(De)constructing Student Engagement for Pre-Service Teacher Learning

Jennifer G. Beasley
Conra D. Gist
& Marcia B. Imbeau
University of Arkansas

Tori* let out a sigh of relief. Looking over her fourth grade students' math fraction assessments, it appeared that her students had performed exceptionally well. In her class, 15 of the 20 students wrote the correct answer and explained how they solved the problem. The fraction assessment addressed key concepts that Tori taught her students earlier in the day, and these data showed that 75% of her students understood the lesson. Her worry over the future of her teaching career began to subside.

This is Tori's first semester of student teaching, and she was learning that teaching a successful lesson was more complicated than she had first imagined. Throughout the lesson on fractions, Jason, who often had trouble focusing on lessons, repeatedly attempted to read a Harry Potter book and refused to put the book away in his desk. She noticed that other students were either sleeping or on the verge of falling asleep. Tori could not understand why they had no interest in the lesson, particularly when she followed her lesson plan perfectly. Although Tori felt a sense of comfort from the math assessment scores, she was not comfortable dismissing what she had noticed about her students' comments and behaviors during the lesson. And the more that she thought about this lesson and others that she had taught, the more that she began to worry again.

*All names are pseudonyms

Jennifer G. Beasley and Conra D. Gist are assistant professors and Marcia B. Imbeau is a professor, all with the College of Education and Health Professions at the University of Arkansas, Fayetteville, Arkansas. Their e-mail addresses are jgbeasle@uark.edu, gist@uark.edu, & mimbeau@uark.edu

Learning to teach is a complex intellectual and adaptive performance act. The scenario of Tori illustrates this complexity by showing how several factors are often at play in any classroom. Even as a pre-service teacher, Tori understood that good teachers carefully observe their students' reactions during a lesson for signs that particular elements of instruction might need attention. She also was aware that a teacher's ability to be a careful observer of student learning must be developed and practiced. While the teacher education literature has extensively noted common challenges to teacher learning, including pre-service teachers' view of teaching as improvisational (Ball & Forzani, 2009) and the difficulties that they have in overcoming the beliefs formed from their own school experiences (e.g., viewing students as consumers and teachers as deliverers of information), the means to facilitate pre-service teacher efficacy and practice have not kept pace. The field still lacks an in-depth understanding of the kinds of instructional practices that make a difference in pre-service learning, and this is particularly true for specific domains of effective instruction, such as engaging students in learning.

Student engagement is the cornerstone of effective instruction. Current education reform policies, such as Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010) and Teacher Effectiveness (Rothstein & Mathis, 2013) prioritize the importance of educators' developing K-12 students' intellectual capacities through cognitively engaging tasks. To prepare effective teachers, teacher educators must foster pre-service teachers' abilities to cognitively engage students and increase students' academic achievement. In this article, the authors highlight the importance of student engagement by describing promising practices in one teacher education program: (a) clearly identifying the role that student engagement plays in the classroom, (b) creating structures for teacher educators to observe and support student engagement, and (c) exploring what student engagement looks like from a pre-service teacher's perspective.

The Significance of Promoting Student Engagement

Increasing student engagement is at the heart of effective teaching. The literature contains a variety of perspectives on effective teaching, but most researchers suggest that it is a multifaceted construct (Findlay, 2006; Fredricks, Blumenfeld & Paris, 2004; Jang, Reeve, & Deci, 2010; Skinner, Kindermann, & Furrer, 2009). In regard to this multifaceted view of engagement, Jang et al. (2010) found that, when teachers provided both support and structure in classroom learning experiences,

students were more cognitively engaged than they were in classrooms that provided only support or structure alone. In a study of teachers who passed the National Board for Professional Teaching Standards with those who were just below the cut score, Hattie (2012) found those who passed were more likely to have a systematic and consistent way to challenge students to think and regularly promoted varied and appropriate assignments that were demanding and engaging.

