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Pre-service Teachers: Reflections on Observed Practice

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Teacher Education: Reflection on Field Observations

Reflective practice is an essential part of teacher development and is connected to improving teacher quality. To be effective, teachers need to think critically about their practices and be able to adapt their teaching strategies and classroom management to fit the diverse needs of their students. Documenting the reflective process in pre-service teacher education is relevant to educational institutions and future teachers. For the educational institutions, recording pre-service teachers’ experiences not only serves to improve teacher quality but also fortifies documentation for accreditation bodies, such as the National Council for the Accreditation of Teacher Education (NCATE) and the Council for Accreditation of Educator Preparation (CAEP). The purpose of this qualitative case study was to explore the roles that reflective practice and technology play in the development of pre-service teachers. This study sought to answer the following research question: In what ways do pre-service teachers make pedagogical decisions based on their reflections?

This study takes place in the southeastern United States and is particularly relevant because inequality is historically documented in this geographical area. Reflecting on student diversity and how it influences pedagogical decisions is crucial to improving the quality of education and promoting social justice. The research question is relevant to the state in which this study takes place because it consistently ranks at the bottom of education charts. Education Week’s Quality Counts 2015 rated this state a ‘D’ and ranked it 50th in the nation in education (Education Week, 2015). This state’s low ranking in education is, in part, related to its being one of the poorest states in the Union, where 26.4% of people live below the poverty level (United States Census Bureau, 2014). In fact, 63.85% of children receive free lunch and 7.76% receive reduced lunch (Mississippi Department of Education, 2012). Improving the quality of education is essential to the development of the state.

Literature Review

The conceptual framework is an integrated approach that draws from the professionalization and reflective practice paradigms. The professionalization and reflective practice paradigms are the larger lenses with which to view the teacher development process. The following review of literature looks at reflective practice in
teacher development. The role and functions of e-portfolios are discussed as a best practice that supports pre-service teacher development.

**Reflective Practice in Teacher Education**

Improving teacher quality is often dependent on reflecting on pedagogical strategies. Schon (1983), defines reflection-on-action as reflecting on how one’s practice can be developed, changed or improved after the event has occurred. The practice of reflection serves as a tool for teachers—particularly those in low-resource, hard-to-reach, rural areas—to improve on their pedagogical practice.

Dewey (1933) and Schon (1983) provide the foundation for shaping teacher reflective practice. Reflective practice is rooted in the philosophy of John Dewey. Dewey (1933) contended reflection is thinking about and assisting learners to recognize what, how, and why they absorb information. Dewey (1933) believed that teachers should think critically about themselves and their environments. Dewey (1933) defined reflective practice as, “...the ground or basis for a belief is deliberately sought and its adequacy to support the belief examined” (pp. 1-2). Further, Dewey (1933) summarized reflection as, “thinking that consists of turning a subject over in the mind and giving it serious and consecutive consideration” (p. 3).

Schon (1983) proposed four levels of reflective practice: knowledge-in-practice (using a teacher education technique in the field), reflection-in-practice (reflection on a practice), reflection-in-action (reflecting on a situation while you can still change it), and reflection-on-action (critically thinking to change future behavior).

The professionalization paradigm posits that teacher education should foster reflective practitioners who adapt their teaching to the contextual environment (Darling-Hammond, 2006, 2010). Educational researchers have contended that reflective practice improves teacher effectiveness (Fendler, 2003; Mayes, 2001). Weber (2013) argued that reflective practice “is a skill that is beneficial to pre-service teachers because it guides them to bridge the gap between theory and practice, and leads them to be more effective as teachers” (p. 53). According to Zeichner and Liston (1996), reflective practice is a professional development strategy that encourages practitioners to look “both inwardly at his or her own practice and outwardly at the social conditions in which this practice is situated” (p. 208).

