type their respective animals. Although there are few instances when individual students seemed confused, other students within the pods were quick to offer support. Mr. Daniels affirms the supportive nature of the class, “I like how a couple of friends are helping each other out. That’s awesome!” As the lesson continues, Mr. Daniels reminds the students that the totem pole and the font have to remain on one page. Accordingly, Mr. Daniels models how to change font sizes, including how to highlight existing words in order to change their size.

36 (size font) fits, but let’s say I want to make it a little bigger. Let’s try 48…that’s pretty good. But, I don’t want you to do every little thing I do. Look Jimmy put a different little spin (style and size of font) on his, I like it. I want each of you to experiment to see what works best for your animal.

The class appears to understand as they begin to experiment with font sizes.

Mr. Daniels is now walking around the room monitoring the students’ experiment. He notices that some of the font styles are difficult to read:

So, let’s talk about font. There are a couple more things with font. Arial is standard, and you can pick other styles. But you have to be able to read it. Because if you cannot read it, I cannot read it. There are some cool fonts that are in cursive. Some of those are difficult to read, so be careful with those. And some do not look like English don’t use those. So, I am going to give you a minute and a half to experiment with your font, and then it is time to move on.

Mr. Daniels sets a 90 second timer on the Smart Board. Then, he walks around the rooms encouraging students and offering the occasional suggestion through the 90 seconds of font experimentation time. “Boom!” A graphic of an exploding bomb reorients the class back to Mr. Daniels for the next step of the assignment on totem poles using Google Docs.

Discussion on the Totem Pole Unit.

After the unit on totem poles, I asked Mr. Daniels some follow up questions. Overall, Mr. Daniels felt the students “did fabulous” in grasping the concepts of unit on historical Native American cultures in southern regions of North America. The students eventually finished designing their own totem poles, which were displayed in the hallway. According to Mr. Daniels, “They really took ownership of it (the totem poles). They realized by the end (of the unit), there is voice behind the depictions on the totem poles.” To ensure the students met the learning objectives of the unit, Mr. Daniels utilized “exit tickets and think-pair-share” as a form of formative assessment. ‘I’m able to check for basic skills without them even realizing what I’m doing.’”

From a summative perspective, Mr. Daniels also evaluated the totem poles “to see what they wrote, what they depicted, and to see if they understood the symbolic nature of totem poles.” Mr. Daniels felt part of the success had to do with departmentalizing different content areas across the 5th grade. This structure allows Mr. Daniels to focus more on science and social studies projects with students. When asked if there was an area of the unit in which students especially excelled, Mr. Daniels cited showing a video from the Smithsonian about how totem poles are actually made. “It gave them a sense of pride in how this gentleman (carving totem poles) hits the finer details. They paid attention to the fine details. They (the students) modeled what they saw.”

Mr. Daniels confessed that there were ways in which students struggled with the unit, particularly in designing the actual totem poles. “But, I could also reteach and remodel, showing how it might look to be effective.” Though it was not clear to me during the time of the observation. Mr. Daniels said that he used differentiated instruction to help all the students succeed throughout the unit in various ways:

I have variety of students that learn in different ways, and so differentiating is really key, whether it is a video, or hand drawing model (of a totem pole) myself, or modeling step-by-step instructions of how to write a correct paragraph for the writing portion of the assignment that went along with the totem pole(s), or helping them choose an animal and the symbolic meaning of the animal. There are students that excel at that really quickly, and I do not need to scaffold anything at all. There are students that need step-by-step instructions.

After hearing this perspective, I realized that Mr. Daniels decision to employ step-by-step instructions with the font changes was, in fact, an aspect of his approach toward helping all students to be successful. Mr. Daniels relies heavily on modeling and breaking directions up, step-by-step, in his pedagogical approach.

I asked Mr. Daniels if there is anything he would do different the next time he teaches the unit:

I might spend more time on a couple (historical Native American) cultures that are more important to American History....the North Dakota State Standards really allow for that. I think I would hit harder on the northeast cultures more because once you get into the pre-revolution period more, the mid-1600's, everything speeds way up...with the Wampanoag and Mohawks. Those relationships are really how our foundation started. And it would be more beneficial to spend more time on those cultures than I do now.

Mr. Daniels sets a 90 second timer on the Smart Board. Then, he walks around the rooms encouraging students and offering the occasional suggestion through the 90 seconds of font experimentation time. “Boom!” A graphic of an exploding bomb reorients the class back to Mr. Daniels for the next step of the assignment on totem poles using Google Docs.

Ms. Alyssa Herbert

Ms. Alyssa Herbert teaches 5th grade at private parochial school. Mrs. Herbert graduated from the elementary teacher education program at the same time as Mr. Daniels. This is Mrs. Herbert’s second years in 5th grade at the parochial school, and she is also in her second and final year of a masters’ degree program at MSU. Beginning this year, Ms. Herbert has been directed to teach from a classical education curriculum. Ms. Herbert teaches twelve students. 10 out of twelve of the students appear White. All of the students appear to speak English as a first language. There were no other adults, such as paraprofessionals in Ms. Herbert’s classroom.

I observed the first day of a reading and language arts unit focused on the text *The Merry Adventures of Robin Hood of Great Renown in Nottinghamshire* by Howard Pyle (1883). Ms. Herbert especially hoped to help the students make sense of the new vocabulary terms, so that they can have better comprehension of the story. Prior to the lesson, Ms. Herbert confessed that she too has a difficult time with the vocabulary of the classical education curriculum, “They use older words that we don’t really use in everyday language. And the Latin...we are all struggling with the Latin.” Nonetheless, Ms. Herbert continues to look for the positive aspects of the new curriculum, and she hopes to inspire her students to do their best.

The following vignette, *Preparing to Read Robin Hood*, details what Ms. Herbert describes as “a typical lesson” for the new classical education curriculum. According to Ms. Herbert, the class reads each section together, out loud, and then the students respond to comprehension questions, individually, through writing. Though the curriculum is limited with

regard to what Mrs. Herbert chooses to teach and assess, there are instances when her own pedagogical sensibilities emerge from the lesson.

