Constructing a Professional Identity: Connecting College and Career Through ePortfolios

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In this paper, we describe the use of ePortfolios at a public, land-grant university and document how the ePortfolio has been used to develop more authentic learning experiences. We discuss the best practices for ePortfolios and its varied use as a teaching and learning tool. In addition, we discuss the challenges of implementing ePortfolios. For these examples, we provide strategies for helping both undergraduate and graduate students communicate how their academic experiences connect with the expectations of employers. All of these efforts are directed through an online, outward-facing ePortfolio by providing examples of relevant, professional experiences, combined with reflective writing (i.e., authentic learning). Students who identify the narrative themes running through their experiences, and use those themes to develop an online presence, are able to reflect, construct, and articulate a professional identity through the ePortfolio. Students then can answer the critical question posed by employers, "Tell me about yourself."

"Tell me about yourself" is one of the most common first questions in a job interview, especially for those who are new college graduates. When potential employers ask this question, it generally means, "Give me an overview of who you are, professionally speaking." In the modern employment environment, being able to direct the interviewer to an efficiently curated, online resume as part of the answer can mean the difference between the short or long resume stack. An ePortfolio provides a highly successful approach to creating such a professional presence, and thereby higher selection potential for an employment interview.

For college graduates, ePortfolios have proven to be effective vehicles when used to showcase higher education experiences and skills to outside audiences. In doing so, they provide a professional presence for the new graduate who is seeking not only a job, but also a career (Cambridge, 2010). As an interdisciplinary teaching tool, the ePortfolio has become increasingly popular in the postsecondary environment, providing the learner with an outlet to present a comprehensive picture of their learning experiences. Basken (2008) noted ePortfolios "are a way to generate learning as well as document learning" (p. A30).

A critical task for university students is making connections between their academic experience and their professional goals, especially when communicating their career readiness to potential employers (Zubizarreta, 2009). An ePortfolio can unite the learner's experiences and display a professional, online identity to the employer. In addition to allowing the learner to demonstrate who they are to the professional world, utilizing ePortfolios in higher education challenges educators to provide more authentic learning experiences by connecting learning experiences to actual career goals (Reese & Levy, 2009).

In this paper, we describe how three differing programs at a public, land-grant institution are using

ePortfolios in an effort to better prepare students for the global workplace. These programs are the Department of Human Development and Family Studies, the School of Forestry and Wildlife Sciences, and the College of Education and the Adult Education degree program. We discuss the best practices for ePortfolios and its varied use as a teaching and learning tool from these three different colleges within the university. In addition, we discuss the challenges of implementing ePortfolios. For these examples, we provide strategies for helping both undergraduate and graduate students communicate how their academic experiences connect with expectations of employers and job readiness. All of these efforts have resulted in authentic learning, showcased in an online, outward-facing ePortfolio with examples of relevant, professional experiences, combined with reflective writing.

We believe the frameworks of professional identity (Meizrow, 2000; Wenger, 1998), lifelong learning (Cambridge, 2010; Knowles, 1984), and constructivism (Bruner, 1966; Vygotsky, 1980), should guide the use of ePortfolio in the postsecondary learning environment. These frameworks influence the development and structure of the learner's creation of an ePortfolio. We propose that learning happens, most effectively, when students construct systems of knowledge for themselves, rather than simply having information presented to them (see Figure 1).

Cases on Integrating ePortfolio into Higher Education Curriculum

In the following sections, we describe how three separate programs utilize ePortfolios in the higher education curriculum in an effort to better prepare students for the actual workplace. These programs are the Department of Human Development and Family Studies (HDFS), the School of Forestry and Wildlife

Control ePortfolio

Lifelong
Learning

Figure 1
Constructing the ePortfolio in the Learning Environment

Note. Professional Identity = Combining development and learning theories, professional identity can be described as how we perceive ourselves, occupation, and career, along with explaining this "self" to others (Meizrow, 2000; Wenger, 1998). Lifelong Learning = Although there is no single theory for lifelong learning or adult education, the concept of andragogy by Knowles (1984) provided clear assumptions for adults engaged in the learning process; Knowles (1984) defined andragogy "as the art and science of helping adults learn" (p. 12). Constructivism = A learning theory that proposes people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences (Bruner, 1966).

Sciences (SFWS), and the College of Education, the Adult Education degree program (ADED).

Undergraduate Professional Identity Development in HDFS

The first case we present highlights ePortfolio and student learning in HDFS. The overarching goal for HDFS is to prepare undergraduates for successful entry into the job market or graduate school, depending upon each student's career goal. A common challenge faced by most undergraduates, however, is creating a personal narrative that effectively connects their academic experiences with their post-graduation goals (Graves & Epstein, 2011). Without an effective personal narrative, students are limited in their ability to communicate with a professional preparedness for assuming audience their responsibilities of the position they desire to obtain. The discrepancy between the learning provided for students, and their ability to make connections between their experiences and goals, led HDFS to adopt the ePortfolio as a tool for guiding students' professional development.

