Using ePortfolios in the Twenty-First Century Classroom:

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An ePortfolio Revolution

In today's twenty-first-century world, technology is everywhere and constantly changing. In today's digital age, information is always readily available with the swipe of a finger or by just saying, "Hey, Siri." Things that commonly used paper have now been transformed, such as telephone books to phone contacts, recipe cards to Pinterest recipe boards, and paper maps to Google Maps. Education is no different, but we act as if we add a screen and a keyboard, then we can continue business as usual.

This review will examine supporting literature and explore how ePortfolios will help develop twenty-first-century skills, improve student self-reflection, and encourage student ownership. Additionally, it will examine the benefits and importance of providing a Choice, Voice, Ownership, and Authentic Learning environment to promote the continual refinement process for ePortfolio persistence. This literature is concentrated on the American education system for high school, nine through twelfth grades. Within the last decade, numerous works have been published about instruction technology and, specifically, the benefits of having and using an ePortfolio. It has been concluded that instructional technology is most impactful when used appropriately to create deeper levels of learning, and ePortfolios are needed in education to meet the needs of all learners through reflective exercise that allows for student ownership. Instructional technology has the ability to transform education, but

> If you really want to help people embrace an ever-changing future you need to help them learn how to learn and prepare them to be adaptable, flexible, and innovative. More specifically you need to create a significant learning environment (CSLE) in which you give your learners

> choice, ownership, and voice through authentic learning opportunities (COVA) that equips them to learn how to learn. (Harapnuik, Thibodeaux, 2023, page 12-13)

Using ePortfolios is a big step toward giving students a choice in what connection they add and voice in how they convey their own learning, but it is not a quick fix. Using ePortfolios creates a new method of learning and assessment that will change teaching and learning to best suit the needs of today's learners.

The ePortfolio Definition

An ePortfolio, or electronic portfolio, is an online collection of work that allows learners to connect, reflect, and learn to document their learning journey. It contains evidence of learning supplemented by reflections and connections, more than a digital or online cloud file storage. “An ePortfolio is about both the product, a digital collection of evidence, and the process, as in the reflection of the meaning of the evidence” (ePortfolios Explained: Theory and Practice, 2017). Moreover, Lorenzo and Ittelson (2005) defined ePortfolios as “digital collections of student-generated authentic content that include resources and multimedia elements contained in a personal space.”

> ePortfolios fall within a learning theory known as social constructivism, which proposes that learning happens most effectively when students construct systems of knowledge for themselves, rather than simply having information presented. Social constructivism also proposes that another determinant of effective learning is that it happens in a social context: we construct our knowledge through dialogue and interactions with others. With ePortfolios, the process of reflection originates as a solo activity, but becomes social through a feedback loop, as the student’s instructor, peers, mentors, and even family members respond to and provide commentary on those reflections. Making and then sharing an ePortfolio with others is somewhat like telling a story: the story of one’s learning journey. (ePortfolios Explained: Theory and Practice, 2017, para. 5)

Benefits of the ePortfolio

The benefits of the ePortfolio are numerous for both students and teachers. “When the goal of a student portfolio is to display the learning process for a specific unit of study or across a specific period of time, putting the student in charge of creating the portfolio is a great means to ensure they have buy-in on the process” (Sager, 2023). Before assigning a student portfolio, you must explain the goals of the portfolio, explain how it will be graded, and supply a checklist of items that you will be looking for when the portfolio is handed in. For teachers, these portfolios become great assessment tools as you’re able to evaluate not just each individual piece of work but also assess a student’s holistic learning journey (Sager, 2023, para. 11). The use of ePortfolios as a learning and improvement tool will lead to a learners mindset and student ownership of the ePortfolio even after their formal education.

Why ePortfolios

We, as educators, must first have our own ePortfolio to demonstrate how it can showcase our own learning and experiences. We must also show our students how creating and documenting our personal learning journey is beneficial. For the same reason, we can ask our students to create an ePortfolio of their own, but inevitably students will ask why. In Harapnuik and Thibodeaux’s (2023) book, they revealed

> learners will ask us what they need to put on their ePortfolio and who is this for? We turn this around and ask them the very same question. We let them know that they own the learning and the content they wish to add to their ePortfolio. As a result, learners set up posts, pages, blogs, learning networks, and build out and share all their coursework that is applied in their organizational settings (Harapnuik, Thibodeaux, 2023, page 138).