Preparing to Read *Robin Hood*.

The students arrive to Ms. Herbert's for their afternoon reading and language arts lesson shortly after 1:30 p.m. They are returning from their religion class with the school priest, dressed in their school uniforms, and they seem as if they are going outside to recess, slightly hoping and mostly running into the classroom. Without being told, they take sit in their desks, which are all in rows facing the front of the classroom, and they pull out their new class book, *The Merry Adventures of Robin Hood of Great Renown in Nottinghamshire*. Although the text was written back in 1883, this version looks like a thin textbook, with a glossy cover and pages between chapters for vocabulary terms, reading notes, and comprehension questions. Ms. Herbert briefly greets the students as a class and begins reviewing some of the introductory reading notes:

We have the *Crusades*, military campaigns fought between Muslims and Christians to determine who will gain control of the Holy Land. We have King Richard the 1st, rightful king of England who is often away fighting crusades. We have, Richard's evil brother who rules in the place of Richard when he is away at war. He has the Sheriff of Nottingham, the cruel sheriff appointed by Prince John who carries out John's merciless and unjust orders

The list of characters continues and ends with William Scathlock, "he's also known as Will Scarlet. He is Robin's loyal follower and second in command." The classroom quietly follows along the list of terms, with some students making notes in their books.

After viewing vocabulary words terms, like coffer and Steward, Ms. Herbert begins to review the comprehension questions that the students will be asked to answer at the end of the question:

1. Why did Much the Miller kill one of the king's deer?
2. Who kills Much?
3. How does Robert Fitzooth's steward betray him?
4. What does Will Scarlet think is strange about the arrow used to kill Much?
5. What happens to Much the Miller's son?

Some of the students seem annoyed or overwhelmed. One student takes a deep breath and sighs loudly. Ms. Herbert acknowledges the student with a warm smile and then continues reviewing the upcoming quotations to notice and discussion questions. A couple more students begin using their body language to communicate with Ms. Herbert. One student yawns. Another student stretches his arms above his head and slowly yawns. Still, the majority of the class appears to be attentive and following along. Despite these conditions, Ms. Herbert stops the review to remind students that these terms and questions might be difficult, "but we are going to just do our best. And we will get through this together."

The lesson resumes with Ms. Herbert asking the class about the heritage and lineage of the characters. To my surprise, much of the class seems to be well aware of Robin's parents and their taboo relationship. "Were they supposed to be together?" Ms. Herbert asks the class. Several students raise their hands up in the air, waiting to be called on. Finally, when a majority of the hands are raised, Ms. Hebert calls on a student, who responds, "No. They were not supposed to be together because one was Saxon and one was Saxon and Norman." The class nods in agreement. "Robin's dad wanted peace between all the countries...like Donald Trump." The class giggles, and Ms. Herbert acknowledges the contemporary reference with a smile, and

then responds with “No!” and offers another friendly smile. The whole class, including Mrs. Herbert, seems to erupt into laughter, as if there was some kind of inside joke that I missed. After the moment subsides, this system of discussing the characters, context of the time, and vocabulary terms continues until about 1:37. Finally, Ms. Herbert begins to read to the whole class, and eventually students began to volunteer to take turns reading as well.

Discussion on the Robin Hood Unit.

In speaking with Ms. Herbert before and after the lesson, she continuously talked about the importance of helping the students to understand the vocabulary and context of the story. I observed this intention when Ms. Herbert, spent the first seven minutes of class reviewing building up some foundations to access prior knowledge later in the lesson. As Gee (2004) suggested, Ms. Herbert is providing experiences for her students to interact with the text before reading it. Ms. Herbert does wish there were more ways to make meaning out of the vocabulary, but, with consideration to the dimensions of the explicit classical curriculum, Ms. Herbert is “picking my moments.” I also found Ms. Herbert picked moments to add her own personality to the lesson, such as when she seemed to be joking with a student about Donald Trump. I asked her about that reference later and she said “some of the kids are very political, and they know it makes me nervous to talk about in class. It has become an ongoing joke, but it does not bother me when they say it. Sometimes it livens up the day.”

When asked about student learning, Mrs. Herbert said there is a comprehension quiz after each chapter then a test comprehension over the whole book. The entire comprehension test is four pages long, which Ms. Herbert felt “is long for 5th graders, especially for words they are not familiar with. Five of the twelve students earned an A grade on the comprehension test. Accordingly, five students received grades of B, one student received a C, and one student failed. “Some of these students are not used to getting anything but grades of A, so this year has been a

change like that. They really struggle with Latin.” When asked if some students seemed to especially excel, Ms. Herbert referred me to the students who received grades of A; “Even though this curriculum is challenging, these ones are complete about it”. Ms. Herbert also reflected on some broader themes of the whole class regarding student learning:

They students do really well with some of the comprehension questions, better than I expect sometimes. They come up with really pretty good answers. So that (comprehension questions) is where I think the class excelled the most. But the vocabulary is a little more difficult because it is words they are not familiar with. So, we try to come up with similes to help them make connections.

As this is the first year of adopting the classical education program, Ms. Herbert is hopeful that the vocabulary will be easier after students become more comfortable with Latin and classical languages in the text. I asked Ms. Herbert if she different her instruction, and she said it is hard to do because this curriculum makes the students all do the same thing. Nonetheless, Ms. Herbert does try be thoughtful with who she asks to read out loud:

They (the curriculum makers) want us to do a round robin when we read. I try to look at the text beforehand so that I can make sure students are assigned paragraphs that they can be successful with....The reading part is the hardest. Because if they don't like to read outlook anyways, I don't like to put them on the spot when it is difficult for them.

Ms. Herbert and her students are learning how to navigate the new curriculum.

