

Obstacles Pre-Service Teachers Encountered after Classroom Observations on the Write-Up of Reflections in a Digital Teaching Portfolio

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ABSTRACT

The purpose of this study was to understand current uses of a digital teaching portfolio with applications in a pre-service teacher education program. Questions to be analyzed related to obstacles users encountered in developing a digital teaching portfolio and how best to engage pre-service teachers in the reflective process of best practices while utilizing a digital teaching portfolio. The data gathered in this study was collected at a four-year state-supported college in the Midwest region. An open-ended questionnaire was selected for both supervising faculty and pre-service teachers to submit reflections in digital format to a master portfolio of summary comments. Survey findings from both pre-service and faculty responses yielded interesting information. The results of the data gathered provided insight into

suggestions and applications to improve students' reflective writing in a digital teaching portfolio. Further research and investigations are needed in the area of how best to encourage student reflective thinking and writing.

A long standing debate has existed among educators as to whether the computer is and to what degree it may be an effective tool in education (Maddux, 1984). How have proponents of computer integrated instruction coped with criticism related to teaching effectiveness? Constructivist educators have argued that learning with the aid of a computer has encouraged and promoted reflective practices integrated with problem-solving activities (Stone, 1998).

From the constructivist camp, it is important to create a learner-centered environment. This scholarship may require perspective change of using a computer from "learn from" to "learn with." The "learning with computers" approach to education views computers as a tool the student can use to find, collect, analyze, organize, and present information (Jonassen, 2000).

Along with the line, researches are done to develop technology supported inquiry learning activities and multimedia projects using emerging digital technologies (Cunningham et al., 2004). Teacher education programs have also provided opportunities for preservice students to learn about "teaching with technology."

Pre-service students are ready to show their qualifications to teach with technology. However, traditional ways to store achievements and teaching qualifications in paper portfolios may not be effective and efficient any more. The students need a new place where they can show and update their multimedia works in a convenient way. According to the current trend, digital teaching portfolios have emerged as a valuable online tool that learners, faculty and institutional representatives can use to collect, store, update, and share information.

These days, pre-service teachers are asked to provide a list of their academic accomplishments. Furthermore, teacher education programs are increasingly being asked to align curriculum and student outcomes with state and national teacher education standards (Wetzel, et al, 2009).

Some advocates of the digital teaching portfolio insist that these portfolios can enable both novice and accomplished teachers to document a myriad of professional experiences and thereby bring into focus a clear picture of themselves as growing, changing, developing professionals. They also contend that the digital portfolio may be a meaningful and highly effective way to demonstrate to others the knowledge, skills, and dispositions teachers and teacher education candidates have gained in the complex processes of curriculum development and instruction (Montgomery, 2002).

A high percentage of the educational literature concerning digital teaching portfolios recognizes the benefits and effectiveness of implementing these portfolios. The purpose of this study was to understand current uses of a digital teaching portfolio in teacher education programs and the obstacles encountered while developing these portfolios. Also the researchers were interested in how instructors can engage pre-service teachers to the best reflective processes while utilizing a digital teaching portfolio.

This study examined five research questions with the aim of understanding current uses of digital teaching portfolios in a teacher education curriculum, and how to assist pre-service teachers to engage in the reflective process.

Research Questions

The research questions are

1. How were pre-service teachers instructed to write classroom observation reflections for inclusion in a digital teaching portfolio?
2. How did pre-service teachers write their reflective comments in a digital teaching portfolio?
3. What possible obstacles did pre-service teachers encounter in writing their reflective comments in a digital teaching portfolio?
4. What resources did faculty have to assist pre-service teachers in writing reflections in a digital teaching portfolio?
5. What perceptions did faculty have with regards to advising pre-service teachers to write reflections in a digital teaching portfolio?

Methodology

Setting

The data for this study was collected at a four-year public college in the Midwest region. The college has the largest teacher education program in the state and has required pre-service teachers to submit a digital teaching portfolio with artifacts completed from required education classes before student teaching. Pre-service teachers are asked to compile their most suitable artifacts such as research article reviews and lesson plan assignments for posting on a portfolio management system called LiveText.