In creating the space for a more personalized and learner-centered environment, we give students much of the control to become the curators of their own learning. In creating student-centered learning, we, in turn, get students to change their thinking from how to do something, which means to get a grade, to why we do something, which is a life-long learner mindset

(Sinek, 2009). Getting students to see the difference will create more student engagement and realization of the ePortfolio as a tool for use throughout and after high school.

COVA

COVA is an approach that emphasizes learner choice, ownership, voice, and authentic learning experiences through student-centered, active learning (Harapnuik, Thibodeaux, 2023). The ePortfolio implements the ideas of COVA (see Appendix A for COVA information). In the ePortfolio, students have choice, develop ownership, and share their voice while learning through authentic experiences and the reflection of their experiences. This creates learner agency, engagement, and motivation.

Choice

According to Harapnuik (2023), choice is when “learners are given the freedom to choose (C) how they wish to organize, structure and present their learning experiences and evidence of learning”. When given a choice in their learning experiences, learners are able to connect and create life-long learning experiences. In creating an ePortfolio, learners have a choice in the content and are able to decide the visual look of the ePortfolio to match their personal preferences.

Ownership

Ownership is students taking control of their learning. Harapnuik and Thibodeaux (2023) reveal that “when the learner is given the opportunity to choose and take ownership of their own authentic learning experiences…with an ePortfolio, you also give your learner the opportunity to find their voice, reflect on their experiences, express their insights, connect, and collaborate with a broader learning community. In taking ownership of their learning, students become more engaged in their ePortfolios and more invested, leading to intrinsic motivation.” This notion of ownership is crucial to the effectiveness of the implementation of an ePortfolio. According to Shroff, Deneen, & Lim (2014), “ownership of learning is a process developed over time and appears to emanate from the following

components: finding personal value, feeling in control and taking responsibility". (see Figure 1 for more information)

Figure 1

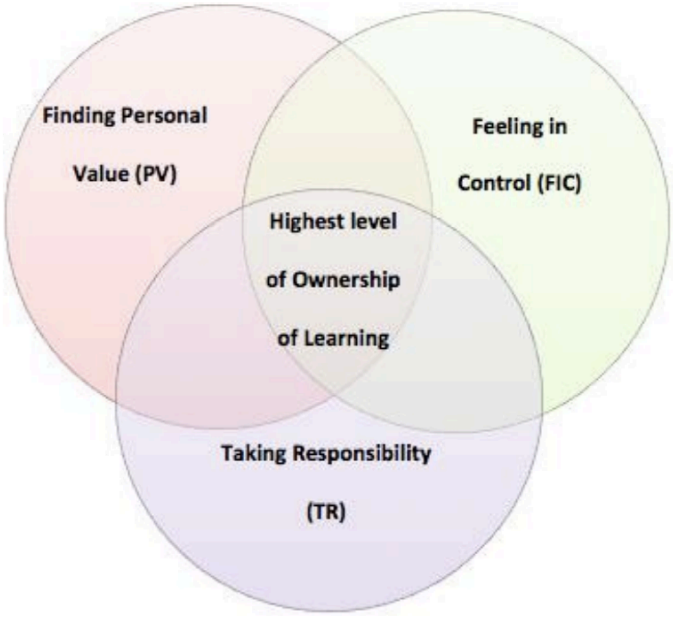


Figure 1: *Ownership of learning as an interactional effect of finding personal value (FPV), feeling in control (FIC) and taking responsibility (TR). Adapted from Milner-Bolotin (2001).*

Voice

In a typical school day, a student does not get to make many meaningful decisions about their role and learning. The educational system and teachers decide what students need to learn and when and how they will learn it. By having learners create an ePortfolio, we offer practical ways teachers and other educators can create opportunities to have more of a voice in their classrooms and schools. It can be challenging to shift and share the power. However, when it occurs, it likely has tremendous benefits for student engagement and learning. It also enhances student-teacher relationships, which benefits everyone (Jostens, 2016).

