Assessing the Future:

Eportfolios at Johns Hopkins

A Final Report

presented to

The Committee of
Homewood Advisors
&
the Campus Community of
the Johns Hopkins University

by the

Johns Hopkins University
Eportfolio Task Force

February 15, 2009

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February 18, 2009

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The Eportfolio Task Force was charged by the Committee of Homewood Advisors to conduct a focused inquiry into the current and potential uses of electronic portfolios at Johns Hopkins to assess their potential impact and facilitate their development on campus. The Task Force managed and evaluated six pilot eportfolio pilot projects and researched eportfolio implementations at other universities. The enclosed report summarizes these activities and describes the potential uses of eportfolios at Johns Hopkins.

As the Task Force concluded its activities, three divisions initiated new eportfolio projects in addition to the pilots conducted by the Task Force. A description of these activities is included in the report. This recent expansion demonstrates the variety of eportfolios uses in higher education and reveals the emerging trend to use student-based outcomes as the foundation for designing a program's curriculum.

The report recommends cross-divisional sharing of best practices to support these new projects and to assist other groups interested in implementing eportfolios.

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I. Executive Summary

This report provides an overview of the Johns Hopkins University (JHU) Eportfolio Task Force's query of the current and potential uses of electronic portfolios (eportfolios) at Johns Hopkins. Representation on the Task Force included staff and faculty from five of the University's nine divisions, including the School of Education which implemented the first large-scale eportfolio initiative at the university in 2001.

The Task Force identified the following university activities eportfolios can support.

- Academic Advising
- Institutional Accreditation and Departmental Review
- Curricular Development at the Program Level
- Student Career Planning and Development
- Alumni Development

Eportfolio technologies can both facilitate current work with new efficiencies and promote productive innovation in each of these areas (Section III).

The Task Force observed the following.

- Eportfolios meet students' academic and professional needs
- Eportfolios are easy to use
- Eportfolios capture more than the Johns Hopkins experience
- Eportfolio use increases with external motivation
- Eportfolio use increases when integrated with other applications

These conclusions were drawn from research conducted by the Center for Educational Resources (CER). While CER studied eportfolio initiatives at other universities, it conducted thorough evaluations of eportfolio pilots at JHU (Section IV).

- Second Decade Society Grant Program – piloted Summer 2005
- Robins Internship Grant Program - piloted Summer 2005
- Senior Leadership Consultants - piloted Fall 2005
- Hopkins 101 - piloted Academic Year 2006-07
- Leadership Theory Course - piloted Fall 2007
- The Peabody Digital Portfolio Project - piloted Fall 2007

Based on its work and conversations with faculty and staff, the Task Force finds sufficient interest in exploring a coordinated and expanded implementation of eportfolios at Johns Hopkins.

To this end, the Task Force makes the following recommendations (Section VI).

- Host an Eportfolio "Summit"
- Create an Eportfolio Community of Practitioners
- Foster Additional Pilot Projects at the University

II. History of the Eportfolio Task Force

The Eportfolio Task Force was established in May 2004 after discussion between Alice Brainerd, Sr. Manager in IT@JH, and the Committee of Homewood Advisors (CHA) about the potential benefits of integrating eportfolios in the undergraduate experience at Johns Hopkins University (see Appendix A for list of Task Force members). The CHA charged the Task Force with conducting a focused query of the current and potential uses of electronic portfolios at Johns Hopkins in order to facilitate their development on campus. In embracing its charge, the Eportfolio Task Force acknowledged the CUE Report's recommendation that "[s]ome schools have begun to explore the creation of electronic student portfolios, and such efforts should be encouraged" (CUE Report - Recommendation 18).[1]

To promote effective development of eportfolios at Johns Hopkins, the Task Force sought to gain a comprehensive understanding of the potential uses of eportfolios along with the best practices and practical challenges of their implementation. The Task Force researched eportfolio initiatives on other campuses (see Appendix B for summary of findings). The Task Force also conducted pilots at Johns Hopkins to gauge interest, identify implementation challenges, and evaluate different eportfolio applications. (See Section IV for an overview of eportfolio activities at Johns Hopkins including pilots managed by the Task Force.)

The retirement of the chair, Alice Brainerd, in 2008 marked a natural transition point to report on the Task Force's activities to date and to make recommendations for next steps.

[1] 2003, May 15. Johns Hopkins University Commission on Undergraduate Education Report. *http://www.jhu.edu/news_info/reports/cue/chapter6.html*.

III. Eportfolios - Background and Best Practices

Eportfolio Overview

Paper-based portfolios have existed for decades, most notably in the fine arts. Individuals assembled their work in boxes, three-ring binders, manila envelopes, or plastic folders. Eportfolios arose to address several shortcomings of these paper-based portfolios, including their

- inability to document multimedia resources (e.g., computer applications and digital images, audio, text, video, and animations); and
- limited ability to share and distribute content.

In the broadest terms, an eportfolio is "a digitized collection of artifacts including demonstrations, resources, and accomplishments that represent an individual, group, or institution."[2] While eportfolios can be stored on CDs, DVDs, or memory sticks, the Task Force explored the potential of web-based eportfolio applications. While the simple act of documenting personal or group work fills an important archival need, the full impact of eportfolios is realized when the author(s) and others reflect on the content.

Eportfolio Use in Higher Education

The range of objectives sought by those using eportfolios in institutions across the country testifies to their versatility. Eportfolios have become central to curricular development, academic advising, career preparation, job searching, and credentialing in the professions. The U.S. Department of Education Spellings Commission's emphasis on assessment suggests additional uses of eportfolios.

The following five categories with examples provide a helpful scheme for distinguishing the varied purposes eportfolios fulfill at post-secondary institutions. None of these is mutually exclusive; to the contrary, most eportfolios are employed to fulfill several of these goals at once.

