Documenting Preservice Teacher Growth through Critical Assessment of Online Lesson Plans

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Abstract

This research explores the question of how students in a social studies methods course improve skills in analyzing and critiquing pre-existing lesson plans. It utilizes a pre-post authentic assessment tool to measure student growth in key skills of lesson plan critique over the course of one semester’s methods instruction. The results support the finding that training preservice teachers in becoming critical consumers of online lesson plans and prepared materials is worthy of focus in methods courses.

As teacher educators, we want to believe that our students are learning and profiting greatly from our teaching (Hawley, Crowe & Brooks, 2012); yet, documenting growth can prove evasive (Gerwin, 2014, Mitton Kukner & Murray Orr, 2015). This study was designed to document the impact of a methods course on the students’ development as teachers specifically related to their ability to be critical consumers of existing lesson plans. Developing the use of online lesson plan banks as a resource for training future teachers is an increased necessity to meet the needs of beginning teachers in the digital age (Beyer & Davis, 2012; Greene, 2016; Son & Hu, 2014). Students frequently lack the expertise or the initiative to question what they read on the Internet, including prepared classroom materials (Son & Hu, 2014). Thereby, teacher educators need to create opportunities to train and assess students in developing a “critical stance” toward the prepared teaching materials, especially those most readily available online (Beyer & Davis, 2012; Greene, 2016).
Thus we crafted the following research questions:

- In what ways, if any, did students demonstrate growth in successful lesson planning skills gained over the course of their social studies methods instruction as measured by critique of online lesson plans?
- To what extent can their growth be attributed to their methods course of the current semester?

**Literature Review**

Situating this study in the existing research on teachers’ use of established curricular materials lends the appropriate context to view the findings. Cohen and Ball (1999) assert that teachers’ interpretation of the materials they choose to use affects their effectiveness: “teachers mediate instruction: their interpretation of educational materials affects curriculum potential and use” (p. 4). Beyer and Davis (2009) identify two impactful practices of teachers—critiquing materials and making adaptations to them—as a process of “analysis” in their lesson plan design practices. They assert that teachers vary in their “pedagogical design capacity,” which they describe as the ability to transform existing resources into usable materials to meet the needs of the context. They further contend that mistakes preservice and beginning teachers make in their adaptations of existing lessons center around “failing to make much needed modifications or making only superficial or counterproductive adaptations to materials lacking scope and depth” (Beyer & Davis, 2009, p. 682).

While studying science preservice teachers’ use of prepared curriculum, Beyer and Davis (2012) found that students were limited in their application of best practices discussed in class when asked to revise existing online lesson plans. Students naturally fell back to old perceptions, despite their training, when assessing existing lesson plans. Their study demonstrated that once
students were given specific prompts to recall the frameworks discussed in methods class, they were able to implement more of the course objectives and take a more critical approach to the material.

Many studies assert that teachers rely on pre-printed curriculum materials to meet benchmarks and facilitate their ease of teaching especially in their early years (Beyer & Davis, 2009; Drake & Sherin, 2006; Kang, 2017; Remillard, 2005; Schwarz, et. al., 2008). Creating original lesson plans becomes less feasible with limited planning time and district-wide emphases on common benchmarks across grade levels (Duncan, Pilitsis, & Piegaro, 2010; Grossman & Thompson 2008; Remillard, 2005). In today’s teaching environment, the most readily available resources are online (Son & Hu, 2014; Tanni, 2012). The need for teachers to create fully original lesson plans in the digital age is akin to the need of creating meals fully from scratch in the age of the microwave and prepared foods. Thus, it becomes imperative for methods professors to teach the skills of critiquing and improving existing lesson plans, given the almost archaic act of designing lesson plans entirely from scratch (Duncan, Pilitsis, & Piegaro, 2010; Kennedy, 2016).