Authentic Learning

Real-world situations allow learners to see the relevance of learning and participate in realistic ways. Authentic learning connects students with real-world problems and situations (Becker,

Cummins, Davis, Freeman, Hall Giesinger, Ananthanarayanan, 2017). As determined by the authors above, when students are put in a real-world situation, they gain valuable activities that foster active learning and promote problem-solving, which are increasingly necessary in higher education. The ePortfolio allows learners to reflect on their learning experiences and make real-world connections to their learning knowledge and skills.

Twenty-First Century Skills

Technology skills are required for any career in the twenty-first century. Even careers today require basic computer skills and technology that employers use to increase productivity and automate industrial processes. A twenty-first-century education should develop foundational subject content, technology skills, and applied interpersonal and thinking skills, including critical communication, problem-solving, creativity, collaboration, and self-sufficiency.

> It is important to avoid simplistic “either or” thinking about 21st century skills. Factual knowledge, the ability to follow directions, knowing how to find a right answer when there is one—all of these things will still be important in the 21st century. The key is to develop a curriculum that teaches students those things as well as how to apply what they learn to solve real world problems and helps them to develop the broader competencies increasingly important for success in an ever more complex and demanding world (Jerald, 2009 page 69).

Twenty-first-century skills are a combination of previously demanded skills and new skills that are needed in a new world. The ePortfolio not only helps develop these necessary skills but also provides evidence of having successfully attained and proof of being able to apply those skills. In order to have an ePortfolio, students innovate, collaborate, communicate, and solve problems as they learn content. As students develop ePortfolios, they apply the skills of self-reflection, critical thinking, written communication, and creativity while using technology skills to incorporate multimedia and develop a website. Students then have a collection of skills that they can use to show others in

traditional education, and even more importantly, students can use their ePortfolios after graduation to potential colleges and employers.

Reflection and Assessment

The implementation of ePortfolios demands that students use technology, not complete a technology assignment. The ePortfolio also offers students the opportunity to do three things: understand the standards and how to apply them, reflect on their work (which requires students to describe what they have learned), and utilize them to showcase their overall skills for assessment or it can be repurposed for another audience beyond school. Being able to repurpose a student's ePortfolio is ultimately what the CTE Center I work for is trying to accomplish. The learners are reflecting on content knowledge, not how to use the technology, and teachers can use the ePortfolio to assess the required content. The ePortfolio can demonstrate progress towards standards in a specific grade or job skills that are needed to pursue employment in a specific career field (Nelson, 2011).

Reflection is critical in the learning process because it asks students to describe what they learned and not just complete an assignment. According to Costa and Kalllick,

> Reflection involves linking a current experience to previous learnings (called scaffolding). Reflection also involves drawing forth cognitive and emotional information from several sources: visual, auditory, kinesthetic, and tactile. To reflect, we must act upon and process the information, synthesizing and evaluating the data. In the end, reflecting also means applying what we've learned to contexts beyond the original situations in which we learned something (Costa, Kallick, 2008, para. 3).

The ePortfolio is a guide that encourages students to reflect and gives them a platform to do so. Students are given a voice to process their learning, therefore helping to create lifelong learning.

Growth Mindset and the ePortfolio

An ePortfolio is a physical manifestation of a growth mindset. Having a growth mindset is "the ability to believe that the most basic activities can be developed through hard work and dedication" (Einck, 2017, p. 2). The growth mindset is a belief that success is not an innate ability and is only cultivated through hard work. Dweck (2006, p.6) states, "In this mindset, the hand you're dealt is just the starting point for development. This growth mindset is based on the belief that your basic qualities are things you can cultivate through your efforts, your strategies, and help from others."

Dwek also encourages people that they are able to transform their "self-talk" from a fixed mindset, in which one believes abilities are permanent, to a growth mindset, in which your abilities are skills you can develop. A mindset shift from fixed to growth builds resilience, reinforcing that the inability to do something is not permanent. This also builds self-confidence as learners realize that the struggle is part of the process.

> How can we know where effort, coaching, and time will take someone? Who knows—maybe the experts were right about Jackson, Marcel, Elvis, Ray, Lucille, and Charles—in terms of their skills at the time. Maybe they were not yet the people they were to become (Dweck, 2006, p.28).