Rather than an ePortfolio based on a single course or an assessment, HDFS emphasizes the broader concept of a Professional ePortfolio, an ePortfolio designed to demonstrate achievement in a wide range of

learning outcomes and readiness for the job market. The Professional ePortfolio is a living website that displays a student's skills or experiences through the presentation of artifacts (i.e., specific examples of learning and/or experiences), and through reflective statements that communicate to an audience outside of the university how the artifacts support professional goals. Through the selection of artifacts and the writing of reflective statements, students begin to solidify their professional narratives and understand the relevance of learning to their professional goals (Cambridge, 2010; Graves & Epstein, 2011). Yet, students need assistance in the process of developing this narrative (Eynon, Gambino, & Török, 2014; Miller & Morgaine, 2009). Even though students may identify relevant artifacts, they do not automatically see the connection between various artifacts or between the artifacts and their professional goals. To assist them in making these connections, HDFS has established various points across the curriculum to promote student ePortfolio development and support identity construction (Light, Chen, & Ittelson, 2012).

Developing the ePortfolio across the HDFS curriculum provides students with multiple opportunities to consider their professional growth, refine their career goals, and reflect on the connection

between the two (Cambridge, 2010). Under the HDFS model, students create a beginning ePortfolio in a sophomore-level professional development class. Instruction on developing the ePortfolio and constructive feedback from the course instructor during the semester are provided. In addition, during the HDFS professional development course, students explore potential career directions and requirements for positions, which assists them in better understanding the professional audience they will target with their ePortfolio (Light et al., 2012).

At the end of a senior capstone course, HDFS students are required to submit a final ePortfolio, concluding their full college experience. During the senior capstone course, assignments provide direction on connecting experiences with professional goals and, again, students are provided constructive feedback, ensuring relevance and readiness to the job market (Light et al., 2012). During the sophomore and senior semesters, additional ePortfolio workshops are offered, and students can meet with faculty to receive guidance to refine their ePortfolios. Expectations for the ePortfolio, direction for selecting artifacts and writing reflection, as well as other ePortfolio-specific resources also shared with HDFS majors through an ePortfolio website (see http://www.humsci.auburn.edu/hdfs/ugradeport.php). Furthermore, students complete ePortfoliospecific assignments in multiple HDFS undergraduate courses, which ask them to consider how their classroom learning relates to their professional goals, as a best practices teaching strategy (Light et al., 2012).

In the HDFS model, students in various courses consider the skills and qualities necessary to become a professional in the workplace. There are three key expectations, emphasized at all stages of ePortfolio development, which facilitate students' creation of their personal narrative and ability to make connections between their experiences and professional goals (Peet et al., 2011). First, they are expected to create an "About Me" page as part of their ePortfolio development. On this page, students present themselves and answer the typical interview question, "Tell me about yourself." Students are instructed to emphasize their professional qualities and skills, and clearly identify their professional goals on this main page. Each subsequent page in their ePortfolio then presents a collection of artifacts related to their job skills. On each of these ePortfolio pages, students are expected to write an introductory paragraph that explains the connection between the artifacts and their overall relationship to the student's professional goal. For example, a student may explain that the research experience presented on the page led her or him to understand the developmental needs of young children. Finally, students are required to provide a brief reflective statement for each individual artifact to detail the

learning experiences (Zubizarreta, 2009). A student who volunteered in a preschool classroom, for example, might reflect on how the experience taught him or her to form supportive relationships with children and utilize different methods of classroom management.

Through consistent development and revision of the ePortfolio across the HDFS curriculum, students develop a narrative about who they are as a professional and become ready to enter the job market (Brandes & Boskic, 2008; Eynon et al., 2014; Miller & Morgaine, 2009). Continuous editing allows the student to demonstrate a mature understanding of the connections between their learning and their career goals (Zubizarreta, 2009). Through multiple ePortfolio-related assignments, constructive feedback, and reworking of their ePortfolio, students solidify their professional identity and are better prepared to communicate their credentials for a professional position to employers (Brandes & Boskic, 2008). The ePortfolio not only provides students with a modern, online presence, it also prepares students to be more successful in face-to-face interviews (Graves & Epstein, 2011). The best practice strategies of continuous editing and feedback, implementation of a variety of ePortfolio assignments across the curriculum, and the creation of a personal narrative through the selection of artifacts and reflective writing, all contribute to the student's development as a ready professional.

HDFS believes that the Professional ePortfolio is foundational in supporting our goals for undergraduates toward completion of the program and success in the marketplace. The data collected over the past six years of integrating the ePortfolio into our undergraduate curriculum indicates that 80% of our students view it as an effective tool to demonstrate their preparedness to a professional audience prior to graduation. In the future, employer demand for the ePortfolio product will be researched by HDFS in order to effectively integrate marketplace needs with the undergraduate curriculum.