A more student-centered definition of effective teaching comes from the work of Schlechty (2002), who suggests that students who are engaged exhibit three characteristics: (a) an attraction to their work, (b) persistence in their work despite challenges and obstacles, and (c) visible delight in accomplishing their work. This view of student engagement acknowledges that students not only are physically involved in the lesson, referred to in the literature as procedural engagement (Appleton, Christenson, Kim, & Reschly, 2006), but also interact with the content of the lesson in a deep and thoughtful manner, referred to in the literature as cognitive engagement (McLaughlin et al., 2005).

Increasing student engagement is a worthy endeavor. Shernoff, Csikszentmihalyi, Schneider, and Shernoff (2003) believe that teachers should focus on student engagement because doing so results in increased student autonomy and appropriate challenges in the classroom. In a longitudinal study of 526 high school students across the U.S., Shernoff, Csikszentmihalyi, Schneider, and Shernoff (2003) found that students who experienced increased engagement were more actively involved in both individual and group work. These same students also were more likely to work in a state of flow (Csikszentmihalyi, 1990), meaning that their performance was perceived as pleasurable and successful and that the activity in which they were engaged was worth doing for its own sake.

Even when teachers have an understanding of engagement and its benefits, it remains challenging to put it into practice. Schlecty's (2009) research, based on 1,500 classroom observations of experienced teachers, found that only 15% of the teachers were successful in achieving greater than half of their respective students' attention during their lessons. If student engagement is challenging for experienced classroom teachers, then it is likely to be even more challenging for pre-service teachers.

Observing and Supporting Engagement

How do teacher educators observe and support engagement in the classroom? One teacher evaluation model that specifically addresses student engagement is the Framework for Teaching, which Danielson (2007) stated can be used for "a wide range of purposes, from meeting

novices' needs to enhancing veterans' skills" (p. 2). This model provides a description of a teacher's responsibilities through 22 research-based components for effective teaching that are clustered into the following four domains: Domain 1—Planning and Preparation; Domain 2—The Classroom Environment; Domain 3—Instruction; and Domain 4—Professional Responsibilities.

Domain 3—Instruction contains five components, one of which is Engaging Students in Learning (3c). This component identifies four elements that are linked to student engagement: (a) activities and assignments, (b) grouping of students, (c) instructional materials, and (d) structure and pacing.

Danielson's (2007) evaluation model was selected as a guiding tool for our pre-service teachers for several reasons. First, Framework for Teaching (FfT) criteria are clear. Within the elements, Danielson imbeds specific levels of performance (e.g., unsatisfactory to distinguished) that guide the observer and the teacher to proactively plan for engagement in the classroom. Pre-service teachers are in need of explicit criteria that can provide focal points for next steps in gaining the skills to become an effective teacher. In this regard, Danielson's clearly defined elements establish a common vocabulary as teacher educators coach pre-service teachers in student engagement. The second reason that FfT was chosen is that the criteria best mirror what we know about defining student engagement (Appleton et al., 2006; McLaughlin et al., 2005; Schlechty, 2002). Explicit in its criteria are procedural engagement and cognitive engagement, which are key aspects of an inclusive definition of engagement (Schlechty, 2009). The third reason that this model was chosen for use with our pre-service teachers is that FfT is currently used in our state to evaluate beginning teachers. Its use in our coursework will help our students be prepared for their profession in the future.

Masters of Arts in Teaching: A Case of Pre-Service Teacher Learning

In this section, we describe a teacher education program that utilizes Danielson's (2007) framework to help pre-service teachers think deeply about student engagement. We also seek to demonstrate how, using Danielson's promising practice, pre-service teachers define and implement student engagement in the classroom at one university. We are concerned with how engagement looks from a pre-service teacher's perspective and how teacher educators support growth in this area. To provide a rich background for this promising practice, we first would like to highlight some of the explicit ways that we prepare pre-service

teachers for teaching, with student engagement in mind, and how this affects their own perspective of engagement. We believe that it is the combination of structure and support that fosters our students' growth in attending to student engagement.

Program Structure and Support

We serve approximately 75 elementary pre-service teachers each year in a Research I university setting. Over 90% of the candidates are Caucasian and female, and all students are required to have at least a 3.00 GPA to be admitted to the program. The students are in their fifth year at the university and are working toward their Master of Arts in Teaching along with an additional licensure of their choice (e.g., English as a Second Language, Special Education) or a STEM (Science, Technology, Engineering, and Math) certificate. Following graduation, our graduates are most likely to teach in schools in the surrounding school districts, which have some of the highest populations of English Language Learners in the state.