In an ePortfolio, learners can show the process of learning and reflect on their growth. The ePortfolio shows the results and the effort required to reach a goal. In addition, ePortfolios are constantly changing and evolving, just as learners are, so they can grow with the learner. A growth mindset is knowing that learning never ends, and the ePortfolio shows evidence and reflection of never-ending learning.

Trends in Technology

As technology advanced thirty years ago, it was necessary for job-seeking young adults to have a paper-based portfolio. An ePortfolio is the natural progression of this, and the creation of the ePortfolio requires students to become more adaptable to learning new technologies. This skill will prove invaluable as almost every job available has some sort of technology. Careers in the future will

demand that young adults become comfortable with learning new skills that incorporate the use of technology.

Visual Communication

In design, visual communication is the key, and the ePortfolio is a great way for students to show their knowledge and application of visual communication. The creation of an ePortfolio also reinforces the specific knowledge students must understand. An ePortfolio is also an excellent way for students to get actual practice using different things, such as fundamental layout and image types, and learning the benefits and drawbacks of each. The ePortfolio allows learners to communicate with images or in other ways that suit their preferences, such as videos, text, slide presentations, etc. Students can post a collection of their completed work that is created throughout the year during various projects. This is a place where students can design the layout of their own ePortfolio, essentially their own website, during and after their time in school. The ability of a student to use their ePortfolio after high is why it is necessary to use an ePortfolio that is not tied to their district-owned email.

Digital Footprint

In today's world of ever-advancing technology and data collection, someone's digital identity or digital footprint is of the utmost importance. The student who identifies themselves online, whether via text, images, or video, is developing or contributing to a digital footprint. Someone's digital footprint can be exceptionally positive and can determine a strong, authentic online presence for an individual. A student who creates a positive online identity may see a number of benefits, for example, in relation to employment opportunities (such as a job search using LinkedIn) or engaging with a community of peers (for example, in a Facebook study group). On the other hand, those who do not consider the possible extent of outreach and content with which they are posting could experience a negative impact on their employment prospects, among other things. Those who do not

take control of their digital presence risk allowing others to define their identity through tagged images, comments, etc., posted on social platforms.

> A recent article in Forbes noted employers are becoming more interested in seeing a digital portfolio than a resume. It has become commonplace for employers to search Internet sources for information on a prospective employee. Sources like Facebook, Instagram, Twitter, and LinkedIn. In the face of these digital footprints, which often are not ideal measures or expressions of one's potential, it is essential that students and faculty alike become skilled in presenting themselves professionally by reflecting on, constructing, and curating a digital identity. The eportfolio is the ideal space to facilitate this activity (Batson, Coleman, Chen, Watson, Rhodes, & Harver, 2017, p.39).

ePortfolio Persistence

Teachers who want to incorporate this into their curriculum should first practice creating and implementing their own ePortfolio. Teachers should then demonstrate how the continued use of an ePortfolio is beneficial in an educational setting and in a job search. In a 2017 study, Thibodeaux, Cummings, and Harapnuik found that "while participants did not mention feedback specifically, several participants mentioned that an example would have been helpful… data from this study suggested that choice of ePortfolio platform is necessary to contribute to continued use of ePortfolios." (Thibodeaux, Cummings, and Harapnuik, 2017, p. 8) Giving students examples and choices of the ePortfolio platform are both key components to continuing to use ePortfolios even after they are used for educational purposes. In the study mentioned above, Thibodeaux, Cummings, and Harapnuik stated that "ePortfolios not only provide a location to host their media, authentic plans, and reflections, but they also become the digital staging points for the learning innovations that they are developing in their learning environments" (Thibodeaux, Cummings, and Harapnuik, 2017, p. 5).

Conclusion

The ePortfolio has many benefits, including developing student ownership and voice, reflective practices, and twenty-first-century skills. An ePortfolio can determine the "why" behind what we do, models the growth mindset, and shows students that learning is a process. In addition, the ePortfolio coincides with current trends in technology, although it is not about the technology at the forefront. The ePortfolio is a positive digital footprint and a collection and reflection of learning that is needed in today's education system. Tom Vander Ark (2015) argues that "every student should have a collection of personal bests–a cloud-based story of their development and artifacts of accomplishment that's easily shareable in full or in part and organized for presentation" (para. 1). An educator's duty is to help students learn, but educators also need to help students learn for themselves, and the ePortfolio is a successful method.

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