

# **ePORTFOLIOS: A HIGH-IMPACT PRACTICE FOR EXPERIENTIAL LEARNING**

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## **EXTENDED ABSTRACT**

### **Summary**

A high-impact practice of ePortfolios promotes authentic experiential learning and can serve a range of pedagogical, assessment, and promotional purposes. This paper discusses an innovative approach of integrating ePortfolios in the curriculum of an undergraduate business program. The paper delineates benefits of an ePortfolio as an educational practice in the context of a systems development project in the Fundamentals of Computer Information Systems course. The paper's practical implications are the viability of ePortfolios not only as a vehicle for integrating learning across curricular and co-curricular educational experiences, but also as a medium for promoting the visibility of student achievements to internal and external stakeholders.

### **Abstract**

This paper, based on an action research study, presents an innovative approach of integrating ePortfolios as a high-impact practice (HIP) in the undergraduate curriculum of a business program at California State Polytechnic University, Pomona (CPP). The university, with the motto of "Application of Knowledge", is one of two polytechnic campuses in the California State University System (CSU) comprised of 23 universities. Currently, CSU, in collaboration with the National Association of System Heads, is working to make high-quality HIPs accessible to more CSU students [1].

Cal Poly Pomona University is well-known for integrating experiential learning into a broad liberal arts education in applied sciences and professional fields. Across the curricula, its diverse programs operationalize experiential education through active learning pedagogies, including high-impact practices that prepare students to identify and solve problems in real-world contexts.

A high-impact practice is a teaching and learning practice that promotes active learning experiences shown to have a positive impact on learning, retention and engagement of college students from many different backgrounds [2]. According to the Association of American Colleges and Universities (AAC&U), there are ten different HIPs that range from first year seminars and undergraduate research to service-learning and capstone courses and projects [3]. Students engaged in the AAC&U's "officially approved" HIPs report spending more time on coursework and having more frequent and more substantial interactions with faculty and peers [4]. They are also more likely than other students to apply, integrate and reflect on their learning. Furthermore, students who engage in at least two HIPs in college benefit the most from these structured active learning experiences. Finally, research shows that engagement with HIPs has significant impact on the achievement of underserved population of learners [5]. These findings have far reaching implications for institutional and system-wide strategies for

improving graduation rates and eliminating achievement gaps in higher education.

Recently, AAC&U has identified ePortfolios as the *eleventh* high-impact practice with positive impacts on student learning, persistence and graduation rates [4]. AAC&U based its designation on indirect evidence of student engagement from the National Survey of Student Engagement (NSSE) [2] as well as direct evidence, some of which came from data collected over a four-year period from 24 colleges and universities participating in the Connect to Learning (C2L) Project [6].

What is an ePortfolio? An ePortfolio is a digital curation of student artifacts that may include academic and co-/extra-curricular assignments, projects, and reflections on learning. It represents student interests and active learning experiences that can serve a range of pedagogical, assessment, and promotional purposes. More specifically, ePortfolios can be used as a means of demonstrating learning and assessing student learning outcomes, thus improving student success [7]. ePortfolios can also be used to assess student attitudes, dispositions and values through written accounts of synthesized reflections [8]. Furthermore, students may use their integrated digital curation of curricular and co-curricular projects as a medium for engaging with alumni, community partners, prospective employers and admission officers of graduate schools. Such use of ePortfolios can prepare students for the future of work and civic engagement, thus fulfilling the university's strategic initiatives [9].

Banta and Palomba [10] point out several different examples of ePortfolio use on campuses across the nation. Some of the examples are: 1) students at Florida State University (FSU) develop career portfolio artifacts for internships, job searches or graduate school applications; their artifacts reflect the type of demonstrated learning skill (i.e., critical thinking, communication, etc.) and the type of experience (e.g., service-learning, capstone, etc.) [11]; 2) faculty at Clemson University use General Education (GE) ePortfolios for formative and summative assessment of students' general education competencies [12]; 3) students at St. John's University use ePortfolios to present themselves, through their digital learning artifacts, both academically and professionally [13]; and 4) an *ePortfolio Initiative* at Virginia Polytechnic and State University engages students and faculty from across disciplines; it also provides faculty with training and support, through communities of inquiry and practice, to integrate ePortfolios into their courses [14].

To provide business students in Computer Information Systems (CIS) program at Cal Poly Pomona with a discipline-based experiential education and a structured opportunity to engage in a high-impact practice, we have piloted an ePortfolio pedagogy in several sections of the Fundamentals in Computer Information Systems course (CIS231). CIS231 is a required introductory course in the CIS program. One of the course objectives is to engage students in active learning by applying the methods, techniques, and tools relevant to the systems development practice in the real-world context. Another objective is to socialize students into the Information Systems (IS) profession through a guided exploration of careers in the IS field.