SFWS Utilization of ePortfolio for Career Employment

In this section of the paper, we highlight two cases of ePortfolio in the School of Forestry and Wildlife Sciences (SFWS), where soft skills in the profession have only recently been emphasized as important learning outcomes. In the early 1900's, schools of Forestry focused primarily on teaching technical land management skills (Chapman, 1935). Less than 20 years later, though, it was determined that skills such as writing and public speaking were also needed by students in the natural resource disciplines (Barrett, 1953). Today, careers in forestry and wildlife and natural resource management continue to have an emphasis on working with nature in a sustainable way for the benefit of society. However, studies have shown

that employers perceive that students who graduate from natural resource programs tend to lack "soft skills" such as communication, leadership, and problem solving (Crawford, Lang, Fink, Dalton, & Fielitz, 2011; Robinson & Garton, 2008; Sample, Block, Ringgold, & Giltmier, 1999; Stauffer & McMullin, 2009). In addition, the employment field in the disciplines of forestry, wildlife and natural resources can be highly competitive. Job openings each year are often limited, and predictions for job growth in these professions is expected to be only average (5-8% increases), to slower than average (3-7%) over the next 10 years (Bureau of Labor Statistics, 2017). This shortage in jobs makes it essential for students in the discipline to set themselves apart and be ready to enter the professional job market as competitive players with a variety of skills.

Constructivism and ePortfolio Development in the SFWS

When applying for jobs, SFWS students find themselves competing with others from all across the southeastern United States to fill only a handful of positions. Similar to results seen in prior studies (Crawford et al., 2011; Robinson & Garton, 2008; Sample et al., 1999; Stauffer & McMullin, 2009), potential employers expressed disappointment in recent years, as SFWS students seemed poorly prepared for job interviews. Students had the "boots on the ground" knowledge yet lacked the polish and professionalism employers expected. The use of ePortfolios to develop the students' professional identity had the potential to address these employer concerns, and set students apart from their peers by connecting their learning experiences and career goals through creating an online, professional presence (Basken, 2008; Brandes & Boskic, 2008; Graves & Epstein, 2011). Prior to the university-wide employment of ePortfolio, though, relatively few SFWS students, faculty, or potential natural resource employers were familiar with ePortfolios and their benefits. This created a gap in knowledge and a need for faculty development related to best practices in utilizing ePortfolios for learning in the SFWS.

In an effort to address this knowledge gap on ePortfolio, a two-fold SWFS project was initiated. First, we sought to increase the awareness of both the ePortfolio and the ePortfolio Project among student and faculty in SFWS, in addition to increasing the awareness to the potential employers for SFWS students. Second, we wanted to determine if ePortfolios could be used to help SFWS students improve skills such as communication, technical competency, visual literacy, and critical thinking through reflection as shown in the literature (Basken, 2008; Graves & Epstein, 2011; Zubizarreta, 2009).

ePortfolio awareness survey. The initial step to increase ePortfolio awareness within the SFWS was initiating face-to-face conversations with twenty-seven potential employers at a SFWS career day in the fall of 2016. As part of the discussions at this event, we explained what ePortfolios were and showed potential employers examples of ePortfolios. These potential employers were also asked for input about how ePortfolios might be beneficial to their hiring process in order to probe for relevancy (Reese & Levy, 2009).

The data collected at the career event showed that 97% of employers interviewed stated that ePortfolios would be beneficial for both students and potential employers. These potential employers acknowledged the benefits of having an online platform to view resumes or other projects or assignments that helped them understand students' learning experiences. Employers were encouraged by what they saw in the examples presented to them, as many felt an ePortfolio could give them better insight into the credentials of potential employees.

ePortfolio workshops. In October 2016 and again in February 2017, we conducted a four-week ePortfolio workshop for students. Workshops were open to all undergraduate and graduate students in the SFWS. Participation in these workshops was voluntary, but extra credit was given in some forestry and natural resource courses if students took part in all four weeks of the course. These workshops provided information on: (a) what an ePortfolio is; (b) reflective writing exercises, including writing a personal mission statement; (c) targeting an audience; (d) collecting artifacts and ethical literacy; and (e) developing an ePortfolio using Wix or a similar online platform. The information to develop the workshops was based on collaboration with the Office of University Writing and the university-wide initiative on ePortfolio (see http://wp.auburn.edu/writing/eportfolio-project/).

In the first week of the workshops, we introduced the ePortfolio concept and discussed ways it could benefit students in their job searches. We also guided the students through thinking about experiences they would want to tell a potential employer about during an interview and instruction on writing a personal mission statement. For homework, students then completed their personal mission statement, which included reviewing the websites of companies or agencies at potential employers. Based on that research, students noted website wording and phrasing, and images and colors used by the employer. This information was brought to the following week's workshop session.