1. Academic Advising – Eportfolios allow a student and an academic advisor to track student progress through defined degree requirements. The eportfolio illuminates a structured workflow toward academic and professional goals, making it easy to review past activities and document academic achievement and goals. It encourages ongoing self-reflection, serving as a virtual advisor between face-to-face meetings. Iowa State University uses eportfolios for many purposes including students' annual review in the Curriculum and Instruction Technology (CIT) Program. Students upload documentation of their progress through the program and share them with an advisor.[3]

[2] Lorenzo, G., Ittelson, J. *An Overview of E-Portfolios*. The EDUCAUSE Learning Initiative, (July, 2005). Retrieved April 1 2008 from: http://www.educause.edu/ir/library/pdf/ELI3001.pdf.
[3] Email to Mike Reese from Leysa Hassall, Instructional Development Specialist at Iowa State University, on June 20, 2008.

2. Institutional Accreditation and Departmental Review – Eportfolios provide an efficient and transparent means to archive and to access student work. This facilitates internal and external departmental review, as well as broader institutional assessment for accreditation and other purposes. Duke developed an eportfolio system made available to all students starting in 2001. Faculty groups recognized their value and six departments currently manage program portfolios to gather and archive student work for accreditation reporting. With interest growing, Duke plans to expand the use of eportfolios across the curriculum over the next three-five years.[4]

   Rose-Hulman Institute of Technology incorporated eportfolios into a redesign of its Accreditation Board for Engineering and Technology (ABET) reporting process. The eportfolio captures student work to document evidence of performance criteria. Faculty review teams evaluate these artifacts using rubrics as part of accreditation review committees. The institutional assessment office works with departments to develop performance criteria and evaluation rubrics.[5]

3. Curricular Development at the Program Level – Curriculum-related eportfolios capture curricular requirements that transcend individual courses (e.g., design projects, senior theses) and promote authentic assessment activities. The task of integration renews critical attention to these requirements and the way that they are articulated. Eportfolios used for this purpose also lead students to deeper reflection of programmatic goals and objectives, ones that are promulgated to wider audiences.

   The Johns Hopkins School of Business established learning outcomes for MBA Fellows to achieve as a degree requirement. Fellows track progress toward these learning outcomes and set individual professional goals using the Blackboard Portfolio System. It enables individuals to quickly and easily add content, manage resources, and establish clear connections between customizable learning outcomes and portfolio work samples.[6]

   Virginia Tech requires all incoming students to define learning outcomes for which they must document evidence of completion before they graduate. To meet this requirement, the Materials Science and Engineering department requires students to define what it means to be an engineer along with self-defined learning outcomes approved by the faculty during a required, introductory engineering class. Students then document evidence from coursework to demonstrate how they met those outcomes over their undergraduate career.[7]

[4] Mike Reese phone interview with Matt Serra, Adjunct Assistant Professor at Duke University, on October 27, 2008.
[5] Mike Reese phone interview with Julia Williams, Professor of English and Executive Director of Institutional Research, Planning and Assessment at Rose-Hulman Institute of Technology, on October 20, 2006.
[6] Email to Mike Reese from Toni Ungaretti, Assistant Dean and Director for Office of Learning at Carey Business School, on April 29, 2008.
[7] Mike Reese phone interview with Marc Zaldivar, Director of Eportfolio Initiatives at Virginia Tech University, on November 4, 2008.

4. Career Planning and Development – Eportfolios allow students to present a comprehensive overview of academic and extra-curricular activities along with self-reflection and supporting evidence (i.e., artifacts) to a potential employer. Similarly, they enable professionals to sustain evidence of their further credentials and ongoing achievement. Graduate students at Johns Hopkins use teaching portfolios to showcase their work when applying for faculty positions.

   > *Having an eportfolio was definitely a huge asset when I went on the job market. Several institutions that interviewed me mentioned that my website was what initially drew their attention to my job application. Teaching is becoming more and more technology-oriented around the country, and creating an eportfolio was a great way of showing potential employers that I'm enthusiastic about merging my research and teaching with new trends in technology. My new department at Duke is very tech-savvy, and I know I have my eportfolio to thank for getting my foot in the door there!*[8]

5. Alumni Development (or Life-Long Learning) – Eportfolios can evolve and continue to support an individual's professional growth after graduation. Eportfolios provide an opportunity for the university to stay connected with a generation of Facebook users - a cohort comfortable posting their biography online - after they graduate.

Appendix B provides a longer summary of how other institutions use eportfolios. Please see Appendix C for more information on eportfolios in general.

[8] Email to Mike Reese from Valerie Mirshak, German and Romance Languages 2008 Ph.D. graduate, on August 4, 2008.

IV. Eportfolios @ Johns Hopkins

Undergraduate Pilot Programs

Launching and supporting six eportfolio pilots across several divisions comprised much of the Task Force's activity.

1. Second Decade Society Grant Program - piloted Summer 2005
2. Robins Internship Grant Program - piloted Summer 2005
3. Senior Leadership Consultants - piloted Fall 2005
4. Hopkins 101 - piloted Academic Year 2006-07
5. Leadership Theory Course - piloted Fall 2007
6. The Peabody Digital Portfolio Project - piloted Fall 2007

Each pilot targeted a specific constituency with distinct goals; each provided opportunity to engage colleagues across the university in discussions about the future impact of eportfolios in undergraduate education.

For each pilot, the Center for Educational Resources conducted a thorough evaluation. Students provided anonymous feedback through an online survey. A small sample from each pilot group also participated in focus group sessions to allow Task Force members to probe their use of eportfolios in more detail along with themes identified in the online survey results. The Task Force reported on the outcomes of the first three pilots along with preliminary recommendations to the Committee of Homewood Advisors in February 2005. The Committee requested the Task Force continue conducting pilots so that more informed and detailed recommendations could be made. Continuing to conduct pilots reaffirmed previous findings and generated additional findings. Major themes identified from a review of all six pilot evaluations include the following.