Ms. Carmen Petersen

Ms. Petersen teaches fourth grade at local elementary school. This is Ms. Petersen's second year teaching 4th grade, and graduated with Mr. Daniels and Mrs. Herbert from the elementary education program at Minot State University two years ago. Similar to Ms. Herbert, Ms. Petersen is enrolled in a master of education program at MSU; however, this is her first year

in the program. Her classroom walls are covered with reading, math and language arts content. Words like “analogy” and a list of Common Core Math Standards hang around the room. I found a couple puns and inspirational phrases too. “Be your best!”

Early on in our conversations about the unit, Ms. Pedersen expressed particular interest in challenging PACE students, which are students enrolled in the gifted and talented program. To this end, Ms. Petersen gave her class a six-question pre-assessment about two decimal long division, and, based on the results, divided the students into four groups and rotated the groups between four centers:

Some had prior knowledge to build from, there were some that had no idea what long division was, so that was kind of hard...different levels there. Some had already mastered it, while others were just learning about two-digit long division for the first time. So, it just took a little...A LOT, of consistency in meeting the needs for all the students.

Ms. Petersen teaches 21 students, 4 students of Color and 17 White students. While it appears that all students speak English as their first language, a paraprofessional is also in the room to support a particular student’s individualized education plan. The desks are in rows, facing the front of the room. However, the center dynamics have students separated into four areas in the classroom. The following vignette, *Two Decimal Division Groups*, describes the final rotation of ability groups through their centers one day in Ms. Petersen’s classroom.

Two-Digit Decimal Division Groups.

The students worked in ability groups for about 35 minutes now. Each center focuses on different aspects of fractions and decimals. Ms. Peterson gave some directions about the centers, but, otherwise, she spends most of her time at the back kidney-shaped table working with one of the four groups.

The pretest determined the groups. They are leveled groups. The group I met with first were the “lower ones” (ability group), and they needed a little bit more practice. So, it seemed slow at first, and then we rotated quickly through the last groups because they already mastered those skills.

At this point in the lesson, Ms. Petersen is with the third group. There are six students in the group, with three sitting on each side of the kidney table and Ms. Petersen in the middle.

It is difficult to hear Ms. Petersen throughout the room because she is talking in a soft voice within the group she is working with. For the most part, Ms. Petersen asks students to solve computation problems on white boards, and then says, “1, 2, 3, show me what you have.” Markers squeak as time expires.

I notice the level of difficulty between the groups increasing. The first group reviewed dividing two-digit numbers, and the new group seems to already know two-digit long decimal division. Ms. Petersen is now asking the group to solve three-digit decimal division. The paraprofessional is with the first group, working particularly with one student, and the other students in the group are playing a game on iPads® involving money. The other two groups are solving problems from their math workbooks. One of the sections of the book has an activity involving dice, so the group rolling the dice generally makes the most noise in the classroom. Yet, they appear to be relatively engaged in learning, and, all things considered, the classroom atmosphere feels relatively calm.

I can hear Ms. Petersen ask a particular student, “Okay, how did you get your answer?” Three other students around the kidney table raise their hand while the student bites her lip. “No, I’m asking her?” Ms. Petersen responds. After a little bit of coaching, the student eventually describes her rationale. Though I cannot hear her speak, the group around the table seems to understand. I hear Ms. Pedersen quietly offer praise, “Good job,” and then begin to write

another three-digit decimal division problem on her white board for the students to solve. After a few more three-digit decimal division computation problems on the white boards, I hear Ms. Petersen talking about probability with students. This is a new topic that was not brought up to the prior two groups. The fourth group, the one using the dice, is becoming a little more loud and rambunctious. Ms. Pedersen looks at the clock; we are now 40 minutes into the math hour. “Okay, it is time to rotate”.

Discussion on Fraction Unit.

To make sense of student learning, Ms. Petersen gives the same six-question assessment before and after the unit, and then she plots and monitors their improvement on the tests:

We use proficiency scales, which you can see on the board. All of the class is at least at a 3, except two (students). You can see we have a couple still at a 2. Three is where I wanted them, so the majority are there.

Ms. Petersen plots students as they prove proficiency along a continuum, with “I can divide single digits” on the first space and “I can divide multiple digit decimals” on the last space of the continuum. The continuum did include the students’ names; although they were difficult to see from further than ten feet. The students could move along the continuum as they mastered the skill. One student got all six questions correct on the pretest, so her name was placed on the far side of the continuum at the beginning of the unit. Ms. Petersen quietly gave the student a different assignment while her group worked through the math workbook. According to the math scales, by the end of the unit, ten students earned a four on the post assessment, three students earned a three, and two students were still at a two. All 20 students that had an opportunity to make improvements from the pre-assessment to the post assessment did so, with the one previously mentioned student left because she did not take the post assessment after answering all six questions correct on the pre-assessment.

Despite the improvements, some of students struggled with content in the unit. “There were a few that wanted to give up right away, but after while they really got the hang of it. It was cool to see the smiles on their faces once they said, ‘I get it...I get it now!’” When I asked Ms. Petersen if there was anything she might do differently, she said, “I’m not sure...I liked putting them (students) into groups with all the levels.” Though Ms. Petersen might seem quiet and soft-spoken, I notice a little swagger in discussing what her students have learned.

Ms. Kerry Walters

Kerry Walters is a white woman in her second year of teaching history and social studies in one of the larger cities in a Midwestern state. In her current position she splits her day between a middle school and a high school. She attended the university as a traditional age student and is from the state. The focus of this research is her regular US History class, a required class for juniors. The school also offers Advanced Placement US History as an option. She teaches US History to two periods at the high school and has about 40 students between the two classes. The school is approximately 82% students who identify as white and students who identify as Hispanics, American Indians, Blacks represent a range of 2.9% - 4.50% of the population, which is slightly below the district-wide average. Approximately 16% of the students are on free and reduced lunch at the school, which is below the district-wide average.

Progressive Era Unit and Lessons.