The second week of the workshop focused on refining students' pages for their personal ePortfolios and understanding the idea of ethical literacy. Using their experiences and the knowledge learned from looking at potential employer websites, most students

decided to create four main pages for their ePortfolios. These pages included: (a) an "About Me" page, which served as the ePortfolio homepage and included the student's mission statement, with a current resume; (b) a page that highlighted relevant coursework; (c) a page that highlighted work experiences; and (d) a page with contact information. Some students also included information on scholarships or field-based experiences. During this class, students started writing short descriptions that could accompany each of these pages to provide relevancy to the employer audience.

At the end of this workshop session, the concept of ethical literacy was discussed at length, helping students understand the critical thinking skills needed when writing or presenting information in a way that is moral and respectful of others' viewpoints (Light et al., 2012). Because natural resource management topics can be uncomfortable to some readers (i.e., cutting down trees or wildlife taxidermy), students were coached on thoughtful image selection and how to provide context for images used in a professional ePortfolio (Graves & Epstein, 2011; Light et al., 2012). For example, some wildlife studies require the use of radio collars or other devices that might appear strange or cruel to those outside the discipline. Similarly, timber-harvesting equipment can seem large and destructive to the general public. As a best practice, instruction on ethical literacy was provided to students. For example, students were coached about how to provide context for images of valuable educational experiences, in order to provide relevancy and appeal to a variety of audiences (Reese & Levy, 2009). During this instructional session, instructors also discussed the importance of using high quality, professional images of themselves on their About Me pages. Students often initially selected pictures of themselves in casual or social settings (e.g., football games, formals, friends' weddings) because they thought they "looked good." However, these images of students rarely showed professional attire and sometimes included behaviors not appropriate in a work environment (e.g., holding a beer or red solo cup, indicating alcoholic beverages). As homework for the class, students collected artifacts (e.g., papers, projects, images) that could be used on their ePortfolio site, including a professional looking image of themselves. All of these activities scaffolded learning about ethical literacy.

During the third week, students were introduced to various ePortfolio platforms. This class was conducted in the SFWS computer lab so various platforms could be displayed and actively demonstrated to the students. Then, students could select the platform that was best suited to their individual needs. Additional time during the session was given to the students to begin populating their ePortfolios, utilizing the reflective writing and artifacts developed in the previous weeks. Instructors provided guidance and helped trouble-shoot any

technical issues in the session. Additionally, as a best practice, students were encouraged to collaborate and share their experiences or frustrations with one another.

The final week of the workshop was also conducted in the computer lab so students could continue to work on their ePortfolios with assistance from instructors. Many students had final versions of their ePortfolios or near final versions by the end of this session.

The first student workshop in October 2016 had 41 students. Twenty students completed an ePortfolio by the end of the course. Twenty-four students participated in the February 2017 training, with 20 students completing a working ePortfolio by the end of the workshop. Training materials used in these workshops will be available for use annually for each new class cohort in SWFS as a way to provide instructional continuity and to build a faculty development resource. During the four workshops, students were most engaged in reflective writing and personal mission statements. At the start of the first workshop, almost every student felt they had nothing to write about that would interest a potential employer, yet all had developed career mission statements by the end of the sessions.

Our research into the published literature on ePortfolios found very few articles coming from more science-based curriculums. We hope our experiences will encourage others in similar disciplines to utilize ePortfolios, add to the ePortfolio literature, and build best practices for wildlife disciplines and other science faculty. We plan to continue our integration and development of ePortfolio in the SFWS with additional workshops in coming semesters.

SFWS Integration of ePortfolio in an Online Graduate Certificate Program

Online, graduate certificate programs are growing in popularity in the professional marketplace (Johnson et al., 2016). As the future of natural resource programs and careers are uncertain in the current political climate, graduate certificate programs provide an opportunity for professionals to obtain additional skills that set them apart from their peers and augment career options. Online certificate programs also give professionals the opportunity to expand their educations without having to leave their current jobs or spend time and money on full graduate degrees (Johnson et al., 2016). Studies have shown that ePortfolios can be very useful to participants in online certificate programs because the structure of these programs naturally lends itself to the development of artifacts that demonstrate technical expertise and theoretical knowledge that can then be highlighted in an ePortfolio (Bolliger & Shepard, 2010; Richardson, Watkins, & Field, 2012).

Program assessment and review are supported by ePortfolios, as they are well-suited to goal setting for

student achievement, measuring those achievements, and reviewing that information for program improvement (Crowell & Calamidas, 2016; Lowenthal, White, & Cooley, 2011). Many universities now include ePortfolio development as part of capstone courses in a graduate certificate program (Cambridge, 2010). As the market for certificate credentials has grown, SFWS has looked to enhance its curriculum to meet the needs of employers with both ePortfolios and credentialing (Carnevale, Rose, & Hanson, 2013).