- Eportfolios meet students' academic and professional needs - Student users expected other students to broadly adopt an eportfolio if made available to the entire university. Students expressed interest in using eportfolios to support their professional growth as both students and alumni.

- Eportfolios are easy to use - Almost universally, students found each of the web-based eportfolio applications piloted easy to use.

- Eportfolios capture more than the Johns Hopkins experience - Students communicated the value of documenting non-course and research activities such as internships and personal life experiences. Students also expressed interest in maintaining their eportfolio beyond graduation.

- Eportfolio use increases when integrated with other applications - Students requested eportfolio integration with other academic technologies (e.g., course management

system, student information systems) to make it easier to document course work and degree requirements.

- Eportfolio use increases with external motivation - Pilot participants admitted they did not make full use of the technology because participation was voluntary. Use was nominal even though students expressed excitement about using the eportfolio at the beginning of the pilot. At the end of the voluntary pilots, participants suggested that other priorities limited the time needed to upload content, reflect on their accomplishments, and create presentations for faculty or employers.

- Eportfolio use improves with systematic planning – Pilot participants not given clear direction on why eportfolios were made available to them expressed confusion about how to use them. While training can alleviate this, it also points to the need for systematic planning by those overseeing the project. Successes at the School of Education and Carey Business School can be traced to thorough preparation. Student eportfolio initiatives at these schools define clear student outcomes which anchor the program with the eportfolio capturing demonstrated applications of those outcomes.[9]

In addition to evaluating the potential uses of eportfolios at Johns Hopkins, the Eportfolio Task Force also wanted to assess eportfolio applications. A review of the industry led the Task Force to start with a comparison of two applications: the School of Education's Digital Portfolio (DP) and Open Source Portfolio (OSP). The University of Minnesota developed OSP as an open-source eportfolio application. OSP was integrated into a larger open source project, Sakai, in 2006. During this integration, the OSP application needed to be reprogrammed to work within the Sakai framework so pilots were conducted using the DP only. Both the JHU DP and OSP met the needs of the pilot groups.

Appendix D includes a summary of each pilot including a description of the pilot group and key findings.

Existing and Planned Eportfolio Initiatives

As the Task Force began its work, the School of Education was the only division with a fully implemented eportfolio initiative at the University. Since then, other divisions have implemented or began exploring eportfolios to support undergraduate and graduate education. Table 1 and 2 on the following pages summarize these existing and exploratory eportfolio initiatives.

[9] Mike Reese phone interview with Betsy Lowery, Assistant Dean, School of Education Teaching Learning & Assessment, on February 6, 2009.

Table 1 - Current Eportfolio Initiatives

Division & Program	Description	Application Used	Contact
School of Education **Master of Arts in Teaching**	All M.A.T. students develop an eportfolio that represents a detailed summation of coursework and internship experiences completed during the program. Faculty advise students on future coursework and career development through eportfolios.	Johns Hopkins Digital Portfolio (Developed by the Center for Technology in Education at the Johns Hopkins School of Education.)	Betsy Lowry, Assistant Dean, School of Education Teaching Learning & Assessment
Whiting School of Engineering **Integrative Graduate Education and Research Traineeship (IGERT) Fellowships**	Graduate students in KSAS and WSE receiving IGERT Fellowships will archive their research and teaching experiences, publications, conference presentations, and outreach activities using an eportfolio. Faculty mentors will use these eportfolios to advise students and track their progress. The program director will collect evaluation data to include in grant reports.	Johns Hopkins Digital Portfolio	Lori Graham-Brady, Associate Professor of Civil Engineering
Carey Business School **MBA Fellows**	The Carey Business School's MBA Fellows Program coordinating faculty team established learning outcomes for participants to achieve as a degree requirement. Fellows track progress toward these learning outcomes and individually set professional goals using an eportfolio. The eportfolio enables individuals to quickly and easily add content, manage resources, and establish clear connections between customizable learning outcomes and portfolio work samples.	Blackboard Portfolio System	Toni Ungaretti, Assistant Dean and Director for Office of Learning Rick Milter, Professor of Management

Division & Program	Description	Application Used	Contact
Carey Business School **Organizational Development Program**	Students post examples of their work in each course to provide an evolving illustration of their growth, development, and achievement of the learning objectives of the Program. The faculty reviews the portfolios to determine the degree of academic and professional progress students are making before decisions are made about their readiness to participate in the required practicum courses of the Program. Students will be able to take a copy of their portfolio entries with them to help create resumes and other materials related to their career development.	Blackboard Portfolio System	Toni Ungaretti, Assistant Dean and Director for Office of Learning Dick Kilburg, Associate Professor of Management
Peabody **Humanities Department**	The eportfolio complements humanities coursework, fulfilling explicit curricular objectives. Portfolio postings draw from a students' work over the course of a succession of semesters, encouraging both students and faculty to reflect on the development of student work and the arc of each student's humanities studies overall. The Peabody portfolios can be used by faculty and administrators as a tool for longitudinal assessment; they encourage students to recognize that their humanities studies at Peabody contribute to ends transcending individual classes.	Johns Hopkins Digital Portfolio	Ron Levy, Peabody Humanities Department Chair

Table 2 - Eportfolio Initiatives Under Discussion

Division & Program	Description	Contact
School of Medicine **Educator's Portfolio**	The School of Medicine is exploring the use of eportfolios to assist promotions committees in making promotions decisions for medical educator faculty. A template for the Educator's Portfolio is available in the "Silver Book," the Professional Development Guide for the Faculty (2006). An electronic version of the Educator's Portfolio is currently under development with Advanced Informatics. Eportfolios may also be used in the proposed Master's in Health Professions Education program currently under development.	Lisa Heiser, Assistant Dean, School of Medicine Office of Faculty Development
Homewood Pre-professional Advising	Staff from the Pre-Professional Programs & Advising Office will explore the potential of having students use eportfolios to store documents (resume, etc.) related to the Health Professions and Law School Application process.	David Verrier, Director of Pre-Professional Programs & Advising
Homewood Arts Programs	Homewood Arts Programs staff will explore the possibility of using eportfolios to track students' progress in completing the art certificate requirements.	Eric Beatty, Director, Homewood Arts Programs
Homewood Art Workshops	Homewood Art Workshops faculty will explore the use of eportfolios in support of courses offered through the program.	Craig Hankin, Director, Homewood Art Workshops
Whiting School of Engineering **Civil Engineering**	Civil Engineering faculty are exploring how to use eportfolios to archive student work for ABET accreditation committee reviews.	Takera Igusa, Professor of Civil Engineering

