

# Student Portfolios: Bring the Kids When You Move to the Web

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## Abstract

There is a better approach to exploiting the Internet than piecemeal *electronification* of instructors' materials. This paper offers a system that balances instructor content with *student* content using a database approach that not only delivers course materials, but also delivers student portfolios created in response to the course materials. The Internet-based student/teaching portfolio system facilitates implementation and assessment of competency-based curricula. The heart of the system is a database containing instructor provided course competencies and activities/assignments that students complete to demonstrate mastery of the competencies. For each activity/assignment, the database contains instructor provided detail and help; Web resource pointers; and assessment description. Although the delivery of course materials is an important component of the system, the system is believed to be unique in its focus on showcasing and delivering multimedia portfolios the students create in response to the various competency activities. That is, it is unique in its focus on multimedia portfolios that students create to demonstrate their mastery of competencies developed in student life activities, career planning efforts; and in formal course work. During the system's five year development, implementation, and revision period, more than four thousand students from multiple institutions have been involved in building Web based multimedia portfolios using the system.

**Keywords:** Competency based curriculum, distance learning, Internet-based curriculum, lifelong learning, mentoring, student portfolios, teaching portfolios

## 1. INTRODUCTION

*Put courses on the Web.* This has been the answer to educational institutions' fears of losing geographically captive markets and also to their desires to seize opportunities to better achieve their missions. The focus has been to base the instructor's course work (course materials) on the Web with little concern about how the Web might be used to host artifacts of the student's course work. Furthermore, anecdotal evidence suggests that faculty moving courses to the Web tend to engage in the task independently from one another; concern about uniformity in course format and integration with other courses is secondary to getting the courses on the Web.

There is a better approach to exploiting the Internet than this piecemeal *electronification* of instructors' materials. This paper offers a system that balances instructor content with student content using a database approach that not only delivers course materials, but also delivers student portfolios created in response to the course materials.

This study describes an Internet-based student/teaching Portfolio System that facilitates implementation and assessment of competency-based curricula. For an example of a competency based curriculum approach see AICPA (1999) and for the use of portfolios in curriculum assessment see Banta *et al.* (1995) and DeMong (1994). The heart of the system is a database containing instructor provided course competencies and activities/assignments that students complete to demonstrate mastery of the competencies. For each activity/assignment, the database contains instructor provided detail and help; Web resource pointers; and assessment description. Although the delivery of course materials is an important component of the system, the system is believed to be unique in its focus on multimedia portfolios the students create in response to the various competency activities. The multimedia portfolios demonstrate student mastery of competencies developed in student life activities, career planning efforts; and in formal classroom work.

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During the system's five year development, implementation, and revision period, more than four thousand students from multiple institutions have been involved in building Web based multimedia portfolios using the system. The system was designed to accommodate multiple institutions from a single site

## 2. SYSTEM DESCRIPTION

The student Portfolio System helps students build an organized collection of World Wide Web multimedia "documents" that shows how each student is interweaving career planning, formal class work (separate sections for each course), and student life activities into a unique educational experience.

### Portfolio sections

Within the formal class work category, a student's responses to assignments and other significant work for each course taken is contained in hyperlinked portfolio sub-sections. Students also can include categories for assisting with job search (e.g. interview and resume). For example, students can add the *interview* category and give multimedia responses (text, audio, and/or video) to thirteen questions commonly asked during interviews in separate subsections. By including the *resume* section, they can present a brief summary of student career preparation in a format familiar to recruiters. The student can control access to each sub-section by various user groups (instructors, other students, mentors, recruiters, and all Internet users). As students create their portfolios, they have hyperlink access to materials/resources provided by faculty. These include the assignments/activities that the student will address to demonstrate their achievement of competencies, competency specific help, competency specific web pointers, and competency specific assessment descriptions.

### Multiple Institutions

The major categories of portfolio sections identified above reflect the Student Portfolio System's implementation at one of the participating institutions and as a matter of convenience, the subsequent text will refer to the same unit. The system has considerable implementation flexibility in that multiple universities, colleges, and departments can tailor the system to their individual missions by creating whatever competency categories they want their students to possess, but also can share competency resources with other institutions. Flexibility combined with multiple universities in the same Student Portfolio System opens a number of collaborative opportunities and increases the value of the site to each user.

### Mentoring

Because the instructor provided course materials and the student responses are in a database, the system permits data views facilitating other uses such as mentoring. For each section of a student's portfolio the system maintains

a log where faculty, mentors, and recruiters can provide comments to the student about his or her work.