Our teacher education program was developed based on a model of preparing scholar-practitioners. This model is important because it guides the development of courses and field experiences for all of our teacher candidates and provides a setting in which student engagement is developed. Over the course of a year, our students spend one day a week in their Master's courses and the rest of the week in their school placements. This model allows for students to be in continuous reflection about the issues that arise in their courses and the real-world classroom experiences of which they are a part.

During their internship year, pre-service teachers see the complex nature of the classroom in relation to the structure of their course goals and assignments. They take courses in Literacy Assessment, Classroom Management Concepts, Curriculum Design, and Action Research. Each of these courses helps students to understand what it means to get to know their students as well as how to use data to inform daily instructional decisions. These courses also provide the structure to allow for conversations about designing environments that lend themselves to cognitive engagement.

Student engagement can look different depending the grade level, content, or individual student. During their yearlong internship, pre-service teachers work as student teachers in three different grade levels. This gives them experience in teaching different content in new environments. At each placement, the pre-service teachers are asked to reflect on what student engagement looks like in that classroom. Throughout

the year, they begin to bring the pieces of the puzzle together and to see student engagement in a new way.

Finally, in addition to the structure and experiences that our students receive, pre-service teachers need extensive coaching. Our program provides weekly support not only to the pre-service teachers but to their mentors in the school as well. Weekly seminar classes devoted to their experiences help to support growth throughout the year. Pre-service teachers also are observed once a month using Danielson's (2007) framework. At the end of each observation, pre-service teachers select a focus for the next observation. As they begin to identify engagement in the classroom, they are supported by the university liaison and mentor teacher in their taking their next step on the FfT continuum.

Spotlight on Student Engagement

Our program spotlights engagement through regular conversations in weekly seminar classes and reflection journals that our students shared with their university liaison. Through these reflections and conversations, and as they debrief classroom observations, the university liaison and pre-service teacher build a common vocabulary for engagement. Each classroom observation is scored in terms of student engagement. After the discussion of the observation, the liaison and pre-service teacher choose a focus area for increasing student engagement in a subsequent lesson. This pattern is repeated throughout the year. The pre-service teachers also reflect in their self-assessment documents about how, over time, they grew in their abilities to engage students.

Promoting Student Engagement

In this section, we describe how pre-service teachers' understanding of student engagement evolved over the course of the year as a result of the structures and support given. To illustrate our work with pre-service teachers, the senior researcher selected two participants who exemplified the findings we routinely see in our pre-service teachers. Kennedy and Lana learned about student engagement in the context of their university coursework. When designing learning experiences that they would teach their students as part of their internship, they were required to follow a lesson plan format that asked them to attend to the several elements they should consider not only in their planning but also in their practice (see Figure 1).

While they had used the lesson plan format in their classes the prior year, these young teachers were asked to be particularly mindful of each element of the plan as a means to be successful in meeting a Classroom

Management course requirement of designing and implementing a differentiated instruction lesson. The purpose of the assignment was to show students that effective teachers have a clear vision of how they want their classrooms to function, that their relationship with their students is critical for helping them to realize that vision, and that both of these ideas affect how and what students learn in the classroom. They further studied the principles and practices of differentiation (Tomlinson, 2003;

Figure 1
Lesson Plan Format

Title / Subject:
Grade Level:
State / Common Core Standards Addressed:
Learning Goals: (What is it that you want your students to KNOW, UNDERSTAND and BE ABLE TO DO as a result of this lesson?

Understand (big ideas, principles, generalizations, rules, the "point" of the discipline or topic within the discipline)

Know (facts, vocabulary, how-to's, information that is memorizable)	*Do* (Skills) (thinking skills, skills of the discipline—skills you will assess)

Materials: (Specifically, what do you need to have available for your students to accomplish your learning goals?)