Training preservice teachers how to assess and modify existing lessons has not generally been a part of the teacher education coursework in many methods classes (Grossman & Thompson, 2008). As Pam Grossman and Cathy Thompson (2008) reported, students were most often expected to create their own, not use the prewritten curriculum. Ball and Cohen (1996) claim that teachers prize those among the field who do not even use textbooks, let alone curriculum prepared by someone else. However, as Kennedy (2016) asserts, teachers are constantly making decisions and filtering appropriate materials and approaches, and thereby teacher education courses “must be designed to facilitate these judgments” (p. 11). Research on
assessing student growth in lesson plan development and adaptation is slim (Kang, 2017). Duncan, Pilitsis, and Piegaro (2010) conducted a self-study based on their science methods course over two semesters which addressed students’ thinking during the adaptation of lesson plans. Their intervention incorporated both analysis of prepared materials alongside student creations of their own lessons. This synergy benefitted both skill sets after two full semesters of instruction, according to the researchers. Their research specifically cited improvements on students’ ability to critique lesson plans and design inquiry-based revisions.

Another study involved having students annotate their lesson plans with comments attributing their curricular choices to certain theories and methods taught in class. By annotating their original lesson plans, students were able to connect the research in best practice to their own application in lesson design (Hughes, 2014).

In a study of 50 beginning teachers, Kauffman, Johnson, Kardos, Liu, & Peske, (2002) found that novice teachers identified additional training in designing and using curriculum as one of their greatest needs. Without more structured guidance with curriculum decision-making, these teachers responded that they were considering abandoning the profession given their feelings of inadequacy and lack of sufficient support. Thus, even the limited existing research suggests the benefit of including the practice of critiquing existing lesson plans in teacher training, yet most of this research stems from single case studies in science or mathematics methods courses. This current study adds to the literature on the use of lesson critique to train future teachers to be critical consumers of ready-made online lesson plans within the context of a social studies methods course.
Research Methodology

This research uses the lens of the self-study as a means to extrapolate best practices and areas to improve for the researchers’ own practice, as well as functioning as a model of an effective self-assessment technique for teacher educators (Dinkelman, 2003; Kang, 2017; Schulman, 2000). As Hong and Lawrence state, “[self-study] helps teachers closely examine their practices” (p. 12) and echoing the words of Zeichner (2007), they point to the benefits of using self-study as a methods instructor to model the action research stance for students who will then use it in their own teaching. In his recent article, “Professionally Developing as a Teacher Educator,” Loughran (2014) calls for teacher educators to engage in “rigorous self-study” as part of their contribution to the field.

Schulman (2000) offers an eloquent justification and call for more studies in the scholarship of teaching and learning, including self-study of professors of education. He argues we need these studies for three reasons: professional, practical, and policymaking/affecting. “Scholarship of teaching and learning supports our individual and professional roles, our practical responsibilities to our students and our institutions, and our social and political obligations to those that support and take responsibility for higher education.” In this vein, we offer this study of a means of assessing our own professional course outcomes, evaluating our students’ growth, giving them a means for visualizing their own progress over the semester, and reflecting upon it, as well as modeling good practice with authentic assessment.

Research context and participants

This pilot study was conducted with a class of 25 seniors, 11 males and 14 females, in a medium-sized university founded as a normal school and well-known for its teacher education program. Students take this social studies methods course as part of a pre-professional program.
culminating in a fifth-year Master’s in the Art of Teaching degree. All students previously completed an introductory methods course where they are introduced to lesson planning in a non-content specific format. In addition, four students had previously taken a literacy course and all students were concurrently enrolled in a reading course.

The methods course of interest for this study is MSSE 470H where students first become aware of the complexities and challenges of being a social studies teacher including cross cultural competencies, global-mindedness, and dedication to social justice. This is also their first introduction to the content-specific domain of writing social studies lesson plans. They emerge with varying degrees of confidence, which grows further and takes root fully over the course of the graduate year in the College of Education. Growth in the skills of lesson plan writing really happens in the first social studies methods course and is clearly underestimated by the students, who self-report low confidence in their abilities and skepticism about their progress. A means to document their growth thus becomes a useful tool to help bolster their confidence and their positive reflection for their growth over this course, since most have developed far greater skills and abilities than they give themselves credit. As Remillard (2005) asserts in her study of mathematics teachers, the success of a teacher’s ability to evaluate critically and adapt existing curricular materials reflects their notion of themselves as teachers and learners, suggesting that self-efficacy is a contributing factor in the implementation of successful lesson adaptation.