Similarly, Zeichner and Liston (1996) contended educators should be able to make pedagogical choices based on a situation and give reasons for their actions. Weber (2013) maintained that, “Being a critically and reflectively thinking teacher means incorporating metacognition in order to inquire about an event or an issue, review the possibilities and choose the best solution for that event or issue” (p. 53). Anderson and Matkins (2011) stated, “developing critical reflective practice abilities in teachers establishes skills that pre-service teachers need to reflect ‘on action’ and become skilled reflective practitioners” (p. 36).

**The Role of E-portfolios in Reflective Practice**

The use of portfolios in reflective practice is based in the professionalization paradigm that articulates teachers are capable of deciding (selecting pieces of their work for display) and determining their strengths/weaknesses. Harland and Wondra (2011) compared the depth of reflections in pre-service teachers’ blogs.
and end-of-term papers and found, “not only do pre-service teachers reach a greater DoR {Depth of Reflection} in blogs, but they do so by writing fewer words” (p. 4). Oner and Adadan (2011) found that pre-service teachers frequently reflected on practice using web-based portfolios because they served as “tools that allowed easy access and the development of better portfolio artifacts” (p. 488). Anderson and Matkins (2011) argued that a “shift from traditional journals to blogs can facilitate interactivity that augments reflective practice” (p. 29).

Developing e-portfolios can be another way to scaffold and facilitate reflective assignments. Oakley, Pegrum, and Johnston (2014) claimed that when pre-service teachers document reflection, e-portfolios serve to “build records of their learning journeys and develop into reflective practitioners” (p. 1). Moon (1999) argued that instructors should have pre-service teachers reflect on the artifacts they put in their e-portfolio. Similarly, Denton and Wicks (2013) contended that pre-service teachers need to write entries that include “analysis and reflection, instead of recall and description” (p. 131). They argued for self-evaluation with “supporting evidence” (p. 132) and peer assessment. Furthering this concept, Denton and Wicks (2013) argued there is a need to develop “instructional methods for soliciting quality entries from students through questions and prompts” (p. 125).

Pedagogically, this means it would be a sound educational practice for faculty to design teaching strategies which interact with and guide pre-service teachers. Technology and social media mechanisms can further the reflective practices of pre-service teachers. Finally, Kahn (2014) posited that “the ability of e-portfolios to capture work representing authentic performances in multiple digital media—like a video clip of a candidate for teacher licensure teaching a lesson—offers a clear advantage over more traditional forms of assessment” (p. 2).

Methods

A qualitative case study method was used to explore the use of e-portfolios for documenting the reflective practices of teachers. Merriam and Grenier (2002) contended that qualitative research serves “to understand the meaning people have constructed about their world and their experiences” (p. 5). This is pertinent to “making sense” of how participants view their surroundings (Merriam & Grenier, 2002). A case study method was selected to provide depth of understanding of the research question: In what ways do pre-service teachers make pedagogical decisions based on their reflections?

The researchers were university professors of education at universities located in the southeastern part of the United States who were interested in understanding reflection in teacher education. The research received Institutional Review Board approval and participants agreed to participate by signing informed consent forms. To ensure reliability, the data was uniformly collected from Taskstream, a customizable, electronic portfolio, assessment management and performance-based instruction tool (GMU, 2008). The qualitative data is comprised of an analysis of reflective essays from pre-service teachers in a founding general education course, Survey of Education with Field Experiences.

Data Collection and Participants

Qualitative data consisted of 249 focus observation essays completed by participants and submitted to Taskstream.
over the course of five years. The pre-service teachers who completed this assignment were from a variety of subject areas: English, art, music, vocal, instrumental, math, science, health/physical education, and social science. The focus observation essay is a required assignment in a required education course entitled, *Survey of Education with Field Experiences*, which is a pre-requisite for all pure education courses. All the programs (except music) require pre-service teachers to take three pure education courses (*Survey of Education with Field Experiences, Classroom Management, and Special Education*). Therefore, this course is considered the founding course that introduces them to the field of education. All pre-service teachers enrolled in the *Survey of Education with Field Experiences*, were in their junior year of university and had maintained a 2.75 GPA in their general education courses.

