

Chapter 25

Electronic Portfolios in the Professional Development of Educators

Greg Sherman

Radford University, USA

Al Byers

National Science Teachers Association, USA

ABSTRACT

This chapter presents an overview of current electronic portfolio options available to practicing educators, emphasizing the different roles portfolios play within the professional development process. Available features within a variety of free and subscription web-based portfolio services are compared and the use of specific portfolio options within different professional development environments such as university graduate programs are profiled. Using a case study-like approach, the chapter details the use of the National Science Teachers Association's (NSTA) Learning Center, a collection of resources available to teachers that includes a web-based professional development plan and portfolio tool. The chapter concludes with a reflection on the different ways in which professional organization resources like the NSTA's PD Plan and Portfolio Tool can be used in the near future to continually improve the professional practice of educators.

INTRODUCTION: SUSAN CHILDRESS'S BIG SUMMER

Prairie View High School is a small, rural school serving the farm and ranch communities populating Phillips County in the north-central region of Kansas. It is near the geographic center of the United States, and most of the faculty members who teach at Prairie View grew up in this heart-

land and have been teaching at the school for many years.

Susan Childress, however, has only been a science teacher at Prairie View for the past five years. And like many science teachers in small, rural high schools across America, she teaches more than one science subject. Since joining the other two teachers constituting the small science department at Prairie View, Ms. Childress has taught both biology as well as physical science courses. Although she is certified to teach second-

DOI: 10.4018/978-1-61692-854-4.ch025

any education biology in Kansas, she has taken enough undergraduate and graduate physical science coursework to feel comfortable with high school physical science content. But this year, Ms. Childress agreed to teach an Earth science class in addition to her biology and physical science courses. It was only after she agreed to teach the course that she realized she had never actually taken a single course in any Earth science content area. Not in college. Not even in high school. In fact, after spending part of her summer break examining curriculum guidelines as well as state standards, Ms. Childress realized that there were quite a few areas of Earth science that she would need to learn more about before she would feel comfortable teaching the course.

Ms. Childress could not take an Earth science graduate course during the summer break before school started because she only had enough time and money to accommodate two courses she needed to fulfill requirements of a state university educational leadership graduate program. She chose to be part of this program not only because she was interested in school administration, but also because the graduate program administrators encouraged her to join with other teachers from Phillips County as a cohort; many of the courses were offered to this group via distance learning technologies or on-site at the district offices after school. This was important to Ms. Childress because the main university campus was over 200 miles from where she lived.

Since she could not take any Earth science coursework over the summer, Ms. Childress identified a variety of Earth science content resources and experiences that she wanted to review and participate in over the summer, including selected journal article and text readings, online seminars and workshops, and even a visit to a natural history museum. In her evaluation report at the end of the spring semester, Ms. Childress articulated the goals she envisioned for the upcoming school year. These goals included the development of content-rich, inquiry-based science lessons based

in part on her plans to acquire more Earth science content over the summer. When she communicated these goals to her building administrator, he was pleased to learn that she was planning both formal and informal experiences designed to help her improve her Earth science content. He asked Ms. Childress to carefully document her accomplishments, because he was under some pressure to report the steps taken to ensure that she was qualified to teach Earth science in the fall.

In addition to her educational leadership coursework and Earth science learning experiences, Ms. Childress also hoped to spend part of her summer organizing the materials needed to continue her work toward national board certification in science. She started this journey the previous year, and although it had been a difficult process at times, she committed herself to using the national certification experience as an important means toward improving her professional practice.

Graduate school. Earth science instruction. National Board Certification. Susan Childress's summer looked quite busy indeed. And it hadn't even started yet. During the hectic summer, Ms. Childress expected to learn many things that would help her improve her professional practice for the subsequent school year. But one of the most unexpected things she experienced during this time was the tremendous support she received through the use of electronic portfolios within many of her endeavors.

The purpose of this chapter is to briefly discuss the role of electronic portfolios in the preparation and continual improvement of professional educators like Susan Childress. This chapter will provide a summary of popular electronic portfolio options for professional educators, and it will profile an innovative tool developed by the National Science Teachers Association (NSTA) that has the potential to support the efforts of teachers such as Ms. Childress to plan and manage professional development experiences and resources. The chapter concludes with a brief discussion about

14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/electronic-portfolios-professional-development-educators/47272

Related Content

Problem Solving Processes and Strategies in the Virtual Interactive Student-Oriented Learning Environment

Junjie Shang, Morris Siu Yung Jong, Fong Lok Lee and Jimmy Ho Man Lee (2013). *Cases on E-Learning Management: Development and Implementation* (pp. 223-239).

www.irma-international.org/chapter/problem-solving-processes-strategies-virtual/68102

How do Professionals' Attitudes Differ between what Game-Based Learning could Ideally Achieve and what is Usually Achieved

Wee Hoe Tan, Sean Neill and Sue Johnston-Wilder (2012). *International Journal of Game-Based Learning* (pp. 1-15).

www.irma-international.org/article/professionals-attitudes-differ-between-game/62853

How do Professionals' Attitudes Differ between what Game-Based Learning could Ideally Achieve and what is Usually Achieved

Wee Hoe Tan, Sean Neill and Sue Johnston-Wilder (2012). *International Journal of Game-Based Learning* (pp. 1-15).

www.irma-international.org/article/professionals-attitudes-differ-between-game/62853

Enhancing the Design of a Successful Networked Course Collaboration: An Outsider Perspective

Rema Nilakanta, Laura Zurita, Olatz López Fernandez, Elsebeth Korsgaard Sorensen and Eugene S. Takle (2006). *Enhancing Learning Through Technology* (pp. 56-74).

www.irma-international.org/chapter/enhancing-design-successful-networked-course/18348

Role-Playing Game for Training a Design Process of Startup Company Compensation Plan

Sangkyun Kim (2019). *International Journal of Game-Based Learning* (pp. 40-54).

www.irma-international.org/article/role-playing-game-for-training-a-design-process-of-startup-company-compensation-plan/225780