Procedures: (List a step-by-step, detailed plan of what will happen in the lesson. If you are working with students in small groups, describe each group's task. Decide the method(s) you will use to assist students in coming to understand the content. Begin with schema activation (the set) and end with closure (reviewing the purpose of the lesson and what was learned). This is also where you will talk about how you plan to address students' readiness, interests, or learning profiles (differentiation).

Schema Activation: (Engages prior knowledge and builds interest. How will you "hook" the children?)

Next Steps: (Outline the rest of your procedures. What is your guided practice? Collaboration? Independent practice?)

Closure: (Ties the lesson together. How will you summarize what was accomplished in the lesson?)

Evaluation: (Were the learning goals obtained? How do you know? What assessment strategy was used to determine whether your goals were accomplished? Did you find that the lesson was too easy or too difficult for some students?)

Reflection on the Lesson: (Introspection! What worked? What didn't? What would you do differently next time? Also discuss what you learned from your assessment data. This section can be completed only after the lesson is taught.)

Tomlinson & Imbeau, 2010) and realized that the practice of knowing their students' interests, readiness, and learning profile needs affected how teachers engage students in the classroom. When a teacher knows his or her students' learning needs and interests, the teacher is more likely to use this understanding to engage students.

Kennedy and Lana came to realize that effecting engagement is a complex process, made more so when they considered the variety of students whom they taught. They knew that their students' readiness, interests, and learning profile mattered when designing instruction and that they were particularly important to how Kennedy and Lana would engage their learners. To facilitate deep reflection, Kennedy and Lana were asked to evaluate their practice using Danielson's (2007) framework. This self-assessment was conducted by the pre-service teachers in the fall and spring and required rating their progress in implementing each element of the framework as well as providing evidence for their rating. Through administering this self-assessment twice during the internship year, the pre-service teachers could see their own progress through the year and have an opportunity to reflect on their practice. A closer look at Kennedy's self-assessment of the engagement element in the Danielson's framework illustrates her progress.

In September, when working in a first grade classroom, Kennedy rated herself with a 2 on a scale of 1-3 and wrote:

> I design all my lessons and activities to be appropriate for all students. I also try to give students adequate time to complete their work as well as several opportunities to engage students in their learning. When I group students, I group them with students that I think they will work best with as well as students who have similar learning levels. I try my best to make my activities engaging so that students can enjoy their learning.

In April, when working in a kindergarten classroom, she rated herself as deserving a score of 3 and wrote:

> I have learned that the way I group students and the type of activities I create can completely affect the type of learning that takes place. With more and more experience, I have learned how to best group students in my class depending on readiness, interest and/or learning profiles. Also, I have found that through reflection, I can decide what resources/materials worked well and what to change/incorporate differently for future lessons. Overall, planning for time, materials, and activities goes hand in hand with knowing one's students and being able to monitor and adjust.

Lana's fall and spring reflection comments provide another perspec-

tive on student engagement. She took care to evaluate each of the sub-elements on the engagement section of Danielson's (2007) framework and presented her evidence as a series of bullet points. In September, when she was working in a third grade classroom, she gave herself a rating of 1 and wrote:

> • A lot of the activities I do with my students keep most of the students engaged. The only lesson in which I have seen all students engaged and absorbed in their activity was my differentiated lesson. I now know that it is probably a better idea to differentiate more lessons in order to keep every student engaged.
>
> • When the students are grouped for group projects, we try to make sure there is a mixture of levels within the same group so they can help each other and rely on each other. Every table group for everyday group work is a mixture of levels as well.
>
> • I feel as though I could use more materials and resources than I do now. For math, I have only been using the everyday manipulatives like the place value blocks. Researching is the only real time students get to use other resources and materials. Once they get to use real manipulatives they are generally engaging for the students.
>
> • I usually try to have my lesson structured and organized in a way that students understand the lesson.
>
> • I have some issues with pacing. When given an allotted time from my mentor teacher or for the lesson to last a specific amount of time, I can do that. But when there are multiple lessons back-to-back with all of the transitions in between, I either end early or need to continue the lesson later.