**Procedures**

To create this assessment, a lesson plan, which aligned with the content taught at the beginning of the course including the teaching of exploration, empires, and controversial topics like Christopher Columbus, was carefully chosen from ShareMyLesson.com. The lesson plan is a primary source analysis and was submitted by the Gilda Lehr Institute as a sample lesson for
Columbus Day. It was chosen as a solid example in order to provide opportunities for students to identify positive attributes, as well as aspects to improve upon, as is the case for every lesson.

Students were given an overview of the research and gave informed consent to participate. During the second week of the semester, students took the pre-assessment. They had 25-35 minutes to familiarize themselves with the lesson and identify strengths, weaknesses, and suggestions for improvement. Once they thoroughly analyzed the lesson plan, they were asked to rate it according to a five point Likert scale and decide whether they would use it, or not, including a justification for their choice answering questions such as why?, why not?, and/or how? This same lesson and evaluation format were employed for both the pre and post assessments administered approximately four months apart.

Throughout the semester, students engaged in various lessons to build their skills. For example, the course included three weeks of practical instruction on historical thinking skills. This centered on student-generated presentations on Lesh’s textbook (2011), “Why Don’t You Just Give Me the Answer,” which parses out seven historical thinking skills using an inquiry approach including critical reading of primary sources, exploring historical significance, examining text/context/subtext, employing multiple perspectives/point of view, developing historical empathy, and considering chronology/causation. Further methods for teaching were demonstrated throughout the semester which students experienced and catalogued including: structured academic controversy, interactive notebooks, cooperative grouping strategies, movement, political cartoons, GRASP activities, and geography-focused activities.

It is the goal for the methods course to transform students into teachers as change agents who help bring about a shift in practice toward skills-based instruction, inquiry-based learning, and training for globally-focused, active citizens. As such, lesson plans written throughout are
evaluated based upon their degree of student-centeredness and connection to real world learning and student lives. The objectives of the course, based on best practice, provided a framework for analyzing the effects of the methods course on this transformation over the course of four months.

Data for this study consisted of the pre- and post-assessments, as well as anecdotal class notes kept by the instructor which helped to flesh out the differences in performance and give context to some of the variations. Pre and post versions of the same students’ work were de-identified and matched, and individual students were assigned numbers. Through multiple readings, in vivo codes (Patton, 2002) emerged and were organized into themes. The following categories were used to illustrate the findings:

- **Lesson plan components** – The most basic category reflects students ability to recognize the presence or absence of essential components of an effective lesson.

- **Instructional strategies** – This category reflects identification of existing strategies and suggestions of appropriate alternatives.

- **Thinking skills and engagement** – This category reflects recommendations to include higher-order thinking, authentic learning, connections to K-12 students’ lives, and use of historical thinking strategies.

- **Self-efficacy** – This category reflects Bandura’s (1986) definition of self-efficacy as the belief that one has the knowledge and skills and is worthy of critiquing materials in the public domain. This category includes an analysis of the level of critique students engaged in and how favorably they viewed existing resources.
## Results and Analysis

Table 1. Pre/Post Assessment Data by Category

<table>
<thead>
<tr>
<th>Lesson components (LC)</th>
<th># Students Identifying Factors in Pre-Assessment</th>
<th># Students Identifying Factors in Post-Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELL</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Struggling learners</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Differentiation</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Hook</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Movement</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Assessment</td>
<td>1</td>
<td>2 (different from pre)</td>
</tr>
<tr>
<td>Objectives</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Essential Questions</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Wrap up</td>
<td></td>
<td>1 strength, 2 weakness</td>
</tr>
<tr>
<td>Values/Ethics</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Strategies (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>4 strength, 1 weakness</td>
<td>3 strength, 4 weakness</td>
</tr>
<tr>
<td>Skill based</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Teacher v. Student Directed</td>
<td>10 add groups</td>
<td>3 incorrect</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Active Learning</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Collaborative learning</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Graphic Organizer</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Think-Pair-Share</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>GRASP</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