**Field observations.** Participants were required to complete 30 hours of field observations in their respective subject areas, within two school districts, and write two reflective essays based on their observations (one for each school district). Faculty at prominent southeastern universities collectively developed the assignment guidelines (see Appendix A), which instructed the participants to observe how teaching strategies and classroom management were adapted based on student diversity.

Spanning five years, the 249 focus observation essays were collected from: fall 2011 through spring 2015. According to Johnson and Christensen (2008), from a population of 249 a statistically relevant sample is 108 (p. 242). Therefore, 108 focus observation essays were randomly selected for analysis.

**Procedures and Data Analysis**

The researchers conducted a narrative analysis using NVivo qualitative data analysis software. One hundred and eight essays were randomly selected for entry, analyzed, and thematically organized according to the most frequently occurring words. Merriam (2009) defined qualitative data analysis as “the process of making meaning” from the documents (p. 176). NVivo software was used to conduct a frequency analysis to determine the most commonly used words. From the 108 essays, the 25 most frequently used words with five or more letters, included “classroom,” “teachers,” “school,” and “grading.” Missing were words which delved into race and socioeconomic status, one of the defining characteristics of the southeastern United States. For example, the vast majority of pre-service teachers used phrases such as, “all types of races,” “no matter what race,” and “students need interaction with other races.” By contrast, Participant 93 stated a more concrete description, “There is about 60% Caucasian students, about 35% African American students, and around 5% of the students are of another race/ethnical background.” Similarly, discussions on socioeconomic status contained oversimplified terms such as “low” or “high” without clear social or economic descriptors.

Participants were instructed to record their focus observations based on the following three defining features: Diversity, Teaching Strategies, and Classroom Management. Analysis of the essays explored how pre-service teachers reflect and connect their observations to pedagogical decisions, and indicated a mixed connection between diversity and pedagogy.
Findings

The main themes which emerged from the qualitative data consisting of 108 focus observations concerned surface level diversity and the link between pedagogical decisions and characteristics of the students in the observing class and the teachers identifying traits. The following subcategories (superficial diversity, student ability-based decisions and teacher identity) are relevant to the understanding of the ways pre-service teachers make pedagogical decisions based on their reflections.

Superficial Diversity

The majority of participants (90 of the 108 pre-service teachers) described the diversity of the students they were observing on a surface level composition of the students, but did not delve deeper and relate it to pedagogy. The guidelines for the focus observation assignment (Appendix A) stated for students to “understand how diversity influences pedagogical strategies.” Although participants were able to provide details of student characteristics and discuss the importance of diversity, they were unable to link it to pedagogical decisions.

Often, participants detailed percentages of student characteristics in the class, for example the percent of African American or Caucasian students, and/or ELL. Fifty-seven of the 90 papers touched on socioeconomic indicators (for example, the percentage of students on free/reduced lunch, low or high income). Of the 90 participants who described student characteristics, 74 of them indicated that diversity is important to promoting equity. Participant 6 exemplified this and stated, “Teachers should always treat all students equal and with fairness all of the time no matter what race, social class, gender, or ethnicity they are.” In all 90 papers, pre-service teachers emphasized a teacher’s role is to be fair and equitable to their students. Often this was prefaced with a “no matter what race” comment (Participant 3). These examples illustrate a superficial understanding because the response lacked an in-depth description and a connection to pedagogical practice.

A surface level example is from Participant 1, “These students were all African American and shared a common socioeconomic status. This particular middle school, did not wear uniforms so the students’ socioeconomic status was easy to identify through appearance.” Unfortunately, the student does not delve into how these characteristics affect teaching strategies and/or pedagogical decisions. Similarly, Participant 34 stated,

The socioeconomic statuses of these students were of the higher class because the school was private and the family had to pay to be able to let their children go. The implications of diversity for teaching and learning in this class were only based on gender and that when the teacher grouped students it was based on gender.