Ms. Walters taught a unit on the Progressive Era. She usually gives students a pre-test and post-test at the beginning of the semester and not usually with each unit because of the time it takes and the concern that students might take pictures of the test with their phones. She did give a test with this unit for the sake of the research project. The pretest had 26 multiple choice or matching questions on it and she did not give the essay questions to the students for the pre-test. During the lesson I watched Ms. Walters started with having the students watch CNN 10

and then asked for questions. She then explained a project that students started working on that day and then worked on periodically during the unit. The project asked students to prepare a slide show with at least 9 slides that described an important figure who was considered a Progressive, his or her achievements, and explain how that person affected lives today. Students had a week to work on the project with that particular day and two additional days to work on the project during class. Other days during the unit Ms. Walter lectured. After explaining the project Ms. Walters asked students to give her a fist to five on their understanding of what they needed to do to complete the project. Most students showed a hand with five fingers. One student did not put up his hand and Ms. Walters asked, “Mark, are you good?” The student replied, “Uh, yes.” Most students got a laptop and worked on the project during the whole hour with some distractions to talk to classmates or send or answer texts. Many students put on headphones to work. After a few minutes, Mark sat and looked at his paper but did not have a computer or phone in front of him. Ms. Walters walked over to ask talk to him and he said that the project made no sense to him so she re-explained the project, asking him some questions and then encouraged him to get a laptop. She talked with another student and then returned to him and helped him get started.

Table 5: Pre- and Post-Test from a section of Ms. Walters

Student	Pre-test	Post-test	Difference in Score
Section A			
S1	8	26	18
S2	2	26	24
S3	7	25	28
S4	7	22	15
S5	-	23	
S6	6	26	20
S7	16	26	10
S8	17	26	9
S9	13	26	13
S10	7	23	16

S11	18	25	7
S12	-	24	
S13	6	24	18
S14	3	22	19
S15	10	24	14
S16	-	26	
S17	-	25	
S18	12	25	13
S19	2	22	20
S20	-	26	
S21	11	26	15
S22	-	26	
S23	1		
S24	8		
S25	8		
S26	8		
Average	6.25/26	24.78/26	16.5

Table 6: Pre- and Post-Test of a second section of Ms. Walters

Student	Pre-Test Score	Post-Test Score	Difference in Score
Section B			
S1	10	22	12
S2	15	15	10
S3	2	15	23
S4	8	22	14
S5	2	24	22
S6	9	24	15
S7	8	23	15
S8	6	24	18
S9	3	17	14
S10	6	26	20
S11	14	24	10
S12	10	25	15
S13	8	24	14
S14	10	26	16
S15	7	21	14
S16	13	26	13
S17			
S18			
Average	8.19/26	22.38/26	15.31

Discussion on Progressive Era Unit.

In reflecting on the students' work for the unit Ms. Walters noted that a few of her students got 16 or 17 out of 26 on the pretest but the majority of the students earned in the 20s on the post-test. This test was the second test of the year so she is still figuring out some of the students. She usually reviews before the test and overall was pleased with the performance of the students. There was one student who did not do well but she described him as a student who "will occasionally decide to tuck and earphone in the middle of class and I have to go over there and be like, 'hey, can you pull that out and pay attention?'" She reported that the student did well on the first test but not on this one and she was still trying to figure out his patterns. She was particularly pleased with a student on an IEP who came up to her after the test and expressed excitement that she had earned an A on the test. When Ms. Walters complimented her on her written answers, the student replied, "This is the first time I have ever done well in a history class in my life." Ms. Walters said, "wow, that is awesome" and the student replied, "Thank you for teaching me the ways I need to learn." Overall Ms. Walters had a variety of ways to accommodate students with disabilities in her classroom including enlarging printed directions and using a dedicated monitor for a student with a visual impairment; reducing the number of choices on multiple choice tests; and reducing the number of matching choices on matching sections. She found the accommodations to be easier than the previous year when she had a number of students who were English Language Learners.

She had changed a number of test questions from the previous year, altered the slide project from an essay, and shifted the emphasis in the chapter to help students get a broader context for the unit before providing details. She did not have specific changes for the following year but knew that she would change a few things. She particularly enjoyed this unit because she

could relate much of what happened to current events but she found that she could relate most of her units to events in the students' lives and that was one of the aspects of teaching that she found most rewarding as well as most surprising. She was pleased with how they discussed controversial topics and respected each other's beliefs. She tried to incorporate different ways for students to remember and demonstrate knowledge such as by having them illustrate concepts or write and draw answers on individual white boards. She also mentioned collaborating with other faculty at either school for suggestions on helping students succeed.

Mr. Dave Smith

Mr. Smith is a white man in his second year of teaching in a small rural Midwestern high school. He attended the university after a career in the military as an older than average student and is from an eastern state. The focus of this research is his US history class, a required class for juniors. He teaches this class to two sections a day and has about 40 students between the classes. The school does not offer advanced history classes and is approximately 94% white with the largest reported group of student reporting two or more ethnicities 2.4% which is slightly above the district average. Approximately 12% of the students receive either free or reduced lunch, which is slightly below the district average.

Gilded Age.

Mr. Smith asked his students a few questions about the Progressive Era and reported that none of them knew any of the answers so he elected not to give students a pre-assessment. The day that I observed his class a number of the students missed class because of standardized testing so his class was smaller than usual. He explained that he usually included some videos into his slides but because of the standardized testing the wireless connections were less reliable and he only had still pictures in the slides that day. He fist-bumped each student as they walked into the class. Mr. Smith had a series of slide with images, ideas, and phrases particularly about

the Gilded Age. He often read the slide and then asked or was asked questions at a rapid pace. Either he or the students connected ideas in the slides to something in their lives, such as working conditions, overtime, and holidays. When a student asked for the derivation of the word scab, Mr. Smith pulled out his phone, looked it up, and explained it to the student. At the end of class, students tweeted a comment and wrote on an exit slip something that they wanted to convey, whether it was a question or comment or something about what was going on in their lives.