### Other uses

The following lists applications of the system identified in the previous discussion as well as applications for which space does not permit discussion:

- 1) Delivery of student portfolios
- 2) Delivery of competency based curriculum
- 3) Mentoring
- 4) Curriculum analysis
- 5) Course Integration
- 6) Lifelong learning
- 7) Career Planning

The remainder of the paper documents the system from the student perspective. Documentation from the faculty and mentor perspectives is not shown here but is available on the Web (<http://portfolio.ilstu.edu/portnews.htm>)

### The system from the student perspective

**Registering with the system.** Before using the system for the first time, students register by providing an id, password, and basic information such as their institutional affiliation and major department. They can then access the system and enter their id and password to move to the system's main menu. Please note that the main menus for faculty and mentors are different from the students and different from each other reflecting the different uses by the three groups. Documentation from the faculty and mentor perspectives is not in this paper, but is available on the Web (<http://portfolio.ilstu.edu/portnews.htm>)

**Main menu and adding a course.** At any time, but usually at the beginning of the term, the student adds courses or other competency categories to his or her portfolio by selecting *Add Course* from the main menu. After selecting *Add Course*, the student is presented with an intermediate screen showing the institution's academic departments and categories of non-course competencies (e.g. *Student life activities* and *Lifelong learning*). Selections from the intermediate screen result in a listing of specific courses and competency categories by year, term, and section. Just as a required text book for a particular course depends on the section, term, and year, the competencies and other instructor provided materials in the portfolio system may vary by section, term, and year. The entire process of logging on and selecting the appropriate courses takes less than a minute or two and the student will not repeat use of the *Add Course* feature until the following term.

**Viewing the student's portfolio.** Having added the correct courses and other competency categories to his/her portfolio, the student can select *My*

*Portfolio* from the main menu and is presented with his/her portfolio as shown in Figure 1. The upper part of the left frame provides the student name and email address which can be clicked to open a mail window. The rest of the left frame shows the course numbers and other competency sections the student added when they used the *Add courses* feature. In this case we just see the course Accounting 468 and the specific competencies making up that course. If we scroll the left window down, we can see the competencies for the other classes and categories the student has added.

The large frame on the right appears after clicking a particular competency hyperlink in the left frame. The content in the large frame on the right is the student's work which, in this case, appeared after clicking *Technology and Competition* in the left frame. Please note that this student has already worked on his portfolio because we see content in the large frame.

#### **Assignment/activity and instructor help.**

The student or the reader can see the activity/assignment; help, Internet resources; and assessment information for this competency by clicking the *Technology and Competition* link at the top of the large frame on the right. Similarly the student or reader can access the syllabus by clicking the course number link at the top of this frame. These links and the rest of the header are generated by the system and pull instructor provided syllabus and competency content from a database.

#### **Composing and editing a portfolio section.**

The student composes a section of his or her portfolio by clicking *edit* next to the desired competency listed in the left frame. The student can type text or HTML directly into an edit box that appears. In practice, most students copy and paste their documents from an HTML editor which takes a few seconds. Below the edit box (not shown) are the visibility settings the student can use to determine who will see the particular section. The students have an upload link (not shown) that allow them to upload images, video, sound, word processing documents, spreadsheet pages, and any other kind of file to the server. The student can create multimedia portfolio pages by linking to these from their portfolio compositions.

Above the edit box (not shown) is a link to the comment log for this section of the student's portfolio. The student can click this link to see comments about this section that have been left by faculty members, mentors, and/or recruiters that the student has permitted to access the section.

**Controlling access.** In addition to setting access as described above when a portfolio section is composed, the student may select *Access* from the main menu and see a list of all the portfolio sections that he/she has composed. The student can then set access

easily by clicking the particular user category that he/she wants to permit visibility. By using this, the student can present different collections of work to different system users. Hence the student may allow faculty to see the entire portfolio, but allow recruiters to see only finished sections. The user will see listings in the left frame of the student's portfolio for only those competencies that the student has permitted access.

### **3. BRINGING THE KIDS WHEN YOU MOVE TO THE WEB**

As indicated in the introduction, the heart of the system is a database containing instructor provided course competencies and activities/assignments that students complete to demonstrate mastery of the competencies. For each activity/assignment, the database contains instructor provided detail and help; Web resource pointers; and assessment description. The system is believed to be unique because it brings the student along when courses are moved to the Web. That is, it focuses on multimedia portfolios that students create to demonstrate their mastery of competencies developed in student life activities, career planning efforts; and in formal course work.

The online portfolio with its associated course materials helps the student see relationships between content in various parts of the curriculum. That is it has the potential to assist in integrating the curriculum from the students' perspectives.

Because student responses are in a database, the curriculum can be analyzed from an outcomes perspective. In contrast to paper portfolios with their considerable physical bulk, electronic portfolios open the possibility of assessing curriculum delivery through efficient examination of outcomes students produce in response to competency related assignments and activities.

### **4. REFERENCES**

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Figure 1. Student's Portfolio