Another surface level comment on socioeconomic status of students was noted by Participant 23 when they stated, “Inferred socioeconomic status was rather low with 75% of the students in the school qualifying for free or reduced lunches.” Another surface level typical response is from Participant 3 who stated,

Of the 22 students in this class, there are 13 girls and 9 boys, 10 black students and 12 white students. There are no other ethnic minorities. There
are 4 black girls and 9 white girls. There are 5 black guys and four white guys.

Participant 3 continued, “The teacher incorporates ways for visual, auditory, and kinesthetic learners to adapt and learn the way that is best for them.” This generic response is not linked to a specific descriptive classroom example.

Another example of this is Participant 7’s surface level description of diversity linked to the importance of diversity. Participant 7 stated, “Diversity can help to implicate different aspects of a lesson that teachers might not otherwise teach or focus on. The different diversities help to expand the class knowledge and expand the experiences of the students in the classes.” Again, this is a platitude without the substance linked to pedagogical decisions.

**Student Ability-based Decisions**

Similar to participants’ discussions on diversity, approximately 86% of focus observation participants (93 of the 108) were unable to directly link student abilities to pedagogical decisions. Participants were unable to discern whether an ability-based pedagogical decision made by their observing teacher was effective and what they would do in a similar situation. From the 15 participants who linked student abilities to pedagogy the abilities discussed were physical and mental and the pedagogical decisions related to grouping (based on academic and/or learning styles) and accommodations.

An example of a participant not linking student abilities to pedagogy is illustrated by Participant 34 who stated, “Academic ability with this classroom about eight to ten where above grade level and three to four where below grade level.” Here Participant 34 acknowledges there are different abilities in the class, but does not suggest or link it to teacher practice. Similar to participants’ surface level discussions on diversity, participants summarized the importance of student abilities linked to content and pedagogical decisions. For example, Participant 13 stated, “Playing in a band requires much physical ability and all of the students were actively involved playing some sort of instrument.”

By contrast, Participant 20 stated, “The teacher felt that it would be better to put the students who were struggling in the front of the class.” This example exemplifies a connection between student abilities and practice. In this example, a pedagogical decision is made to move a student based on that their ability. Participant 93 observed that, “The students are group by skill and ability levels.” Another example is Participant 43 who linked an adaption to ability and surmised, “There was one student who had a disability and the teacher gave him extra time to finish his work.”

**Teacher Identity**

An interesting finding was that 104 of the 108 participants did not mention teacher identity. Only four participants discussed teacher characteristics and just one linked them to pedagogical decisions. For example, Participant 5 stated the teacher’s “young age may have something to do with this and the [students] ... take advantage of that.” This demonstrates that pre-service teachers are critically reflecting on teacher characteristics which may influence their pedagogical decisions. Unfortunately, similar to participants’ reflections on diversity and abilities, Participant 5’s comment did not suggest a teacher strategy to resolve the perceived teacher characteristic.
The single participant who clearly linked a teachers’ identity to pedagogical practice, Participant 10, summarized their observing teachers’ identity as white and not culturally familiar with the students who were predominantly African American. This pre-service teacher commented that, “Education is culturally contextualized, requiring both an understanding and appreciation of the diversity of all individuals within the learning community.” The participant went on to suggest teachers become familiar with their students’ culture.

**Discussion and Implications**

A positive finding is that a majority of pre-service teachers recorded notes regarding diversity in their field observations. The next step is to link those findings to their future pedagogical decisions. Although 90% of participants were weak in linking student diversity to pedagogical decisions, 37% connected a students’ ability to pedagogy. An area that faculty can work to improve is connecting pedagogical decisions to race and socioeconomic factors. Along these lines, faculty should encourage pre-service teachers to interact and have discussions surrounding diversity in class and on Taskstream. For example, pre-service teachers in their founding education course could interact with one another in an e-portfolio system, such as Taskstream or Livetext, concerning how student diversity influences pedagogical strategies. Faculty could reevaluate the instructions for conducting the focus observation and guide pre-service teachers to critically think about race and socioeconomic conditions which may influence pedagogical decisions.