Table 7: Pre- and Post-Test Scores from Mr. Smith's 2 sections

Student	Post-test Score
S1	22
S2	25
S3	24
S4	18
S5	24
S6	22
S7	20
S8	25
S9	19
S10	25
S11	25
S12	24
S13	22
S14	24
S15	25
S16	15
S17	24
S18	25
S19	20
S20	20
S21	22
S22	25
S23	19
S24	25
S25	21
S26	23
S27	25
S28	19
S29	18

S30	20
S31	22
S32	25
S33	20
S34	20
S35	18
S36	20
S37	25
S38	25
Average	22.11/26

Discussion on Gilded Age Unit.

Mr. Smith described the unit as “not as robust as I would have wanted it” and commented that he is still figuring out the prior knowledge that students need from unit to unit in order to be successful. He describes himself as the “the tangent guy” because he encourages students to ask questions about concepts related to social studies and then can often digress from the lesson. In terms of their performance, he expressed satisfaction with the results of the test, indicating that the students who he expected to do well on the test did. He characterized the students who did not do as well on the test as generally either struggling with apathy or ability. Semester finals crept up on him faster than he expected, so he gave the students a multiple-choice test because they also had finals in their other classes and a large project for his class to research any topic from the semester at a deeper level and then choose how to demonstrate their learning. Typically, Mr. Smith’s tests are all short answer so everyone can write something about what they know and he can get a better sense of the limits of their knowledge. Mr. Smith sees that students with reading disabilities are learning in these semester projects because they draw complex graphic novels with graphic citations, but he does not think the multiple-choice test that he gave provided the opportunity for those students to demonstrate their learning. In terms of improving the unit for next year, Mr. Smith would like to figure out how to include more

primary sources because many students, regardless of their reading abilities, give up easily when reading them and comment that they didn't understand anything from them. Next year Mr. Smith is looking forward to a remodel of the classroom and the addition of a device to boost the wireless connection in his classroom so he can regularly incorporate more images and videos, which he believes helps all students learn. Mr. Smith's main goal in the classroom is to help students become educated voters and he reports constantly challenging them to make connections between what they are learning in their history class and what is happening today.

Next Steps

Our preliminary reading of the transcripts and field notes indicates that our graduates are helping students learn on the teacher-provided assessments. All participants indicated that most students improved from the pre-test to the final unit test or assignment. All participants appeared to be using a combination of formative and summative assessments but few seemed to employ much use of self-assessment, a key criteria for assessment identified in recommendations for assessment (Shepard, Hammerness, Darling-Hammond, & Rust, 2006). Likewise, graduates are encountering and synthesizing a range of goals and purposes, some directed by the schools or school districts and some that they identify, which is also a key aspect of developing teachers (Darling-Hammond et al., 2006). Sorting out the importance of those clearly challenges graduates as they identify who has and has not learned in the classroom. A preliminary look at the information from the Student Teacher Observation Tool (STOT) indicates that our graduates score mostly in as 3s and 4 with a few 2s. We look forward to further analysis of these graduates and future graduates to get a sense of both the strengths and challenges of our program, which will help us with future changes. Our planned rotation of graduates included from each teacher education program at the university is included in Appendix D.

Appendix A: Interview Questions

Tell me about how you planned the unit.

What did you want students to learn from your unit?

What information did you use to decide that students learned something from your unit?

How do you think students did in your unit?

Where did students excel in your unit?

What did students struggle in your unit?

What might you do differently next time?

Which students needed differentiation? Was that differentiation successful?

Appendix B: Student Teaching Observation Tool

This assessment is based on the 10 national standards of effective practice for new teachers (InTASC). Under the Family Education & Privacy Act of 1974, the student has the right of inspection and review of this document.

Directions: For each of the items below, place a rating score of 1, 2, 3, or 4 by the number which describes the teacher candidate as a pre-professional. **An overall average score will be calculated for each standard.* Thank you for your time and commitment to the profession.

Program Outcome	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>1a: Recognizes, respects & responds to developmental levels in all domains to design and implement learning experiences*</i>					
Designs Instruction	designs lessons in which the instructional strategies are not developmentally appropriate	designs developmentally appropriate instruction strategies, but opportunities for individual differences are not included	designs developmentally appropriate instruction to support student learning	designs challenging learning experiences through the use of instructional strategies focusing on recognizing patterns of learning and development across cognitive, linguistic, social, and emotional areas	
Implements Instruction	needs assistance to implement developmentally appropriate instructional strategies	implements developmentally appropriate instructional strategies, but opportunities for individual differences are not implemented to support student learning	implements developmentally appropriate instructional strategies and practices to support student learning	communicates and leads developmentally appropriate instruction that takes into account individual learners' strengths, interests, and needs	
<i>III d: Actively plans instruction to support learners in reaching rigorous curriculum goals*</i>					
Sequence of Lessons	lessons are not sequenced to align with standards and students' prior knowledge is not addressed as a class	sequences lessons that address students' prior knowledge as a class, but individual differences are not included in the lesson	sequences lessons that consider students' prior knowledge and leads students toward mastery of standards in a coherent manner	sequences lessons and practice toward mastery of standards for all students in a coherent manner. Lessons access and expand on students' prior knowledge and build on each lesson in preparation for future learning	