In April, when working in a fifth-grade classroom, she gave herself a rating of 3 and wrote:

> • I try to make the activities and assignments I create as engaging as possible. Students become more engaged and absorbed in the activity when the lesson is differentiated. Students get more excited about an activity when it relates to them personally, is thought provoking, or intriguing.
>
> • I have become so much better at grouping students for specific lessons, tasks or subjects. I have come to realize that in some areas, there needs to be a mixture of levels and that in other areas, there needs to be students around the same level. I have learned that by pre-assessing and knowing where the students are academically assists me in knowing where to place students in groups. My students were so comfortable and used to having different groupings and being with different peers.
>
> • I feel as though I have gotten much better at selecting materials that

> are appropriate for different learners. I have realized that students need to have materials that are on their level so they can get deeper into the content. I also try to use different materials and resources to keep students engaged in a task, such as books, iPads, computers, articles and magazines.
>
> • I try to make my lesson as structured and organized as possible. Students need to be able to follow the main ideas and which direction the lesson is taking.
>
> • I feel much more comfortable with my time and my pacing is so much more suitable for my students. I used to have some problems finishing a lesson in a certain amount of time and being able to transition between lessons. Being in 5th grade helped me tremendously because we only had 2 hours with each class in the morning for reading, writing and social studies so I needed to stick to the time schedule.

Lana and Kennedy's reflections on student engagement reveal a deeper understanding as they moved from fall to spring. These pre-service teachers' later reflections suggest an understanding of student engagement that is more fully developed and that indicates a level of confidence that should be invaluable to their work in their first classroom.

This growth also was seen by their liaison and mentor teachers when they observed each of them teach. On a visit to Kennedy's classroom, the liaison noticed that Kennedy had all of her kindergarten students near her on the carpet so that they could see the Promethean board and hear her instructions. On this particular day, Kennedy was working with students during their Writing Workshop time. They had worked on several concrete steps that beginning writers use when writing and that addressed the Common Core State Standard for kindergarten: Use a combination of drawing, dictating, and writing to compose informative/explanatory tests in which students name what they are writing about and supply some information about the topic.

Kennedy had decided that she would model for students something that she could write about that she thought the students would find relevant and interesting. She displayed a picture of herself (although she did not identify it as such), with four missing teeth, when she was in second grade and then asked the students who they thought that it was a picture of and to say something about that person. Her students quickly determined that the picture was of Kennedy. The liaison noticed that all of the students were excited and attentive. Kennedy then asked all of the students to share with the student next to them something about missing teeth. Everyone participated.

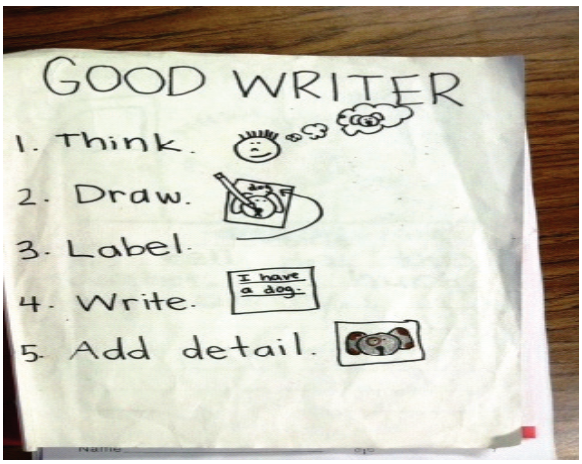
Then she asked, "Do you think I could write about a time when I had so many missing teeth?" All of the students agreed, so she asked them to

help her write her story. She reminded them of all the steps that a good writer might follow, which each had in his or her writer's notebook, and they constructed a story together (see Figure 2). She would routinely stop and ask, "Now what should I do?" to get suggestions from the group, or, "Am I finished?" only to hear the group in unison say, "No, you didn't add detail" or "You forgot to label your picture." Kennedy's thinking out loud while she was working allowed students to recall the process for their own writing that they were learning. Modeling her thought process also helped to keep the students engaged with the mini-lesson, as it kept the pace of instruction appropriate for very young learners and allowed them to talk to each other while keeping everyone focused.

Kennedy had explained to the liaison that she and her mentor teacher had worked to create a Writing Goals Wall, where each student could see his or her goals and progress as well as his or her next step, as a means to ensure growth. Figure 3 shows the Writing Goals Wall.