We have developed an online graduate certificate program in Restoration Ecology within SFWS to expand the programs and reach to the employer marketplace. Restoration ecology is defined as the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (Society for Ecological Restoration, 2018). The Restoration Ecology Certificate program was developed because several on-going, substantial restoration projects have been created in the southeastern United States, with many involving endangered species that inhabit southeastern ecosystems (Robles, Flather, Stein, Nelson, & Cutko. 2008; Van Lear, Carroll, Kapeluck, & Johnson, 2005). Businesses, as employers, see value in working to protect threatened and endangered species, in restoring native species to sites they had been extirpated from, and in mitigation banking. BenDor, Lester, Livengood, Davis, and Yonavjak (2015) reported that the restoration economy provided more jobs than mining, logging, or steel production in total. As a \$9.5 billion industry employing about 126,000 people directly, indirectly generating \$15 billion in revenue, and over 95,000 jobs, the restoration industry's total economic output value was nearly \$25 billion (BenDor et al., 2015).

With this background on the growing restoration economy, the decision to expand on the ePortfolio workshops with SFSW undergraduates was made to transfer the professional knowledge to a graduate certificate program. Online certificate programs naturally lend themselves to the development of artifacts that demonstrate technical expertise and theoretical knowledge (Ruey, 2010). However, could students in online certificate programs create ePortfolios to document and synthesize what they have learned, and present it in a way that positions them to pursue new professional opportunities? How well would the face-to-face workshop materials transition into an online class format? We explored the best practices of moving this information to an online format and discuss the results below.

ePortfolio assignment. To start the development process, information presented in face-to-face ePortfolio workshops was used to develop the initial course modules and rubrics for an online certificate program. Course modules and curriculum were created to guide students through the construction of an ePortfolio,

emphasizing how to highlight what they learned, and position themselves and their artifacts in the area of restoration ecology. Upon completion of the certificate program, students were expected to demonstrate the following in their ePortfolios: (a) advanced knowledge in the area of restoration ecology, (b) the ability to review and synthesize scientific literature and use that resulting knowledge to make decisions with regard to natural resource restoration, (c) potential preparation for additional graduate study, and (d) the ability to communicate scholarly information to professional and general public audiences. All of these objectives relate to best practices in higher education curriculum.

The first assignment for the semester was, "Tell me about yourself." We used this phrase and an icebreaker activity in the online discussion board to learn about each student and help provide direction for the class semester. The activity helped us to understand where the adult learner was in terms of background and their experiences. This helped us to focus and present relevant information (Knowles, 1984). The online discussion revealed that no student in the first two semesters of the program had completed an ePortfolio. Therefore, during the semester, the students viewed two online presentations on the key elements of ePortfolios to mimic the face-to-face workshops (Light et al., 2012). Assignments to work on technical competency, visual literacy, thinking through reflection, and developing skills for the ePortfolio were also created in the course. Following best practices, we scaffolded student learning on critical components of ePortfolio by spreading out the learning over several weeks (Vygotsky, 1980; Brandes & Boskic, 2008).

The final project for the course was the development of an ePortfolio. Projects were individualized as much as possible in an effort to focus on students' professional goals and/or careers in order to make them relevant to the adult learner (Cambridge, 2010; Knowles, 1984). The SWFS online certificate program has adult students from a broad range of backgrounds, experiences, and workplaces. Many students are in the certificate program as a means to gain better employment or move into a supervisory role in their workplaces. Students currently enrolled at the university are also using the program for graduate hours towards their Master's or PhD in wildlife or other sciences.

One major concern in the program is exposure to the online ePortfolio platforms and a potential lack of technology skills. A major difference on the basic knowledge of the web environment was observed between students at the university versus those from other degree programs or those in rural locations in the certificate program. The university students had little to no issues working on the ePortfolio project or with online media and tools. Other student groups, such as older, more non-traditional learners, who had not been

exposed to ePortfolios in the past, had more difficulties. For example, those who had limited access to the internet or lacked computer literacy struggled more with the ePortfolio technical development. In the future, the program hopes to develop or find more resources to support the use of ePortfolios in the online curriculum to assist nontraditional students and remote learners.

Although no data were collected, students in the certificate program for upward mobility took the ePortfolio assignments very seriously. Those students working on a degree described the value and relevance of the ePortfolio assignment, as it had them critically reflect on their career path. Additionally, it helped some students develop materials that could be provided to potential employers or as part of an application for a graduate degree program. Despite some minor issues related to curriculum improvement, we will continue to pursue the use of ePortfolios in the online course in restoration ecology. The feedback from students has been 100% positive about the structure for the classes and how we try to guide them through the reflective process of creating an ePortfolio and professional identity.