V. Expanding Eportfolios @ Johns Hopkins

Eportfolios are firmly established at Johns Hopkins University. The School of Education's Digital Portfolio, as well as the pockets of activity on various Johns Hopkins campuses, confirm this. Nonetheless, eportfolios are only used by a select few students at the University overall. Most divisions do not employ eportfolios in any form (even though eportfolios would further their goals), and only a fraction of faculty and administrators are familiar with eportfolios and their potential. Given the growing reliance on digital teaching tools and the effectiveness of electronic portfolios in educational institutions across the country, it is reasonable to project that more and more of the divisions will inevitably embrace eportfolios over time. But with responsible discussion, planning, and support, Hopkins students could benefit from eportfolios sooner rather than later. The decision to expand eportfolio activities across the institution will reside with each division or department. Clearly, though, coordinated efforts across academic divisions, the libraries, and IT@JH would facilitate the introduction and use of eportfolio projects across campuses and maximize the benefit to the University as a whole.

Opportunities

An expanded eportfolio implementation can benefit from existing infrastructure and experience at Johns Hopkins.

- Current eportfolio initiatives - Representatives from both the School of Education and Carey Business School are committed to helping other divisions implement eportfolios. Whether sharing best practices or building on common infrastructure, their combined experience gives the entire institution a head start in using eportfolios.

- Course Management System Integration - All major course management systems (e.g., Blackboard, Sakai) include an eportfolio module. Adopting eportfolios does not necessarily mean Johns Hopkins must purchase a separate application and overcome the challenges of integrating it with other student information systems.

- Staff support in place - Existing faculty and student support units can assist the community in adopting eportfolios. IT@JH and teaching and learning centers across the university (e.g., Digital Media Center, Center for Educational Resources, and Center for Technology in Education) are ready to help.

- Growing interest – Faculty in the School of Medicine, Whiting School of Engineering, and the Homewood Art Workshops have expressed interest in learning how eportfolios can support institutional accreditation and student work, respectively. Staff in the Pre-Professional Advising Office may consider using eportfolios for student advising. The Homewood Arts Programs would like to learn more about how eportfolios can assist students completing the art certificate requirements. These programs could serve as expanded pilots that could establish the use of eportfolios on campus. There is no expectation for ubiquitous adoption in the short-term, but with careful planning and

coordinated support, early successes can lead to additional adoption. The Carey Business School adoption exemplifies how the establishment of eportfolios in one program can be expanded to another after program success is documented.

In addition to these opportunities, various constituent groups at the university stand to benefit from the use of eportfolios as noted in Table 3.

Table 3 - Institutional Benefits

Senior Leaders	• Facilitate internal and external departmental review • Support broader institutional assessment for accreditation and other purposes
Faculty	• Assist faculty in writing letters of recommendations for students • Facilitate student advising • Support internal and external departmental review • Archive student course work
Students	• Archive student course work, research, internships, and extra-curricular activities • Promote student reflection on academic and professional goals • Facilitate student advising and career counseling • Present accomplishments to potential employers
Administrative/ Support Dept	*Advising* • Facilitate student advising • Support pre-professional advising process by archiving student's academic and extra-curricular data. Faculty/staff can reference this information when writing letters of recommendation. *Career Services* • Facilitate student career counseling *Development Alumni Relations* • Maintain connections and build relationships with alumni

Challenges

Johns Hopkins is well positioned to expand the use of eportfolios on campus, but structural and cultural challenges will need to be addressed.

- Changing Processes - Using eportfolios does not necessarily require more work as much as a different approach to work already required. For example, a faculty working with a student advisee may be required to access student data in new ways. A careful analysis

of how adopters access information in current ways and how this will change needs to be addressed.

- Purposeful Uses - A critical finding from the undergraduate pilots was that students communicated they needed external motivation to maintain their eportfolio. The "build it and they will come" approach will not work. Integrating eportfolios as part of their course work, research lab experience, or advising is necessary for successful adoption.

- Rethinking Curricular Approaches - If eportfolios establish themselves, it may lead to a reconceptualization of the relationships between program goals and courses. Accreditation agencies continue to place new pressures on universities to show evidence of how courses lead students to develop and demonstrate critical skills by the end of their undergraduate experience. To meet this challenge, divisions at Johns Hopkins (e.g., School of Education, Carey Business School) and other universities (e.g., Rose-Hulman) conducted reviews of course assignments to ensure that students made steady progress toward program-level goals.

- Training – New adopters will need training. Previous pilots showed that students found eportfolios easy to use, but an expanded pilot will raise the demand for faculty, staff, and student support.

- Integration with Existing Systems - Eportfolios should "talk" to other IT applications like student information systems and the portal. Most eportfolios come packaged with course management systems, but other programs will need to be integrated.

- Costs - The Task Force recognizes the difficult economic environment the university faces; costs will deservedly dominate future conversation. While eportfolios can result in cost savings (e.g., by facilitating more efficient workflow procedures for advising groups), expanded eportfolio implementations would likely result in additional costs. Examples of costs include the following.

    - Registration and support costs for the application
    - Hardware costs (e.g, storage, backup redundancy)
    - Training of users
    - Faculty and staff time required for planning an implementation

  While a specific budget cannot be provided - costs will be dependent on the scope of future implementations - it is not expected these costs will be insurmountable. In most cases, these costs can be nominal additions to the hardware, software, and training costs associated with the course management system offerings. The Task Force expects the bigger challenge potential adopters will face is envisioning how eportfolios will lead to new forms of communication and reflection between faculty, students, and staff.