Procedure

The study started with an understanding of the need to analyze the current practice of using a digital instructional portfolio at a teaching institution. After confirming the research questions for this study, a pilot survey with faculty and students was conducted. Based on the initial findings from the pilot study, an open-ended questionnaire for faculty was developed, and the submissions of pre-service teachers' reflections in digital teaching portfolios were also solicited and analyzed. At the same time, the open-ended questionnaire was sent to faculty in the Department of Teacher Education via email, and six faculty members returned their questionnaires. Analysis of the findings and discussions followed.

Instruments

An open ended questionnaire was used as a research instrument to gather reflections submitted by pre-service teachers in the digital teaching portfolio for this study. The survey developed for faculty consisted of eleven open-ended inquiries targeting research questions. The digital teaching portfolios of pre-service teachers were collected from four classes in fall 2008 and spring 2009 semesters. Two of the classes were taught face-to-face, and the other two classes were conducted online.

Data Analysis

Content analysis was used to examine the data. Reflections written by pre-service teachers were coded and categorized after careful initial analysis of the pre-service teachers' reflections, followed by the analysis of the data collected from the questionnaire for faculty.

Results

Interesting findings emerged after analysis of the pre-service teachers' reflections in their digital teaching portfolios. Some of these findings provided valuable insight in regards to the research questions related to this study. Information was provided as to a) misinterpretation of curriculum standards, b) repeated curriculum standards as reflections, c) off-the-point reflections.

The investigators discovered that many pre-service teachers did not have a clear understanding of what the term *curriculum standards* means. This lack of understanding resulted in poorly developed reflections in student digital teaching portfolios.

For example, a pre-service teacher's reflection on the educational technology curriculum standard to show the ability of data-driven assessment narrates that "all the information that is needed for the activity is listed... this activity gives the teacher and student all the resources needed to conduct a data driven assessment of learning." This reflection did not provide enough information for the pre-service teacher to demonstrate the ability to apply technology to a data-driven assessment. The student displayed a lack of understanding of the standard.

One of the findings also revealed that some pre-service teachers wrote their reflections just by reiterating the curriculum standards instead of actually reflecting on the artifacts, for example, "I will be able to demonstrate the ability to apply technology to data-drive assessments of learning." This type of writing fails to provide evidence of how their artifacts could be related to the curriculum standard since it is not reflected in the students own words.

It was discovered by the researchers that many reflections were off-point. Reflections were often made for all the projects students completed during the course although they were asked to reflect on the specific artifact that they submitted. Some students did not write their reflections based on the curriculum standards but just as an overall summary paragraph such as "Technology is everywhere in today's changing

world and it is important for teachers to stay up with this technology and ...” Some reflections were even confusing for the instructors to grade. A pre-service teacher wrote that “Standard 7.1 was addressed specifically when I created the rubric for grading the web question assignment although the curriculum standard has nothing to do with assessment.” Overall, it appears that, for some pre-service teachers, engaging in deep, reflective thinking is a challenging task.

During the analysis of the reflections in the digital teaching portfolios, it became apparent that there were a few pre-service teachers who did an outstanding job writing about their classroom observation experiences. This progressive group showed their abilities to connect their artifacts to curriculum standards, providing enough evidence and practical insight of how to use their artifacts for future use in the classroom. It should be noted that only a handful of pre-service teachers were fully engaged in serious contemplative academic thought.

Findings from the faculty questionnaire also provided valuable answers to the research questions. First, faculty members shared the benefits of the digital portfolio as “a flexible and convenient way to document pre-service teachers’ preparation and qualifications to teach in real classrooms.” One instructor said that “it is an opportunity for students to summarize their learning.” Another professor mentioned that “the digital format allows students to submit at varying times.”

Some faculty members had high expectations of pre-service teachers’ reflections and they provided scaffolding (a form of instructional assistance to produce high rates of success) for the pre-service teachers’ reflective process. One faculty member said, “Quality of student reflections has correlation to expectations of professors.” Instructors contended that resources such as specific descriptions and rubrics as well as preferable examples be provided to pre-service teachers to guide them to what an acceptable reflection should look like. Other faculty members did not provide resources or guides to pre-service teachers, although they may also believe that faculty should assist students with the process of reflective thinking.

Faculty members insisted that the obstacles pre-service teachers encounter when writing reflections were due to students’ poor preparatory writing skills and a lack of understanding regarding the purpose of writing reflections.