ADED and the Online Professional Presence of the ADED

The third and final ePortfolio example is from ADED, an interdisciplinary degree program in the College of Education. As the discipline stresses authentic teaching and learning experiences, ePortfolio seemed to be a natural model for the learning environment. Adult education is a broad, interdisciplinary field and attracts an equally wide variety of working professionals. Fundamentally, there is a strong need to provide a cohesive, professional image after completion of the adult education degree or credential (Cervero & Daley, 2016). The use of ePortfolio in the program allows the student to provide an online professional identity in the global marketplace, in the hopes of gaining employment as an adult educator in a variety of disciplines and career fields.

The use of ePortfolio in the ADED program was first established by its faculty joining the university's ePortfolio Cohort Program. This program was created by the Office of University Writing to help faculty and staff implement ePortfolios into student assignments. ADED was the first cohort in the College of Education (in 2014) to adopt ePortfolio by including it in the graduate curriculum. The first course to adopt ePortfolio was the Internship course, as a way to develop an online professional presence. Now, several years into the process, the ePortfolio is effectively part of five courses in the ADED program. Our Workforce Education course is the main anchor for ePortfolio in the program, as career development and training in the field are the main focus of the curriculum. In the workforce course, students are asked to develop ePortfolios for future employment as one of the main course assignments.

As a general teaching strategy and best practice, students are provided with the idea of a template or the main components for developing an ePortfolio (Light et al., 2012). Students usually start the ePortfolio with four main pages: (a) a welcome page, (b) an about me page, (c) an experience or sample artifact page, and (d) a contact page. This strategy was recommended by the HDFS faculty as a best practice, and has remained a core concept for ePortfolio instruction by the ADED faculty. Students in the ADED courses are encouraged to use the resources provided at the ePortfolio university website before they start developing an ePortfolio (see http://wp.auburn.edu/writing/eportfolio-project/student-resources/).

As most of the ADED students are not familiar with web technologies, the ePortfolio allows for initial development of online curriculum materials and development of 21st century technology skills. Students are encouraged to use the template designs provided by free platforms in order to minimize cost. These platforms also have robust tutorials, resources, and designs that help provide an online professional presence to the world that goes beyond other familiar social media such as LinkedIn or Twitter (Chen & Bryer, 2012).

In addition to the ePortfolio Cohort and curriculum integration as a best practice, a faculty member created her own ePortfolio to be a role model to students (see https://aub.ie/LeslieCordie; Peet et al., 2011). As the students began to develop ePortfolios in courses, student examples were added to the course as additional resources and for discussion in the course. These student examples provide peer learning and highlight the relevance of ePortfolio in the adult education field.

One visible outcome from the integration of ePortfolio in the ADED curriculum has been the transfer of knowledge into other college curriculum. Specifically, an ADED graduate student who created an ePortfolio in a workforce course is also the director of an online business degree program at the university. The student saw immediate relevance for ePortfolios in the business program for their students, and as such, ePortfolios were integrated into the graduate business curriculum - the first in the College of Business to adopt ePortfolio. Another highlight of ePortfolio use in the ADED program was when one of the most technologically-challenged students developed professional ePortfolio and was subsequently nominated for the university's ePortfolio student award, becoming one of the top three finalists that year.

Peer review. A crucial aspect of the ePortfolio in the ADED courses is the process of peer review for ePortfolios. As both a best practice and instructional strategy, the use of peer review fits nicely within the philosophy of *andragogy*,

which is adults wanting learning to be immediately relevant (Knowles, 1984). As the ADED students develop their ePortfolios, they learn how to use the technologies and to reflect on their experiences by selecting artifacts. When students have completed the ePortfolio assignment, they are required to showcase their skills to at least two other graduate students and receive constructive feedback on their ePortfolios, utilizing the university's ePortfolio Rubric (see http://wp.auburn.edu/writing/wp-

content/uploads/20150806ePortfolioRubric.pdf). The peer feedback experience allows for discussion, peer-to-peer learning, and helps make connections to learning experiences and professional goals. It also develops constructive feedback skills, which are crucial communication skills in today's workplace (Robles, 2012). Lastly, the ePortfolio assignment is the culminating discussion in the Workforce Education course, providing a natural capstone to the semester by synthesizing the core concepts relevant to professional development and continuous adult learning throughout a career. Students should be able to articulate, "Tell me about yourself" by the completing the ePortfolio assignment.

In the ADED courses, students have indicated positive comments about their experiences, both in the face-to-face and online courses. These comments are documented in both the course evaluations and the online discussion comments. Future plans include: gathering the discussion data as evidence of the value of ePortfolio in the ADED program, and utilizing ePortfolio as part of the summative assessment for both students and the program.

Summary

In this paper, we described the use of ePortfolios by three different programs at a public, land-grant university and document how the ePortfolio has been used to develop more authentic learning experiences. Using the frameworks of professional identity, lifelong learning, and constructivism, we described four specific ePortfolio curriculum initiatives, along with challenges, strategies for integration, and overall best practices. All of the case efforts are directed by developing an online, professional identity through the curriculum.