**Thinking skills and engagement (E)**

<table>
<thead>
<tr>
<th>Real life application/engagement</th>
<th>4</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher-order thinking</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Historical thinking</td>
<td>0</td>
<td>17</td>
</tr>
</tbody>
</table>

**Self-efficacy (SE)**

<table>
<thead>
<tr>
<th>Lacks depth of analysis</th>
<th>7</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-order</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Teaching Philosophy</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

**Star rating**

| Average: 4 | Average: 3.5 |
**Lesson components.** This data category encompasses whether students identified lesson components as strengths, weakness, or recommended improvements of the online lesson plan. Key components identified by the students were: Meeting the needs of individual students (differentiation), Hook, Movement, Assessment, Objectives, Essential Questions, Closure, and Values/ethics. As part of the intervention, a values/ethics component was taught as being a mandatory element of a social studies lesson, hence its inclusion in this category.

Of these listed components, only four were identified by students on the pre-assessment: Differentiation, Hook, Movement, and Assessment, with the additional four recognized on the post. While only one student identified the lesson as lacking a hook initially, on the post-assessment nine students noticed the missing hook, even commenting, “[it] lacks **engaging** hook (emphasis mine)”. Differentiation was a more widely identified element on the pre-assessment, though few labeled it with that term, emphasizing the need to meet the needs of certain types of students such as ELLs or “struggling learners.” This mirrored a general observation of the data that while students may have identified certain components of a successful lesson plan, they did not necessarily use the pedagogical terminology until after their methods class semester (post-assessment).

The total number of lesson plan components identified on the pre and post-assessments illustrates students’ growing awareness and ability to recognize and label the essential elements of lesson planning over the course of the semester. In the pre-assessment, 13 were mentioned; in the post-assessment, triple that number (39) were listed.

**Strategies.** Similarly, the general increase in knowledge of best practice was evident in both the overall number of individual strategies mentioned, as well as the correct labeling of the specific strategy. Prior to grouping the data into categories, there were 21 pedagogical strategies
mentioned by name in the post-assessment, compared to 8 in the pre-assessment. Specific strategies which were named in the post-assessment were all taught in the course, with the exception of the word “wrap up”. This term was taught in the methods course using the word “closure”; however, it is possible that “wrap up” was used in a different course.

Literacy strategies were among the most widely reported. Four students cited the vocabulary building benefit of the lesson, though one pointed out that this element made it “too young” and recommended deleting the vocabulary focus as it was “inappropriate for middle schoolers.” Three of the same students maintained their position on the post-assessment while one changed his/her opinion to that of a weakness. In addition, four students described the vocabulary focus as a weakness on the post-assessment. These results suggest student ambivalence about whether it is appropriate to directly teach vocabulary as part of an effective lesson.

Choice of strategies reveals awareness of the difference between student-centered and teacher-centered strategies. On the pre-assessment, 10/25 students identified the whole-class instruction nature of the lesson as one drawback and suggested applying a “small group strategy” to improve the lesson. Surprisingly, grouping was only mentioned by 3/25 on the post-assessment, perhaps because students found other means of changing the focus to a more student-centered approach (e. g. employing historical thinking strategies). On the pre-assessment, three students incorrectly identified the lesson as student-directed and recommended a more teacher directed approach. By the post-assessment, misconceptions regarding student-centered compared to teacher-centered appeared resolved.

**Thinking Skills & Engagement.** On the pre-assessment, students primarily identified this as a literacy lesson since it involves textual analysis of a primary source. Students thus
credited it with meeting the needs of ELLs and struggling learners through its use of vocabulary instruction. This might be explained by their concurrent reading course. Contrasting this identification with their post-assessment analysis finds their emphasis has moved from literacy to historical thinking skills, which reflects the emphasis in the social studies methods course. Whereas the pre and the post both had 9/25 students mentioning literacy, the post had 17/25 identifying historical thinking skills either broadly or individually, representing an increase of nearly 100% over the literacy focus.