Jimoyiannis (2012) indicated the need to scaffold assignments and provide prompt feedback. Scaffolding could include smaller assignments leading up to a final focus observation. Similarly, faculty could engage pre-service teachers with in-class and online discussions to cultivate deeper discussion and reflection on their field observations, and ensure that they have clear guidelines and examples on the meaning and levels of reflection. An example of a low level observation would be if a student reported the class is 99% African American based on observation of physical attributes alone. By contrast, a comment indicating the teacher incorporated culturally relevant content and/or strategies to be inclusive towards African American students indicates student diversity was used to make a pedagogical decision. These concrete examples would allow pre-service teachers to understand how diversity and pedagogy are interconnected.

Implications from this research reveal the need to reevaluate the objectives of creating e-portfolios for the institution and pre-service teachers. The development of creative interactive assignments would serve to model and encourage faculty to incorporate e-portfolio components into their courses. This may also lead pre-service teachers to use e-portfolios as a personal learning system. In addition, varied and creative strategies are needed to encourage pre-service teachers to interact and self-select assignments. A database individualized for each pre-service teacher could create a more accurate representation of their teacher qualities and abilities.

In addition, systematic documentation serves to collect data on pre-service teachers’ learning for institutional accreditation and for the pre-service teachers’ future employment. In sum, an electronic database on each pre-service
teacher serves to methodically collect work samples to demonstrate their success to relevant bodies. Strudler and Wetzel (2011) asserted electronic portfolios have developed into a means of accreditation management and student learning. They highlighted the constructivist origins of using educational portfolios “to foster deep student reflection and learning” (p. 166). It is not enough to state the students’ demographic background; rather, reflective practitioners ask, “How does the student composition alter our teaching?”

Finally, similar to Moon (1999) and Denton and Wicks (2013), this study supports the premise that pre-service teachers should document their reflection process in the artifacts and entries of their e-portfolio. This study has the potential to inform policy concerning teacher education online data collection policies, particularly the role of e-portfolios in documenting reflective practice.

Limitations

A limitation in this research was that various secondary education programs were represented, due to the small size of the university. Secondary education courses were administered by their respective disciplines, such as history, biology, and English, and were not uniform in scope and sequence, thereby making it difficult to compare outcomes across programs. Another limitation of the study was that it only included pre-service teachers in their junior year. A more robust study is needed to explore the beginning teacher’s reflective process throughout their respective programs to graduation. The final limitation was that, in contrast to the studies in the literature review, this study focused exclusively on the use of Taskstream at one university.

Future Research

E-portfolios are an increasingly popular means of collecting data on pre-service teachers and this data can easily be linked to state and national standards, such as the Mississippi Department of Education (2013) Mississippi Statewide Teacher Appraisal Rubric ethical teacher criteria, which includes: fairness, belief all children can learn, and professionalism. The purpose of e-portfolios can also be expanded to include being a reflective tool and using the online data to inform and guide faculty practice on developing reflective practitioners. As stated previously, An and Widers’ (2010) research found that pre-service teachers viewed e-portfolios as helpful, but that they did not continue developing their e-portfolio after the course.

Further study is needed to determine if programs are fully utilizing e-portfolio systems in their courses and post-graduation. In addition, supplementary research is warranted on documenting pre-service teachers’ reflection processes and whether switching to an online data collection system creates more reflective journeys. This would provide a rationale for changing or adapting assignments to better fit the needs of the community. Moreover, conducting a tracer study linking pre-service teachers with their reflections from their first field observations could provide greater insight into their development and documentation.