Best practice ePortfolio work requires support across time as authentic learning requires intense revision and reflection by the student. In addition, each of the programs provided multiple opportunities to experience the development and application of ePortfolio (e.g., workshops, course assignments, and peer-revision). All of these curricular activities scaffolded student learning experiences to develop their professional identities as a best practice (Vygotsky, 1980). Effective ePortfolio work was also based on a consideration of the audience, such as employers, which shaped reflections to clearly communicate how

learning supports professional practice and readiness for the workplace.

Other key best practices or common themes provided by the three case studies include the following items:

- Reflective writing assignments that help students comprehend how their classroom learning and field experiences support their preparedness for accomplishing professional goals and improve their ability to communicate to a professional audience;
- Personal mission statements, About Me pages, and Tell Me About Yourself assignments that help students formulate their professional goals and construct a personal narrative that synthesizes into a professional identity;
- Personalized ePortfolios that are specific to students' goals and experiences while providing guidance and practice on the process (artifacts, reflective writing, use of technology) rather than the exact content; and lastly,
- Scaffolded use of technology to create the ePortfolio, meeting the needs of the adult learner.

HDFS, SFWS, and ADED are using ePortfolios at various stages and courses in their programs. All three programs, though, identified the need for students to be prepared to communicate their readiness for a career following the completion of an academic program. In higher education classrooms and beyond, the ePortfolio is a valuable tool for constructing a professional identity and for communicating how academic learning and experiences have prepared students from various disciplines for assuming the responsibilities of their prospective careers. All three programs found the ePortfolio is valuable for students and attractive to potential employers.

Work done by HDFS helped to guide the ADED program in the development and use of ePortfolio. In addition, HDFS and ADED faculty assisted SFWS in their implementation of ePortfolios on campus, as well as in their development of an online certificate program. Collaboration with faculty between the programs provided the guidance SFWS needed when their search of the published literature on ePortfolios found very few articles coming from more science-based curriculums. SFWS hopes our experiences will encourage others in similar disciplines to utilize ePortfolios, add to the ePortfolio literature, and build best practices for forestry and wildlife disciplines and other science faculty in other academic institutions and faculty development programs.

We support the debate that ePortfolios have been most successful when they provide an authentic learning experience, and are seen as relevant to professional identity development for the learner. Students who identify the narrative themes running through their experiences, and use those themes to develop an online presence, are able to reflect, construct, and articulate a professional identity through the ePortfolio. Students then can answer the question posed by employers, "Tell me about yourself."

References

- Barrett, J. W. (1953). The role of humanities and other liberal courses in the professional forestry curriculum. *Journal of Forestry*, *51*, 574-578.
- Basken, P. (2008). Electronic portfolios may answer calls for more accountability. *Chronicle of Higher Education*, 54(32), A30-A31.
- BenDor, T. L., Lester, T. W., Livengood, A., Davis, A., & Yonavjak, L. (2015). Estimating the size and impact of the ecological restoration economy. *PLoS ONE*, 10(6), 1-15. doi:10.1371/journal.pone.0128339
- Bolliger, D. U., & Shepard, C. E. (2010). Student perceptions of ePortfolio integration in online courses. *Distance Education*, *31*(3), 295-314. doi:10.1080/01587919.2010.513955
- Brandes, G. M., & Boskic, N. (2008). ePortfolios: From description to analysis. *International Review of Research in Open and Distributed Learning*, 9(2), 1-17. doi:10.19173/irrodl.v9i2.502
- Bruner, J. (1966). *Toward a theory of instruction*. Cambridge, MA: Harvard University Press.
- Bureau of Labor Statistics. (2017). *Projections overview and highlights*, 2016-26. Retrieved from https://www.bls.gov/opub/mlr/2017/article/projections-overview-and-highlights-2016-26.htm
- Cambridge, D. (2010). *ePortfolios for lifelong learning* and assessment. Hoboken, NJ: John Wiley & Sons.
- Carnevale, A. P., Rose, S. J., & Hanson, A. R. (2013). Certificates: Gateway to gainful employment and college degrees. Retrieved from https://cew.georgetown.edu/wp-content/uploads/2014/11/Certificates.FullReport.06 1812.pdf
- Cervero, R. M., & Daley, B. J. (2016). Continuing professional education: A contested space. *New Directions for Adult and Continuing Education*, 151, 9-18. doi:10.1002/ace.20191
- Chapman, H. H. (1935). Professional forestry schools report: Giving the comparative status of those institutions that offered instruction in Professional Forestry for the school year 1934–1935. Washington, DC: Society of American Foresters.
- Chen, B., & Bryer, T. (2012). Investigating instructional strategies for using social media in formal and informal learning. *International Review*