Kennedy ended the lesson by reminding students of their Writing Goal Wall, stating that everyone needs to practice to grow in becoming a better writer. The students were then dismissed to return to their tables, and their table leader retrieved the boxes that contained the writing folders for their group. The liaison noticed that every student was aware of the expectation for this lesson, and most began working right away. Kennedy and her mentor teacher quickly attended to any student who was not drawing or writing and asked, "Are you thinking?" Without exception the student would nod, "Yes."

Figure 2
A kindergarten classroom's steps to good writing



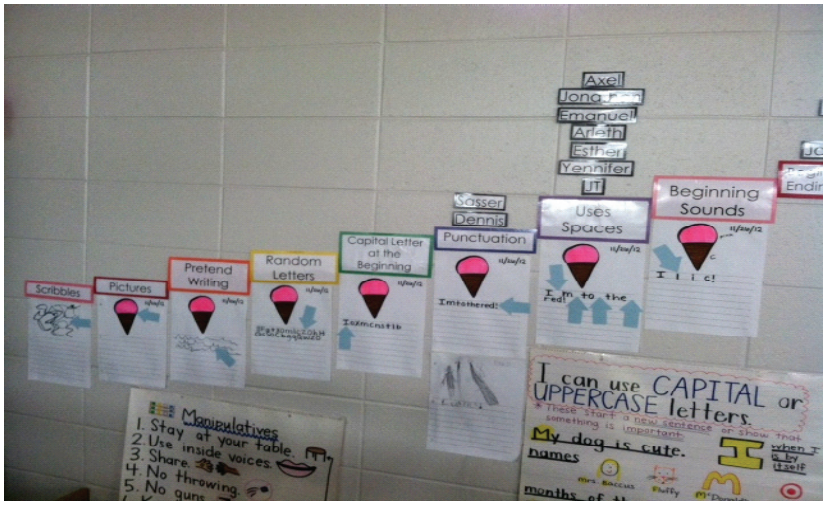
This observation suggests that Kennedy is aware of how to make assignments appropriate and engaging for her students. The clear structure of the lesson also promotes student engagement, as it guides her students in how to be successful with the task and helps to build competence in this skill area.

Suggestions for Teacher Preparation Programs

Student engagement is essential to effective instruction. Through providing structure and support, teacher educators can facilitate pre-service teacher growth in effecting student engagement. Further, by examining the growth of pre-service teachers, teacher educators can begin to see structures and supports that need to be in place to allow for the facilitating of student engagement in the classroom.

The lessons we have learned from our work with pre-service teachers do not provide us with a list of prescriptive steps but, rather, capture the systems that we can have in place for growth to occur. In the case of the vignette at the beginning of the article that portrayed Tori's student teaching experience, we applaud her noting that her students' interest in the lesson was not what she had hoped, and we can conclude that she is in need of support to understand how to engage her students in the classroom. Our work suggests that, for teacher educators to facilitate pre-service teacher understanding and practice, teacher preparation programs need to:

Figure 3
Kindergarten Writing Goal Wall



- Create a critical space for dialogue, deliberation, discussion, and definition of student engagement. Pre-service teachers need time to talk about what student engagement might look like in the classroom, how it can be facilitated, and how it can be observed and measured.

- Incorporate pre-service teacher self-reflection on their lessons as a natural part of the observation cycle. Regular observation by teacher educators is just one step in facilitating student engagement in the classroom. Pre-service teachers also need to watch their own lessons (e.g., engage in video analysis) and reflect on their own growth in the area of student engagement.

- Provide explicit connections of course goals and assignments to student engagement. Throughout the coursework, pre-service teachers need to see the connection between what they are learning and increasing student engagement. They need to have multiple experiences with implementing instructional strategies that are successful in cognitively engaging their students. This structure can be supported through lesson planning as well as through classroom management techniques.

If teacher educators hope to support Tori and other pre-service teachers like her, we need to continue to examine how they learn and grow in their understanding of student engagement. It is our belief that teacher education programs committed to improving pre-service practice, particularly as it applies to student engagement, also increase the likelihood that their students' achievement will be improved as well.

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