- Coordinated Support - To ensure success, coordinated support across the campus community must be established. Table 4 describes the different roles various constituent groups could play. The list represents the scope of support needed for an enterprise-wide adoption. Smaller scale adoptions would need a subset of groups involved.

Table 4 - Support Needed From Critical Stakeholders

Senior Leaders	• Provide strategic direction on:
	  • how eportfolios can support the mission of the university
	  • how eportfolios can be used as sources of data for divisional planning and accreditation activities.
	  • allocation of resources for adoption
	• Identify functional liaisons within divisions who will work with the Eportfolio Task Force on strategic planning and ongoing activities

Faculty	• Provide feedback on application functionality and user-interface • Assist in choosing an application
Students	• Provide feedback on application functionality and user-interface. • Assist in choosing an application
Administrative/ Support Departments	*Advising* • Provide input into how an eportfolio's workflow/operation can support the advising process (e.g., how it will best capture students' academic, research, and extra-curricular activities at Hopkins) • Assist in choosing an application *Career Services* • Provide input into how eportfolios can support students' professional development. • Communicate recruiting trends in industry that may affect eportfolio implementations • Assist in choosing application *Teaching/Learning Support Centers (CTE, CER, DMC, Language Lab, etc.)* • Facilitate conversation about and evaluation of eportfolio application. • Assist with planning user support infrastructure *Library* • Recommend long-term archiving strategy for student artifacts *Development Alumni Relations* • Provide input into alumni uses cases
IT@JH	• Develop budget for hardware, software, and technical support • Recommend appropriate technical infrastructure • Advise on how eportfolios could communicate with other enterprise systems (e.g., student information systems, course management systems)

VI. The Task Force's Recommendations

Because of their utility and overall value to the University, the Task Force concludes that the University should play an active role in facilitating the adoption and development of eportfolios at JHU. We recommend:

1) Hosting an Eportfolio "Summit"

An eportfolio summit should be planned for Spring 2009. This will raise institutional awareness of eportfolios, identify and assist potential pilot groups, and facilitate conversations between existing and new users, ensuring that best practices are shared and efficiencies gained where possible. In this forum, members of the Task Force will report on eportfolio activities at Johns Hopkins and facilitate a discussion about their potential uses at the institution. The entire Johns Hopkins community will be invited to the event; constituencies with special interest will be targeted for attendance. (Contact Mike Reese, Assistant Director of the Center for Educational Resources, at mreese@jhu.edu, about attending).

2) Creating an Eportfolio Community of Practitioners

The Eportfolio Task Force, having fulfilled its charge, is now dissolved. This calls for a successor group to serve as a University-wide resource. This "community of practitioners" will help to sustain conversations between the divisions with ongoing eportfolio projects and to facilitate the creation of new e-portfolio projects. The Task Force would encourage this community work with, or as a subgroup of, an institutional forum regularly discussing assessment, educational technology, and teaching and learning issues (e.g., the former SEDE 21 Subcommittee on Electronic and Distance Education). The Task Force acknowledges that a forum of this type is currently in development under the leadership of Dr. Betsy Lowery, Assistant Dean, School of Education Teaching Learning & Assessment, and Dr. Sarah Steinberg, Associate Dean of Advanced Academic Programs, at the request of CIO Stephanie Reel.

3) Fostering Additional Pilot Projects at the University

The above recommendations each play a role in encouraging the greater use of eportfolios at JHU. Fostering additional eportfolio projects should be embraced as a University objective. The School of Education and Carey Business School commitment to establishing sustainable eportfolio initiatives within their respective curricula is a foundation on which the rest of the institution can build. If previous pilots coordinated by the Task Force were purely exploratory, future pilots should be focused and purposeful with defined goals and measurable benchmarks so the piloting group can identify if, and then how, they will move to a full implementation. Those embarking on new pilots should recognize this systematic planning involves a significant amount of work. This effort, however, will improve the likelihood of success. In addition, representatives at the School of Education and Carey Business School are willing to help and share best practices.

Appendix A – Eportfolio Task Force Members

Active Members

- Joan Freeman – Digital Media Center (DMC)
- Sara Hill – School of Public Health
- Alex Gogue – IT@JH
- Ron Levy – Humanities Department, The Peabody Conservatory
- Jim Martino - Library Digital Programs (LDP), Sheridan Libraries
- Kate May – Center for Technology in Education (CTE), School of Education
- Michael Reese – Center for Educational Resources (CER), Sheridan Libraries
- Bill Smedick – Leadership Programs, Student Life
- Kristen Winters – Center for Technology in Education, School of Education

Former members who left Johns Hopkins

- Alice Brainerd - IT@JH
- Randy Hansen – SPSBE Center for Technology in Education (CTE)
- Anne Kirchgessner – Career Center
- Kristin McJunkins – Pre-professional Advising
- Susan Martin – Enrollment and Academic Services

Appendix B –Eportfolio Use at Other Institutions

The Eportfolio Task Force researched how other universities and colleges used eportfolios. This exercise generated a list of categories that classify how these institutions used eportfolios.

- Career Planning
- Academic Advising
- Degree Requirements Tracking/Student Learning
- Departmental assessment/institutional accreditation
- Alumni Development

Duke University - https://portfolio.oit.duke.edu/index.jsp

- Degree Requirements Tracking/Student Learning
- Departmental assessment/institutional accreditation

Duke made an internally-developed eportfolio system available to all students starting in 2001. The initial use was targeted for the first-year writing class that all students are required to take. Adoption was minimal because faculty did not require students to use it. Faculty groups, however, recently began to take ownership of the application. Six departments currently manage program portfolios to gather and archive student work for accreditation reporting. With interest growing, Duke plans to more fully implement eportfolios across the curriculum over the next three-five years. Left to be determined is whether they will stay with the internally developed product or phase in one or more other available products.