- of Research in Open and Distributed Learning, 13(1), 87-104. doi:10.19173/irrodl.v13i1.1027
- Crawford, P., Lang, S., Fink, W., Dalton, R., & Fielitz, L. (2011). Comparative analysis of soft skills: What is important for new graduates? Washington, DC: Association of Public and Land-grant Universities.
- Crowell, T. L., & Calamidas, E. (2016). Assessing public health majors through the use of e-portfolios. *Journal of Scholarship of Teaching and Learning*, 16(4), 62-74. doi:10.14434/josotl.v16i4.19370
- Eynon, B., Gambino, L. M., & Török, J. (2014). What difference can ePortfolio make? A field report from the Connect to Learning Project. *International Journal of ePortfolio*, 4(1), 95-114. Retrieved from http://www.theijep.com/pdf/ijep127.pdf
- Graves, N., & Epstein, M. (2011). ePortfolio: A tool for constructing a narrative professional identity. *Business Communication Quarterly*, 74(3), 342-346. doi:10.1177/1080569911414555
- Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., Freeman, A., & Hall, C. (2016). NMC horizon report: 2016 higher education edition. Austin, Texas: The New Media Consortium. Retrieved from https://www.learntechlib.org/p/171478/
- Knowles, M. (1984). *Andragogy in action*. San Francisco, CA: Jossey-Bass.
- Light, T. P., Chen, H. L., & Ittelson, J. C. (2012). Documenting learning with ePortfolios: A guide for college instructors. Hoboken, NJ: John Wiley & Sons.
- Lowenthal, P., White, J., & Cooley, K. (2011). Remake/remodel: Using ePortfolios and a system of gates to improve student assessment and program evaluation. *International Journal of ePortfolio*, *I*(1), 61-70. Retrieved from http://www.theijep.com/pdf/ijep37.pdf
- Meizrow, J. (2000). Learning as transformation: Critical perspectives on a theory in progress. San Francisco, CA: Jossey-Bass.
- Miller, R., & Morgaine, W. (2009). The benefits of eportfolios for students and faculty in their own words. *Peer Review, 11*(1), 8-12. Retrieved from https://www.aacu.org/sites/default/files/files/peerre view/Peer Review Winter 2009.pdf
- Peet, M., Lonn, S., Gurin, P., Boyer, K. P., Matney, M., Marra, T., Taylor, S. M., & Daley, A. (2011). Fostering integrative knowledge through ePortfolios. *International Journal of ePortfolio*, *I*(1), 11-31. Retrieved from http://www.theijep.com/pdf/IJEP39.pdf
- Reese, M., & Levy, R. (2009). Assessing the future: E-portfolio trends, uses, and options in higher education.

 Retrieved from

- https://jscholarship.library.jhu.edu/bitstream/handle/1774.2/33329/ECAR-RB Eportfolios.pdf
- Richardson, T., Watkins, D., & Field, S. (2012). The use of the electronic portfolio in evaluating and assessing the efficacy of graduate project management education. Retrieved from http://pages.leadlife.com/PMI/Repository/Docume nts/The Use of ePortfolio paper.pdf
- Robinson, J. S., & Garton, B. L. (2008). An assessment of the employability skills needed by graduates in the College of Agriculture, Food and Natural Resources at the University of Missouri. *Journal of Agricultural Education*, 49(4), 96-105. doi:10.5032/jae.2008.04096
- Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business Communication Quarterly*, 75(4), 453-465. doi:10.1177/1080569912460400
- Robles, M. D., Flather, C. H., Stein, S. M., Nelson, M. D., & Cutko, A. (2008). The geography of private forests that support at-risk species in the conterminous United States. *Frontiers in Ecology and the Environment*, 6(6), 301-307. doi:10.1890/070106
- Ruey, S. (2010). A case study of constructivist instructional strategies for adult online learning. *British Journal of Educational Technology*, 41(5), 706-720. doi:10.1111/j.1467-8535.2009.00965.x
- Sample, V. A., Block, N. E., Ringgold, P. C., & Giltmier, J. W. (1999). Forestry education: Adapting to the changing demands on professionals. *Journal of Forestry*, *97*(9), 4-10.
- Society for Ecological Restoration. (2018). *Ecological* restoration. Retrieved from www.ser.org
- Stauffer, D. F., &. McMullin, S. L. (2009). Desired competencies and perceived proficiencies of entry-level fisheries and wildlife professionals: A survey of employers and educators. In R. E. K. McCabe & A. Stockwell (Eds.), Transactions of the 74th North American Wildlife and Natural Resources Conference 62-68). Retrieved from (pp. https://wildlifemanagement.institute/store/prod uct/63
- Van Lear, D. H., Carroll, W. D., Kapeluck, P. R., & Johnson, R. (2005). History and restoration of the longleaf pine-grassland ecosystem: Implications for species at risk. *Forest Ecology and Management*, 211(1-2), 150-165. doi:10.1016/j.foreco.2005.02.014
- Vygotsky, L. S. (1980). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity.* New York, NY: Cambridge University Press.

Zubizarreta, J. (2009). The learning portfolio: Reflective practice for improving student learning. Hoboken, NJ: John Wiley & Sons.

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