	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>Ib: Recognizes, respects and responds to learner commonalities and differences to design and implement learning experiences*</i>					
Understanding of individual students	demonstrates minimal understanding that learners are individuals with differences in their approaches to learning and performance	demonstrates a basic understanding that learners are individuals with differences in their approaches to learning and performance	demonstrates thorough knowledge that learners are individuals with differences in their backgrounds as well as their approaches to learning and performance	anticipates individual learning needs by proactively designing differentiated instruction	
<i>Ib: Recognizes, respects and responds to learner commonalities and differences to design and implement learning experiences*</i>					
Differentiates instruction for learners	needs assistance to differentiate instruction to support development of individual learning needs	attempts to differentiate instruction, but is inconsistently effective in supporting the development of individual learning needs	applies differentiated instruction with strategies or tools that support development of individual learning needs	effectively differentiates instruction to make decisions while teaching to cultivate student independence in learning	
High expectations	communicates with diverse learners in an unfair and disrespectful manner; provides inequitable opportunities to all, including diverse learners	communicates with diverse learners in a fair and respectful manner; provides occasionally equitable opportunities to all, including diverse learners	communicates with diverse learners in a fair and respectful manner; consistently provides equitable opportunities to all, including diverse learners to meet high expectations	designs and implements instructional strategies to meet the diverse needs of all learners in a fair and respectful manner; consistently designs and flexibly implements equitable instructional strategies to all, including diverse learners to meet high expectations	

Program Outcome	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>IVa: Manages the learning environment to ensure learner growth*</i>					
Positive environment	takes no responsibility to create a positive classroom learning community	attempts to create a positive classroom learning community	creates a positive classroom learning community in which differences such as race, culture, gender, sexual orientation, and language are respected	collaborates with learners to facilitate self-reflection and ownership for ongoing improvement of the classroom community	
Student engagement	needs assistance in developing a learning environment that is engaging for most students	attempts to develop a learning environment that is engaging for most students, but is occasionally successful	develops a learning environment that is consistently engaging for most students	develops a highly engaging learning environment that maximizes students' involvement	
Clear expectations	has minimal standards of conduct in place; however, the teacher candidate needs assistance with monitoring student behavior or in responding consistently	communicates standards of conduct that may not be clear; the teacher candidate inconsistently monitors and responds to student behavior	communicates standards of conduct that are clear; the teacher candidate monitors and responds to student behavior effectively	communicates standards of conduct that are clear and effective; teacher candidate monitors student behavior and responds appropriately on a consistent basis	
<i>IIIe: Actively plans instruction to enable learners to make connections across content and to apply content knowledge in meaningful ways*</i>					
Technology	needs assistance to use interactive technologies as a resource to support student learning; rarely guides learners in using technology appropriately, safely, and effectively	attempts to use interactive technologies as a resource to support student learning; guides learners in using technology appropriately, safely and effectively	regularly uses interactive technologies as a resource to support student learning; guides learners in using technology appropriately, safely and effectively	plans for and frequently uses interactive technologies as a resource to support student learning; develops guidelines for learners to use technology appropriately,	

				safely and effectively	
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Program Outcomes	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>IIIa: Actively seeks to understand the discipline he/she teaches*</i>					
Content knowledge	displays minimal content knowledge; instructional practices indicate little awareness of learning progressions, and practices are too often incomplete or inaccurate for the content	displays basic content knowledge; instructional practices indicate some awareness of learning progressions, although some practices are incomplete or inaccurate for the content	displays thorough content knowledge; instructional practices indicate understanding of learning progressions, and practices seem to be complete and appropriate for the content	displays mastery of content knowledge and learning progressions that allow flexible adjustments to address learners at their current level of understanding to either remediate or deepen the learners' understanding	
Learner mastery of content	applies inappropriate strategies in instructional practice to engage learners in mastery of content	attempts to apply appropriate strategies in instructional practice to engage learners in mastery of content	Applies appropriate strategies designed to engage learners in meaningful experiences and guide them toward mastery of content	creates an interactive environment where learners take the initiative to master content and engage in meaningful learning experiences to master the content	
<i>Ib: Recognizes, respects and responds to learner commonalities and differences to design and implement learning experiences*</i>					
Culturally relevant planning	demonstrates minimal knowledge of learners' cultural backgrounds and experiences, and there is no plan to design learning experiences that build on learners' cultural backgrounds	demonstrates basic knowledge and/or ability to design learning experiences that integrate culturally relevant content to build on learners' cultural backgrounds and experiences	designs learning experiences that integrate culturally relevant content to build on learners' cultural backgrounds and experiences	flexibly designs learning experiences that integrate culturally relevant content to build on learners' cultural backgrounds and experiences	

Program Outcomes	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>IIIc: Actively seeks to connect real world problems to multiple subject areas while encouraging critical thinking and creativity*</i>					
Connection to real world problems	designs instruction related to the core content but learning tasks have no relevance to the students' interests or life experiences	designs instruction related to the core content but learning tasks have only superficial relationships to the students' interests or life experiences	designs instruction related to the students' real-life experiences and relevant core content	designs and facilitates challenging learning experiences related to the students' real-life experiences and relevant core content	
<i>IIIe: Actively plans instruction to enable learners to make connections across content and to apply content knowledge in meaningful ways*</i>					
Content from interdisciplinary perspectives	designs activities related to subject matter but does so from a singular perspective and discipline	designs activities for learners to engage with subject matter, from a variety of perspectives but no interdisciplinary connections are developed	designs activities for learners to engage with subject matter from a variety of perspectives and to develop interdisciplinary connections	embeds interdisciplinary connections and multiple perspectives into activities, allowing learners to independently relate these connections to key concepts and themes	
<i>IIIc: Actively seeks to connect real world problems to multiple subject areas while encouraging critical thinking and creativity*</i>					
Technology	needs regular guidance to determine where and how to access resources, including technologies, to build student awareness of local and global issues	accesses resources, including technologies, to build student awareness of local and global issues	uses resources, including digital and interactive technologies, to build student awareness of local and global issues	seeks out new and innovative ways to access resources, including digital and interactive technologies, to build student awareness of local and global issues	
Creativity, critical thinking and problem solving	Instructional strategies do not promote higher level thinking or collaborative problem solving connected to relevant content	engages students in higher level thinking skills such as critical/creative thinking and collaborative problem solving but skills are not connected to relevant content	engages students in higher level thinking skills such as critical/creative thinking and collaborative problem solving connected to relevant content	creates an environment that encourages higher level thinking, innovative ideas and approaches connected to relevant content	