The use of primary sources was significantly emphasized in methods class due to it being the heart of historical thinking--source analysis--through concept attainment, multiple iterations of analysis, political cartoon strategies, and other primary source experiences. In the final assessment, students mentioned five distinct skills of historical thinking: critical reading of primary sources, asking questions of the source, considering context, point of view, historical significance, and discussing perspective. Adding together those who noticed the lack of higher-order thinking with those who called for more historical thinking leaves only four students who fail to mention these social studies thinking skills.

As noted above, one of the most dramatic areas of improvement was the inclusion of historical thinking skills as part of their expectation for a quality lesson (0/25 to 17/25). This extended to the expectation that the lesson should include higher-order thinking skills, according to the Bloom’s model of thinking skills. In the post-assessment, 10 students noted the lack of higher-order thinking skills, while none did on the pre-assessment. In addition, however, two students described the level of thinking in the existing lesson as higher-order thinking, thus demonstrating that they understood the iteration of cognitive load differently; yet they were at least looking for evidence of higher-order thinking, even if they mislabeled some of what they
found. This leaves 12/25 isolating higher-order thinking skills as a necessary or beneficial part of effective lessons.

The need for student engagement in class is a well-documented foundation for best practice in a social studies classroom (NCSS, 2007). No one positively rated the lesson as having a connection to students’ lives, either in the pre or the post. Prior to the methods class’ emphasis on student engagement, four students recognized the lack of connection to student lives; however, by the end of the semester, nearly half (12/25) of the students suggested adding a real-life application to increase engagement. One of the more creative suggestion to increase engagement included using a text message as a hook to open the study of Columbus’s letter.

**Self-efficacy.** On the pre-assessment, students’ analyses lacked depth. Overall, students seemed insecure in their analysis, asking for more fleshing out of the lesson plan, more examples, and more structure. Despite their critiques, students overwhelmingly rated the lesson four stars out of five (a rating defined on the evaluation as “very good”) and accepted the lesson plan with minor alterations. Their hesitant criticism revealed an insecure grounding in the skills of lesson planning, not altogether unexpected on a pre-assessment.

Post-assessment results pointed to students’ greater confidence in their own abilities to assess and recommended changes to existing lesson plans, even those “published” online. While student appraisal of the value of the lesson plan averaged four stars on the pre-assessment, scores on the post-test averaged lower at 3.5. While students gained a greater confidence in their own abilities to ascertain positive and negative teaching attributes, they remained reluctant to critically evaluate the lesson as a whole.

This category reflected growth and transition from student to teacher. Student comments suggested development of personal philosophies of teaching social studies reflecting their own
individual beliefs and values. In addition, while students remained somewhat hesitant to question online sources, they began to develop creative and innovative alterations and revisions to improve lessons. For example, one student suggested simulating a mock trial for Columbus in order to bring the content to life.

Implications and Recommendations

The findings for the post-assessment are far more revealing of growth in student ability and perception. What was noticed by only a few--often only one--prior to the semester of methods instruction became much more common knowledge by the end of the semester. The data points to an overall growth in the students’ ability to assess strengths and weaknesses of lessons, as well as their confidence to critique a printed/online lesson. The inclusion of lesson plan components, higher-order thinking skills and named strategies all demonstrate the effect of the methods on teacher training. Students’ critiques centered largely on areas of emphasis from methods such as thinking skills and real world connection to student lives.

Granted, students took other courses simultaneously which also likely contributed to their growth; yet results of this study demonstrated the positive effect of methods course instruction on the professional growth of preservice teachers. This research contributes a valid model for methods instructors, yielding an authentic performance assessment of methods students involving the skills of lesson planning. Furthermore, it offers a practical use of the endless resources of lesson plans online from sites such as ShareMyLesson.com. As methods instructors realize the need to teach more information literacy skills, their students will likely become more savvy consumers and more confident in their ability to transform existing materials into effective lesson plans.
Theoretically, it would follow that as preservice teachers hone their skills of being critical consumers, they will also, hopefully, improve in their development of original lesson plans. The reflective skills enhanced through this process might in turn aid in teacher self-reflection, as well as improve their ability to contribute meaningfully to a professional learning community or team meeting where teachers work collaboratively to develop quality instructional plans and materials. Thus, there is much fodder for future research.

References