Through lectures, discussions, collaborative technical labs and individual assignments, students learned about the systems development life cycle, prototyping, client-developer interaction, and IS careers. Subsequently, they integrated and applied what they learned in the classroom to a group field project of developing web portals for local non-for-profit organizations. Additionally, each student developed a Career Portfolio artifact that included a career planning document, a resume, a hypothetical cover/thank you letter, and a LinkedIn profile. As students progressed through their assignments in the course, they documented the assignment artifacts and reflected on their learning through ePortfolios that they designed using Adobe Dreamweaver web development software.

CIS231 ePortfolios, which included text, hyperlinks, and multimedia components were designed to provide a visually engaging medium for presenting student work artifacts and reflections on learning to various stakeholders, including peers, faculty, families, co-workers, and prospective employers. Each student's ePortfolio was comprised of several web pages as follows:

<b>Home page</b>	
	<ul style="list-style-type: none"> <li>○ An entry page summarized portfolio's purpose and the student persona.</li> </ul>
<b>Academic Work page</b>	
	<ul style="list-style-type: none"> <li>○ This page detailed student academic work in the CIS program. For each course, students provided a brief course description, learning reflections, and a link to a tangible evidence of learning for at least one course assignment/project.</li> <li>○ In addition to the previously completed coursework, the Academic Work page provided links to all assignments completed in CIS231. These assignments included: web development exercises, a career planning document, a resume with a hypothetical cover/thank you letters, a LinkedIn profile, a research paper, and a collaborative web portal project for a community organization. Furthermore, students reflected on the value of their applied learning and connected that learning to the university's mission, core values, institutional learning outcomes and the program learning outcomes. Students also reflected on how the knowledge and skills acquired in the course may be applied to other courses in the their curriculum and/or future careers in the Information Systems field.</li> </ul>
<b>Work Experience page</b>	
	<ul style="list-style-type: none"> <li>○ This page detailed student's work experience, including links to current (previous) jobs, and a reflection on what they have learned from the work experience. Students with no prior jobs reflected on their career goals and identified one job to apply for in the future.</li> </ul>
<b>Co-curricular / Extra-Curricular Activities page</b>	
	<ul style="list-style-type: none"> <li>○ This page included links and reflections on student's participation in clubs, volunteer assignments, and co-curricular activities. Students with no prior experience on this were asked to research the clubs, volunteer opportunities and other campus-wide engagement initiatives to identify at least one activity for future participation. Students also reflected on their choice of future engagement activities and the rationale for their decision on this.</li> </ul>
<b>About Me page</b>	
	<ul style="list-style-type: none"> <li>○ The purpose of this page was for students to communicate something interesting about themselves. This may have included hobbies, interests, favorite websites, picture gallery, favorite books, interesting travels, or unique elements of their public persona.</li> </ul>

As a high-impact practice, the CIS231 ePortfolios engaged students in demonstrating multiple learning outcomes in the course (e.g., technical knowledge and application, communication, teamwork, and research skills). They also promoted integrated learning through students' reflections on academic and personal experiences, enhanced students' sense of accomplishment, deepened their engagement with the course material and promoted visibility of their learning to internal and external audiences. At the end of the course, students completed course reflection reports and shared their perspectives on lessons learned from the course and how these lessons may be applied to future courses, professional careers and civic engagements.

Student feedback and reflections revealed that they saw their ePortfolios as creative and engaging medium for integrating and making visible their academic and non-academic accomplishments. They also felt the pride of showcasing the significant effort they put in the curation of their assignments and projects. And, they seemed to value the enduring nature of the portfolio artifacts that would “live on” long after they “graduate” from CIS231. The visibility aspect of the coursework assignments and the opportunity to leverage the portfolio work for e-branding and connecting with employers for internships and full-time positions was the most frequently cited benefit of the portfolio projects by students. They also noted that relating their past coursework as well as the CIS231 projects to the university’s mission, core values and learning outcomes, helped them better understand the university as well as the meaning and value of applied learning.

Informal focus group interviews with students a year after they completed the CIS231 ePortfolio projects revealed that many students continued to use their portfolios to document academic and out of the classroom activities and projects throughout the year. Students also commented that they shared their portfolio artifacts with peers and faculty in subsequent courses, demonstrated ePortfolios during their interviews for internships and summer jobs, and felt a sense of accomplishment and pride in their portfolio artifacts. Furthermore, students advocated for making an ePortfolio project a requirement for all students in the Computer Information Systems program.

Experiential education through a high-impact practice of an ePortfolio can be a highly effective pedagogy with significant benefits to college students. ePortfolios can illuminate experiential learning in action and promote student success through higher level of engagement as well as the application and integration of learning. Well-designed and integrated ePortfolio projects can also provide visibility to external constituents on how the university achieves its educational objectives through the core functions of teaching and learning. Such evidence of learning is likely to be of value for specialized and regional accreditation and bolster the university’s initiatives for branding its image, recruiting prospective students, and cultivating potential donors.

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