Program Outcome	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>IVd: Uses formative and summative assessments to meet learner needs*</i>					
Assessment alignment with learning targets	utilizes assessment methods and items that are not aligned with learning targets	designs and modifies formative and summative assessments but not all are aligned with learning targets	designs and modifies formative and summative assessments that align with learning targets	designs and modifies formative and summative assessments that align with learning targets and assessments are differentiated to meet student needs	
<i>IVb: Uses multiple methods of assessment to ensure learner growth*</i>					
Feedback	feedback provided to students is not actionable	feedback provided to learners is actionable but does not necessarily improve the quality of the work	provides effective feedback to learners that aids in the improvement of the quality of their work	provide descriptive success and next step feedback to individual learners and involves them in assessing their own work	
Identification of learning needs	uses assessments solely to determine a grade	uses assessment data to guide planning and identify student learning needs	documents, analyzes, and interprets student assessment data gathered using multiple methods to identify student learning needs	documents, analyzes, and interprets student assessment data gathered from multiple methods to identify student learning needs, achievement trends, and patterns among groups of learners to inform instruction	
<i>IVc: Uses ethical assessments by minimizing bias to support students in assessing their own growth*</i>					
Learner self assessments	learners are not engaged in understanding and identifying quality work	engages learners in understanding and identifying quality work	engages learners in understanding and identifying quality work (models, examples, etc.). Provides opportunities for reflection, self-assessment, and monitoring of learning goals	creates a collaborative environment that engages learners in understanding and identifying quality work. Infuses opportunities for student reflection, self-assessment, and monitoring of learning goals	

	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>IIIc: Actively plans instruction to support learners in reaching rigorous curriculum goals*</i>					
Match between learning experiences and learning goals	lesson plans are not aligned with learning goals	plans for learning experiences that are aligned with learning goals	plans a variety of learning experiences that are aligned with learning goals and standards in a structure and sequence designed to meet student needs	plans demonstrate and understanding of prerequisite relationships between goals and standards and structure and sequence; proactively anticipates misconceptions and prepares to address them	
<i>IVb: Uses multiple methods of assessment to ensure learner growth*</i>					
Using data for instruction	pre-assessment and formative assessment data do not inform planning	pre-assessment and formative assessment strategies are not aligned adequately with learning targets, so data does not effectively inform planning	uses pre-assessment and formative assessment strategies that align with learning targets and data are used to inform planning	assessments are strategically designed to inform planning and to provide multiple forms of evidence for monitoring students' progress relative to learning targets	
<i>IVd: Uses formative and summative assessments to meet learner needs*</i>					
Adjusts plans	plans are not adjusted to meet student learning differences or needs	uses assessment findings to modify instructional plans to meet students' needs	uses information gained from assessment findings to customize instructional plans to meet students' needs	uses information gained from assessment findings and becomes more capable of predicting, and planning ahead to customize instructional plans to meet students' needs	
<i>IIb: Collaborates and communicates with others to plan instruction*</i>					
Collaboration for planning	collaborating with the cooperating teacher, other teachers, or specialists is confined to exchanging information	collaborates with the cooperating teacher, other teachers, or specialists to design instruction	collaborates consistently with the cooperating teacher and/or specialists to design instruction that addresses and supports individual student learning	proactively addresses student learning needs through ongoing collaboration with the cooperating teacher, other teachers, and/or specialists	

Program Outcome	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>VIId: Takes responsibility for student learning*</i>					
Instructional approaches	utilizes only one instructional approach	uses a variety of instructional approaches but approaches are not matched to learner needs, interests, and goals	varies role between instructor, facilitator, guide, and audience; considers learners' needs, interests, and goals in determining instructional strategies to engage learners	integrates a variety of instructional approaches for all members of the classroom; considers learners' needs, interests, and goals in determining instructional strategies to engage students as both learners and teachers	
<i>IVa: Manages the learning environment to ensure learner growth</i>					
Technology	identifies instructional strategies without involving technology	uses limited instructional strategies involve technology	uses technology effectively to enhance instruction	engages learners in evaluation and selection of media and technology resources; uses technology appropriately to engage learners and enhance instruction	
<i>Ib: Recognizes, respects and responds to learner commonalities and differences to design and implement learning experiences*</i>					
Differentiation and grouping	teaches individual or small group learning experiences without differentiating instruction	varies teaching of individual or small group learning experiences, but variations are not well-matched to student needs	varies instruction for individuals or small groups to create learning experiences that are well matched to student needs	differentiates instruction in the areas of content, process, product, or learning environment in the best interests of the students	
<i>Ila: Collaborates and communicates with others to build a positive learning climate*</i>					
Effective communication	makes frequent errors when articulating thoughts and ideas using oral, written, and nonverbal communication skills	articulates thoughts and ideas using oral, written and nonverbal communication skills but over relies on the same forms of communication	articulates thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms	articulates thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts	

				to inform, instruct, and motivate	
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Program Outcome	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
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Va: Reflects on effectiveness of instructional strategies and adjusts as needed*

Receptivity to feedback	resists feedback to improve teaching effectiveness	accepts feedback to improve teaching effectiveness	seeks and reflects upon feedback from colleagues to evaluate and improve teaching effectiveness	seeks multiple sources of feedback and takes responsibility for ongoing professional learning to address identified needs and areas of professional interest	
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Vb: Reflects on evidence to evaluate his/her decisions*

Lesson reflection	reflects on the lesson, but draws incorrect conclusions about its effectiveness and/or identifies no areas for improvement	reflects on the lesson and has a general sense of whether or not instructional practices were effective and identifies general modifications for future instruction	reflects on the lesson and accurately assesses the effectiveness of instructional activities used and identifies specific ways in which a lesson might be improved	reflects on thoughtful and specific indicators of effectiveness in the lesson. The lessons learned tend to improve future planning, adaptations, and instructional practice	
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Vlc: Conducts his/her self in an ethical manner*