Mike Reese Phone Interview with Matt Serra of Duke University on October 27, 2008.

Iowa State University - http://www.celt.iastate.edu/edoc/

- Career Planning
- Degree Requirements Tracking/Student Learning
- Departmental assessment/institutional accreditation

The eDoc electronic portfolio system at ISU features custom-built electronic portfolio templates (called "themes") that are user-driven and designed by participating academic units (e.g., departments, programs, student organizations). This system is built on open source software and based on uPortal. eDoc electronic portfolios are used for a variety of purposes depending on the academic unit by whom and for whom a theme was developed. eDoc portfolios are used for learning, advisory, course, accreditation, assessment, and employment purposes.

The scope of adoption differs depending on the participating unit. The most mature participant, the Department of Food Science and Human Nutrition, has implemented eportfolios across their curriculum and boasts about 800 student users.

Iowa State shared several lessons learned. First, eportfolios are created by users, therefore, they constantly remind supporting staff of the importance of the participatory design. A programmer, Dr. Pete Boysen, created a so-called hot potato process that serves as a guide for designing teams. Second, eportfolio development calls for embedded curriculum. Third, eportfolio development requires active participation of students, faculty members, administrators, and other stakeholders. Fourth, eportfolios require leveraging grassroots and administrative support (this is actually supported by several researchers).

Email to Mike Reese from Leysa Hassall on June 20, 2008.

Rose-Hulman Institute of Technology - http://www.rose-hulman.edu/REPS/

- Career Planning
- Academic Advising
- Departmental assessment/institutional accreditation

The RosE-Portfolio system is a web-based system that provides for course, department, and/or institutional assessment of student learning. It is an integrated system that provides for student submissions based on student learning outcomes, faculty mapping of course level outcomes to institutional/program outcomes, student submission of resumes, and a rating module which provides faculty and other constituents the ability to develop and maintain inter-rater reliability and then to rate student submissions against the scoring rubrics provided. The system also contains a basic reporting tool.

Mike Reese phone interview with Julia Williams on October 20, 2006.

Virginia Tech University – http://eportfolio.vt.edu

- Career Planning
- Academic Advising
- Degree Requirements Tracking/Student Learning
- Departmental assessment/institutional accreditation

Virginia Tech established the VT Eportfolio Initiative in January 2008 in response to a call from the University's Board of Visitors to develop more robust accreditation strategies. All incoming students must develop learning objectives for which they will document evidence of completion before the graduate. The VT ePortfolio Initatives will be overseen through a staff of three once

hiring is complete. This group will work closely with the academic assessment office. Virginia Tech has been piloting eportfolio projects, however, since 2001, and has been involved in the Open Source Portfolio Initiative since its first version. Interest has grown rapidly in the last year with over 20 programs implementing eportfolios. Departments plan to implement portfolios for learning, assessment, and professional development.

The Materials Science and Engineering department created a professional development portfolio using a flexible template. During a required undergraduate class, students define what it means to be an engineer along with self-defined learning outcomes approved by their faculty. Students then document evidence of how they met those outcomes as they continue their coursework.

As part of ABET accreditation, the engineering faculty will use eportfolios to reflect on graduate students' performance on key qualifying exams. Faculty will comment on student performance on various criteria (e.g., professionalism, communication).

The English department created a matrix of learning outcomes that students must complete before they graduate (over 600 students in program). The outcomes do not correspond to specific courses because each student's course path differs. Students choose course work to upload as evidence of meeting each outcome. They also upload examples of their best work each semester. Students and their advisor review this information together each year. Students can share their completed eportfolio with potential employers or graduate schools.

Virginia Tech uses Sakai's open source portfolio because 1) of its flexibility, 2) its focus on assessment tools, and 3) the university's commitment to migrate from Blackboard to Sakai. Any student can create an eportfolio using a general template offered through Sakai, or faculty and departments can work with the Learning Technologies Office to develop custom eportfolio templates for specific programs.

A full listing of eportfolio programs is available at http://eportfolio.vt.edu/.

Mike Reese phone interview with Marc Zaldivar on November 4, 2008.

Penn State University - http://portfolio.psu.edu/

- Career Planning
- Academic Advising
- Degree Requirements Tracking/Student Learning

Penn State promotes student eportfolio work using students' existing institution-assigned web server space (similar to JShare). Currently students are allocated up to 5 GB of server space and the institution makes common tools available for their use. Faculty have begun developing a content management system using WebLion (Plone) to collect, tag, and store samples of course

assessments in a repository for accreditation purposes. Glenn Johnson shared that this two-pronged solution arose as a result of, "not finding a 'silver bullet' system which supports both student ownership of their personal learning and at the same time provides administrators with a backend that allows for collecting assessment data (for accreditation cycles)."

Some programs of study at Penn State require that students publish on-line Program portfolios before graduating. Many faculty require students to publish course work on-line in Course portfolios. Penn State's eportfolio development process encourages all students to become more actively involved in planning, and more responsible for achieving, their own educational goals. As a result of engaging in the eportfolio development process students must reflect upon and articulate current accomplishments and goals for the future.

Mike Reese's phone interview with Glenn Johnson on August 29th, 2008.

Purdue University - http://p3t3.education.purdue.edu/portfolio.htm

- Career Planning
- Degree Requirements Tracking/Student Learning

The Purdue Electronic Portfolio (PEP) system is a large-scale, web-based, database-driven electronic portfolio system for teacher education students. Developed as part of a Preparing Tomorrow's Teachers to use Technology (PT3) implementation grant from the U.S. Department of Education, the PEP system is designed to allow teacher education students to document their teaching knowledge, dispositions, and performances. It serves as a tool for student self-reflection, for assessment within the teacher education program, and ultimately as a tool for producing a presentation portfolio for students' seeking employment.