Conclusion

In summary, this research adds to the premise that reflective practice is an essential component of teacher development (Dewey, 1933; Zeichner & Liston, 1996). Further, reflective practice in e-portfolio development leads to teacher
growth (Moon, 1999; Denton & Wicks, 2013; Strudler & Wetzel, 2011; Oakley, Pegrum, & Johnston, 2014). The assignment description (Appendix A) was designed to enable pre-service teachers to “understand how diversity influences pedagogical strategies.” Therefore, preservice teachers need to be taught how to reflect upon diversity (specifically race and socioeconomic issues) to understand the role those characteristics play in informing and shaping pedagogical practices.

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Appendix A
Guidelines for Focused Observation Essay

For the focused observation essay, you will need to observe and record the following elements during your classroom visits (totaling 30 hours).

Diversity
- Gender of students
- Apparent racial/ethnic identity
- Language differences noted
- English Language Learners (ELL)
- Estimate of academic abilities levels
- Physical abilities and disabilities
- Learning styles
- Inferred Socioeconomic Status (SES)
- Grade levels
- Age range

Teaching Strategies
- Grouping
- Inquiry
- Demonstration
- Learning activities (bell ringers, interest centers, etc.)
- Technology
- Management
- Questioning strategies
- Differentiated instruction
- Assessment (standards, objectives, etc.)
- Subject integration

Classroom Management
- Room arrangement
- Teacher proximity
- Resources
- Tone of voice
- Eye contact
- Teacher feedback
- Time on task
- Classroom climate
- Strategies
- Routines/procedures
- Rules-written and verbal
Preservice teachers will review their notes from the focused observations on student diversity, classroom management, and teaching strategies completed this semester and write a paper detailing each of these observations. The paper should include at least one paragraph on each and a reflection. Your focused observation reflection paper should include the following information:

- Understand how diversity influences pedagogical strategies
- Personal response
- INTASC Principles
- Guiding Principles from the College of Education Conceptual Framework

### Appendix A, (Continued)

**Focused Observation Paper and Rubric**

<table>
<thead>
<tr>
<th></th>
<th>0 – Unacceptable</th>
<th>1 – Marginal</th>
<th>2 – Acceptable</th>
<th>3 – Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context</strong></td>
<td>Contextual factors* not identified and/or poorly described</td>
<td>Most pertinent contextual factors* described, but important descriptors and/or related information may be lacking</td>
<td>Contextual factors* described in a basic manner</td>
<td>Contextual factors* clearly and fully described; in addition, description is insightful</td>
</tr>
<tr>
<td><strong>Focused observation (instructional strategy and classroom management)</strong></td>
<td>Description fails to convey a meaningful picture of teacher/student behaviors (related to both instructional and classroom management) during observation</td>
<td>Description of teacher/student behaviors (related to both instructional and classroom management) during observation lack substance and/or clarity; gaps or omissions may be evident</td>
<td>Basic description of teacher/student behaviors (related to both instructional and classroom management) during observation</td>
<td>Detailed description of teacher/student behaviors (related to both instructional and classroom management) during observation</td>
</tr>
<tr>
<td><strong>Reflection</strong></td>
<td>Reflection fails to identify or makes very weak connection between INTASC Principles/X University course content/COE Conceptual Framework and observation; no evidence of a personal connection to the experience</td>
<td>Reflection establishes limited links between relevant INTASC Principles/X University course content/COE Conceptual Framework and observations; personal connection to the experience is weak</td>
<td>Reflection links relevant INTASC Principles and X University course content/COE Conceptual Framework to observations, as well as a personal response to the experience, but primarily at a basic level</td>
<td>Reflection reveals keen insight into relevant INTASC Principles and their relationship to observation, as well as a strong connection to X University course content and the COE Conceptual Framework; in addition, a personal response to the experience is made</td>
</tr>
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</table>