Legal and professional responsibilities	does not act in accordance with ethical codes of conduct and professional standards and demonstrates inadequate knowledge of federal, state, and district regulations and policies	acts in accordance with ethical codes of conduct and professional standards but demonstrates limited understanding of federal, state, and district regulations and policies	acts in accordance with ethical codes of conduct and professional standards. The teacher complies with laws and policies related to learners' rights and teachers' responsibilities. The teacher accesses information and uses technology in safe, legal and ethical ways	demonstrates an understanding of the larger context of public education policy by staying abreast of changing laws and ethical standards, through literature, professional development or activities. The teacher anticipates how information and technology might be used in unethical or illegal ways and takes steps to prevent the misuse of information and technology	
<i>V1b: Seeks to advance the profession*</i>					
Professional learning	purposefully avoids contributing to activities promoting professional inquiry	participates in activities related to professional inquiry	regularly participates in activities related to professional inquiry	takes a leadership role in promoting activities related to professional inquiry	
<i>V1a: Seeks appropriate leadership roles*</i>					
Professional commitment	avoids involvement in school activities and district and community projects	when asked, participates in school activities, as well as district and community projects	frequently volunteers to participate in school events and school district and community projects	regularly contributes to and leads events that positively impact school life, and regularly contributes to and leads significant district and community project	

Program Outcome	Undeveloped (1)	Emerging (2)	Proficient (3)	Distinguished (4)	Score
<i>11c: Collaborates and communicates with others to ensure learner growth*</i>					

Collaborative relationships	develops relationships with colleagues that are characterized by negativity or combativeness	develops cordial relationships with colleagues; attempts to improve student performance	develops supportive and collaborative relationships with colleagues that improve student performance	initiates supportive and collaborative relationship with teachers, administration, support staff, and specialists that benefit the teacher and student performance	
<i>IIa: Collaborates and communicates with others to build a positive learning climate*</i>					
Collaborative communication	makes little or no information regarding the instructional program available to parents, and/or there is culturally inappropriate communication	maintains a school-required gradebook but does little else to inform families about student progress, and/or some of the teacher's communications are inappropriate to families' cultural norms	regularly makes information about the instructional program available, and communications are appropriate to families' cultural norms	guides the students in regularly development of materials to inform their families about the instructional program, and all of the teacher's communications are highly sensitive to families' cultural norms	

Appendix C: Participants Scored on STOT Chart

	J. Hoosier	J. Taylor	K. Putnam	K. Walters	D. Smith	B. Daniels	A. Herbert	C. Ericksen
Designs instruction	3	3	3	4	3	3	3	3
Implements instruction	3	3	3	4	3	3	3	3
Sequence of lessons	3	4	4	4	4	3	3	4
Understanding of individual students	3	3	4	4	3	3	3	4
Differentiates instruction for learners	3	3	3	3	3	2	2	4
High expectations	3	3	3	4	3	3	3	3
Positive environment	2	3	3	4	3	3	3	3
Student engagement	3	4	3	3	3	3	3	4
Clear expectations	2	4	3	4	4	3	3	4
Technology (IIIe)	3	4	4	3	4	3	2	3
Content Knowledge	3	3	4	3	4	2	3	4
Learner mastery of content	3	4	4	3	4	3	3	3
Culturally relevant planning	3	3	3	3	3	2	2	3
Connection to real world problems	4	3	3	4	4	3	3	3
Content from interdisciplinary perspectives	3	3	3	3	3	3	3	3
Technology (IIIc)	n/a	n/a	n/a	4	4	3	3	3
Creativity, critical thinking, and problem solving	3	3	4	3	3	2	3	3
Assessment alignment with learning targets	3	3	3	3	3	3	3	4
Feedback	2	3	3	3	3	3	3	3
Identification of learning needs	2	4	3	3	3	2	3	3
Learner self-assessments	n/a	n/a	n/a	3	4	2	3	3
Match between learning experiences and learning goals	3	4	3	4	3	2	3	3
Using data for instruction	2	3	3	3	3	2	3	3
Adjusts plans	2	3	3	3	3	2	3	3
Collaboration for planning	3	3	3	3	3	3	3	3
Instructional approaches	3	4	3	3	3	3	3	3
Technology (Iva)	3	3	3	3	4	3	3	3

INFLUENCE ON STUDENT LEARNING

Differentiating and grouping	3	3	3	3	3	3	3	3
Effective communication	3	3	4	4	4	3	3	3
Receptivity to feedback	n/a	n/a	n/a	3	4	3	4	3
Lesson reflection	2	3	3	3	4	2	3	3
Legal and professional responsibilities	n/a	n/a	n/a	3	4	3	4	4
Professional learning	3	3	n/a	n/a	3	3	4	3
Professional commitment	n/a	n/a	n/a	n/a	n/a	4	4	3
Collaborative relationships	3	3	3	4	n/a	3	3	4
Collaborative communications	3	3	3	3	3	3	4	3

Appendix D: Rotation of Continued Research

Rotation of Research Study for CAEP Standard Four

Procedure: 1 observation with detailed field notes; scoring of graduate using Student Teaching Observation Tool (STOT); and 1 interview to discuss pre- and post-assessment of students

Timing: This is best done in the fall or spring of their second year of teaching

Year of Graduation	Semester of Research	Field and # Grad	Field and # Grad	Field and # Grad
2015-2016	Fall 2017	ELED: 3	SS ED: 2	Engl ED: 3
2015-2016	Spring 2018	ELED: 3	SS ED: 3	Math: 2-3
2016-2017	Fall 2018	SPED: 2-3	Sciences: 1-2	Business: 1-2
2016-2017	Spring 2019	Art: 2-3	Music: 2-3	PE: 3
2017-2018	Fall 2019	ELED: 3	PE: 3	ECE: 2-3
2017-2018	Spring 2020	For Lang: 1-2	PE: 3	English: 3

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