One faculty member said, “Many students seem to have difficulty with the writing process itself: grammar, syntax, etc.” and “They tend to be careless with grammar, counting on spell and grammar check instead of rereading.” It was also mentioned that “...their reflections are completed more as a way to pass rather than as some way to actually reflect on learning in class. This seems pretty inauthentic at the moment.”

The lack of time faculty have to guide pre-service teachers with reflective writings in a digital teaching portfolio format was another obstacle. A faculty member complained that “it is not possible to send student comments with quality since I have to teach six sections every semester and do other duties outside the classroom. It is difficult to find time to open all of the submissions.”

Unclear administrative instructions and a lack of explicitly stated faculty expectations appeared to have hindered instructors in their ability to assist students with reflective comments for posting on the digital teaching portfolio. What surprised the authors was that faculty members do not have clear-cut instructions of required elements

of reflections although the department asks faculty to use a uniformed template and an evaluation template. It causes confusion by faculty to advise students to write-up and evaluate reflections. It also leads students to complain of faculty feedback on their portfolios. Because of these problems, some faculty members do not require students to complete a digital portfolio even though it is required from the education department, but the department chair person was not aware of this situation.

Another problem is that some faculty members do not believe in the effectiveness of the Digital Portfolio. They wanted to keep students' work samples in a hard copy format rather than storing them in the Livetext system. Most of them were older faculty who lack confidence with technology. Some faculty members questioned the current administrative policy on digital portfolio usage from the constructivist perspective. They argued that students should have freedom to select artifacts to show, and faculty should be able to use their own rubric to evaluate students' work. They criticized the current digital portfolio requirements mandated from the department as not meeting the original aim of using a digital portfolio to promote critical thinking skills, engaging students during the whole process of creating their own portfolios. This argument is based on the belief that learning is complex, situated, and individual and must be judged by experts directly involved in teaching and learning (Gary, 2002).

Technology limitations were noted as a frustration by faculty who desired to provide quality comments to students in a timely manner. A few instructors complained that the portfolio management system was very slow to access, especially during the mid-day when numerous users would try to log-on to the system at the same time. One of the faculty members commented that "the Live Text site shuts me out whenever I tried to open students' submissions, and it really frustrates my students and me."

Faculty members were also concerned that they did not have enough training or technical support to use the portfolio management system known as Live Text. A faculty member shared that colleagues who are not confident in how to use the portfolio management system (Live Text) often asked her for assistance with posting rubric scores and grades for class assignments.

Conclusion

The results of this study revealed that the lack of pre-service teachers' writing skills and insufficient resources provided by professors were major issues for the unsatisfactory reflections in students' digital teaching portfolios. Faculty members agreed to the benefits of reflective engagement of pre-service teachers as documented in the digital teaching portfolio. Good quality advisement was also noted as helpful. However, a limitation was that not all of the faculty members in the study were using learning guides and resources to assist pre-service teachers write their reflections.

Findings of this study were interrelated. Repeating curriculum standards without the deep reflective thinking process might be related to the findings of the lack of writing skills of pre-service teachers and the purpose of reflections. It could also be related to the lack of resources or paucity of examples provided by faculty members. It is suggested that digital portfolio template should have a strong correlation between curriculum standards and assignments of education classes so that the teacher education program

could be a model for pre-service teachers on how curriculum standards should be reflected in their digital teaching portfolios. Faculty members should provide necessary resources or examples to better involve students in the active reflective process. Pre-service teachers must be tested to verify that they possess sound writing skills at the collegiate level.

The lack of time for faculty to review each pre-service teachers' digital teaching portfolio, unclear administrative instructions and unclear expectations of the faculty's role in monitoring portfolios, technology upgrades, and faculty training were also major obstacles. This situation needs further investigation from a macro perspective. It is suggested the findings of this study be compared with the results of other recent studies conducted in similar teacher education programs.

For further study, it is suggested to investigate the same research questions from the perspectives of pre-service teachers. Pre-service teachers are the main stakeholders of the digital teaching portfolio. Their perspectives of the digital teaching portfolio are critical to investigating ways to improve pre-service teacher's write-ups of reflections in a digital teaching portfolio.

Finally, comparing students' reflections between an online class as opposed to a face-to-face class might be another correlate topic to research. As more classes are taught online, significant issues in terms of advising and course evaluations will need to be studied in the near future.

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