Accessed July 14, 2008 from website: http://p3t3.education.purdue.edu/portfolio.htm.

Indiana University Purdue University Indianapolis (IUPUI) in conjunction with NY Times
http://www.epsilen.com/LandingSite/Home.aspx

- Career Planning
- Academic Advising
- Degree Requirements Tracking/Student Learning
- Departmental assessment/institutional accreditation

"The Indiana University IUPUI ePort is constructed as an enterprise system fully integrated with their course management system, and designed to be integrated with the registrar's office, student information systems, and digital libraries system. It is also being developed in collaboration with the Open Source Initiative. ePort is currently organized around a Learning

Matrix based on the IUPUI Principles of Undergraduate Learning (PULs). The portfolio will be helpful for students to demonstrate their improvement and achievements in learning in their disciplines in relation to the PULs; it will be helpful for the campus to access information about student learning of the PULs; and it will be helpful for the overall learning mission of the campus as the infrastructure guides students to reflect on and integrate their learning. The portfolio is being conceptualized on a commitment rather than a compliance basis."

From 2003, November 3. *Electronic Portfolio White Paper, Version 1*. Accessed March 20, 2008 from http://www.eportconsortium.org/Uploads/whitepaperV1_0.pdf.

University of Denver - https://portfolio.du.edu/pc/about

- Career Planning
- Academic Advising
- Departmental assessment/institutional accreditation
- Alumni Development

The University of Denver Portfolio Community (DUPC) was created through a joint effort involving University of Denver students, faculty members, and staff. DUPC is a web-based application that supports the academic community with a searchable database of electronic portfolios for students, faculty, staff, and alumni, community discussion, academic program assessment based on student work, and an assessment rubric library.

Accessed August 16, 2008 from website - https://portfolio.du.edu/pc/about.

Florida State University - http://www.career.fsu.edu/portfolio/

- Career Planning

The FSU Career Portfolio enables students in all majors to develop a strategic career vision, pursue learning activities that will enhance the likelihood of their achieving personal and professional goals, and document their skills. It also provides employers with evidence that students are ready to make effective contributions in the workplace. Students have control over all information included in their completed portfolio (i.e., only skills and portfolio sections identified as desirable by students are shown in the output that is made available by students via web access provided to employers and other referred users).

Accessed August 23, 2008 from website: http://www.career.fsu.edu/portfolio/.

Clemson University - http://www.clemson.edu/ugs/eportfolio/

Career Planning
Academic Advising

At Clemson University, all incoming students are required to develop an electronic portfolio. A student's eportfolio is a purposeful collection of work created during the academic career that documents their accomplishment on several competencies.

- written and oral communication
- reasoning
- critical thinking and problem solving
- mathematical, scientific, and technological literacy
- social sciences
- cross-cultural awareness
- arts and humanities
- ethical judgment

See http://www.clemson.edu/ugs/eportfolio/ for description of competencies

Accessed October 10, 2008 from website: http://www.clemson.edu/ugs/eportfolio/.

Appendix C – Additional Eportfolio Resources

Basken, Paul. (2008, April 18). "Electronic Portfolios May Answer Calls for More Accountability." *The Chronicle of Higher Education*, pp. A30-1.

E-Portfolio Product Comparison - http://www.edpath.com/epvendors.htm

EPAC (Electronic Portfolio Action and Communication) Community of Practice - http://epac.pbwiki.com/

http://electronicportfolios.org/ - website of Helen Bartlett, a recognized expert on eportfolios.

Jafari, Ali (Ed.). (2006). *Handbook of Research on ePortfolios*, Hershey: IGI Publishers

Lorenzo, George, & John Ittelson. (2005). "An Overview of E-Portfolios." *The EDUCAUSE Learning Initiative*. http://www.educause.edu/ir/library/pdf/ELI3001.pdf.

Meyer, Barbara, & Nancy Latham. (2008). "Implementing Electronic Portfolios: Benefits, Challenges, and Suggestions." *EDUCAUSE Quarterly*, 31 (1), 34–41.

Reese, Michael, & Ron Levy. "Assessing the Future: E-Portfolio Trends, Uses, and Options in Higher Education" (Research Bulletin, Issue 4). Boulder, CO: EDUCAUSE Center for Applied Research, 2009, available from http://www.educause.edu/ecar.

University E-Portfolio Projects - http://ctl.du.edu/portfolioclearinghouse/search_portfolios.cfm

Appendix D – Task Force Summary of Eportfolio Pilots

The Eportfolio Task Force researched how other universities and colleges used eportfolios. This exercise generated a list of categories that classify how these institutions used eportfolios (see Appendix B). This categorization is applied to the pilots conducted at Johns Hopkins.

- Career Planning
- Academic Advising
- Degree Requirements Tracking/Student Learning
- Departmental assessment/institutional accreditation
- Alumni Development

Second Decade Society and Robins Internship Grant Program - Summer 2005 Pilots

http://www.jhu.edu/careers/internships/alumnigrants.html

- Career Planning

The Task Force conducted the first pilot in Summer 2005 with two summer internship grant programs: Second Decade Society (SDS) and Robins grant programs. The SDS Internship Grant provides grants to undergraduates working in unpaid or non-profit internships over the summer. The Robins Internship Grant provides similar funding to selected students working in internships in companies located in Asia during the summer. All SDS and Robins grant recipients were required to complete a portfolio documenting their experience in the internship.

The first pilot conducted a comparison of the Johns Hopkins Digital Portfolio (DP) and Open Source Portfolio (OSP). The Task Force assigned half the students to use the DP and half to use OSP.

Students found both the DP and OSP easy to use. They experienced few problems uploading content and stated that the eportfolio led them to spend more time reflecting on their work. Two participants presented their eportfolio to their employer. In both cases, the employer responded with encouraging feedback and general interest in the technology. While eportfolios are currently not a standard component of a job application, this interaction shows employers will likely be open to reviewing a job candidates experience through an eportfolio along with a standard resume. All respondents expressed interest in using the eportfolio after they completed their internship and after they graduated. Overwhelmingly, students felt that the primary benefit of the eportfolio was its potential for professional growth.

- "It might be useful to integrate the portfolio with Student Employment and the Career Center so students can send their website to potential employers."
- "I think an online resume would be a great tool to have, especially when searching for an internship or a summer job. I also found it to be a great way to document the big things that you might do in a class - projects, presentations, papers. While many

students create their own webpages to do so, this format was really very simple to use, and I think it would be great to give it the professional feel that comes with the software we used this summer."

- "Creating online resumes and keeping track of accomplishments/experience/skills/etc. that may be useful for future career possibilities."

Students also stated that they felt an eportfolio could be useful in documenting academic and undergraduate research experiences.

Senior Leadership Consultants - Fall 2005 Pilot

Career Planning
Degree Requirements Tracking/Student Learning

Each Spring, rising seniors can apply to become a Senior Leadership Consultant. This group of students spearheads several projects to improve the undergraduate experience at Homewood including administration of leadership workshops for undergraduates. The Task Force recruited these motivated students to complete a portfolio because of the numerous extracurricular activities and previous leadership experiences they could document in an eportfolio.

The Task Force assigned half the students to use the Johns Hopkins' DP and half to use OSP. All but one student (OSP user) rated the applications as easy to use. Interestingly, only half of the respondents wanted to continue using their eportfolio for the remainder of their senior year, but all but one student wanted to use it after graduation. This contradiction reinforces the open comments in which students regularly communicated recognition of the potential professional benefits of an eportfolio. One student commented that it would be best to introduce the eportfolio freshman year. "As a senior, it's been difficult to devote the time necessary to sort through and upload content-- whereas as a freshman, I could have used the eportfolio as a framework for organization and avoid this problem completely."

Hopkins 101 - Academic Year 2006-07 Pilot

Career Planning

Hopkins 101 is a year-long series of programs offered to freshman to help them learn more about the resources at Hopkins and encourage them to get involved in extracurricular activities. The eportfolio was presented at a session introducing students to the career center and its professional planning resources.

Seven students volunteered to participate in the Hopkins 101 pilot. None experienced technical difficulties using the tool, but several suggested minor modifications for the general portfolio

layout. During the evaluation phase, every student respondent (n=5) stated they would like to continue using the eportfolio as an undergraduate and after they graduate. However, several students admitted their busy schedule distracted them from uploading content.

- "I think it is an excellent resource. The only reason why I haven't completely used it was because I didn't have time to update it."
- "I just didn't take the time to get my materials ready to post in the portfolio."

Students said they thought other students would want to use eportfolios. All but one respondent answered that other students would definitely or most likely use an eportfolio. One suggested providing students access during senior year because seniors have more time and are preparing to apply for jobs. The irony is that seniors in the Senior Leadership Cohort (see above) said eportfolios should be made available freshman year so students could document experiences and courses as they occur. Together, these comments show that busy students are not likely to maintain an eportfolio as a voluntary activity.

Leadership Theory Course - Fall 2007 Pilot

Career Planning
Degree Requirements Tracking/Student Learning

This course introduces students to the history of Leadership Theory. Students explore the knowledge base and skills necessary to be an effective leader in a variety of settings. Students also assess their personal leadership qualities and develop a plan to enhance their leadership potentials. The JHU Digital Portfolio was made available to students with participation being voluntary.

The Task Force hoped to determine if an initial required exercise would encourage students ongoing, voluntary use of an eportfolio beyond the initial required assignment. Therefore, students were required to create an online resume using CTE's Digital Portfolio as an early assignment in the course with students' use of the eportfolio for subsequent assignments as voluntary. Students felt the lack of integration with WebCT, the course management system used in the course, made it more difficult to use the eportfolio for course assignments. Students felt it was not worth learning a new system when an existing system (i.e., WebCT) could already support their academic work. Even the course's teaching assistant expressed reservations about learning a new technology when an existing solution already existed that was widely adopted by students. Two students commented in the end-of-semester course evaluation that they would have continued to use the eportfolio if it had been a requirement. This pilot reinforced findings from other pilots that student use of eportfolios will increase if 1) the eportfolio is integrated with the CMS and 2) faculty require use of eportfolios for course assignments.

- Career Planning
- Academic Advising
- Degree Requirements Tracking/Student Learning
- Departmental assessment/institutional accreditation

In Fall 2007 The Peabody Humanities Department introduced the Johns Hopkins Digital Portfolio (DP) to new undergraduates enrolled in Peabody's first-year Humanities Seminar. Sixty-one students worked with this web-based technology; training was incorporated into the class.

The DP is part of a new curricular requirement initiated by the Humanities department in which student are required to document departmental requirements in their portfolio (e.g., personal artistic statement, an art review, historical research). The Fall 2007 Seminar called for several assigned portfolio submissions from each student. At the end of the semester, each student had several postings in their portfolio and were positioned for ongoing work to fulfill the portfolio requirement by senior year.

Student and faculty feedback provided a means to assess the project after this initial semester. Both groups expressed dissatisfaction in several key areas. Students were not convinced of the worthiness of the DP requirement, given the redundancy of posting work that had already been submitted on paper. Both faculty and students expressed concern that the DP system is excessively cumbersome. Some features of the DP serve other learning settings, but are not needed or appropriate for the Peabody DP requirement.

At the conclusion of the pilot, the Peabody faculty and colleagues from CTE and CER addressed these concerns. Discussion revolved around possibilities of adapting features of CTE's "Electronic Learning Community" (ELC) in order to establish more simple web-based protocols for the project in its second year. Student work can thus be retained in a digital repository; the collection of each student's work can be maintained as a portfolio that will be accessible to Peabody faculty (though inaccessible to a broader community). Decisions and further planning in this regard seem appropriate for a pilot year experiment with innovations challenging conventional ways of teaching and learning.