Introducing EXAMPLE

UW Extension Authoring for Mobile Personal Learning Environments

An ICS Mobile Learning Initiative

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Introduction

Instructional Communications Systems’ (ICS) mobile learning platform EXAMPLE was designed around three tenets and best practices for mobile learning: (1) students and instructor(s) are co-creators of knowledge and co-contributors to the learning process; (2) students learn best when they can set their own learning goals and manage their own learning, and; (3) mobile devices are best used to extend and expand the learning contexts of the learning community.

The core capabilities of EXAMPLE are its ability to allow learners to easily create and contribute to the knowledge base of the learning community, and the ability to allow learners to manage their own learning through a personalized learning environment (PLE).
**EXAMPLE pedagogy and engine**

At the heart of EXAMPLE’s engine are content blocks. A content block is a portable instructional element consisting of learning objects and instructional activities sequenced and designed to support an instructional goal or an enabling-objective. Both instructors and learners create and contribute to the knowledge base by authoring content and customizing instructional activities using content blocks (instructors have additional authoring capabilities). Content blocks are further designed to be used and re-used with other content blocks to create a learning experience that fulfills a learner’s self-directed learning goal. Content blocks use the Lego metaphor. As a self-contained, portable instructional element, learners use content blocks in a personal learning environment to organize and sequence content and activities to support a self-directed learning need. When their learning needs change, different permutations of content blocks are used. In order to be effective, content blocks and associated supporting elements have the following characteristics: (1) portability, the ability to be used, re-used, and, adapted to different learning goals; (2) support for self-directed goals, the ability for learners to be able to customize a learning experience aligned with their own self-directed goals; (3) access, the ability for learners to participate and contribute to the body of knowledge in specific and differing contexts. These characteristics are expressed through the design elements in EXAMPLE.

**A learning-community centered design**

A learning community is a group of people who have a shared interest in an area of study and brings a diversity of perspectives and a range of skills and abilities to produce knowledge as a shared goal (Bransford et al., 2000). EXAMPLE was designed with the premise that learners are co-creators and co-contributors to the knowledge base and therefore learners should have access to advanced instructional authoring capabilities to fulfill that role. However, providing learners with access and advanced authoring capabilities are in themselves necessary, but insufficient conditions to promote an effective learning community. For Bransford et al, environments that best promote learning will have four interdependent aspects: a focus on the learners; well-organized knowledge; assessment; and a focus on the community. EXAMPLE addresses the four interdependent aspects as follows:

**Learner-centeredness** - Content blocks give control to the learner to utilize the instructional tools to translate their knowledge, skills, attitudes, and beliefs into instructional objects, thereby contributing to the learning process.

**Knowledge-centeredness** - Content blocks are designed with an intuitive interface that allows learners to easily create well-organized bodies of knowledge.

**Assessment-centeredness** – Content blocks have built in assessment tools designed for formal and informal feedback opportunities.
Community-centeredness – Content blocks gives learners access and tools to contribute to the knowledgebase. This forms the basis and opportunity for learners to learn from one another.

Personalize Learning Environments (PLE)

A personal learning environment (PLE) is a learning system that helps learners take control of and manage their own learning. This includes providing the learner with the capabilities to: (1) set their own learning goals; and (2) manage their learning by organizing the appropriate content to support those goals.

*EXAMPLE* is designed to support two simultaneous learning paths; a path prescribed by the instructor and self-directed paths decided by the learner. One of the operational principals of content blocks is portability and it is this portability that allows content to be used in the various paths. When content is created via content blocks, they are sequenced in the prescribed path designed by the instructor. Additionally, *MyPLE* in *EXAMPLE* gives learners the ability to organize, select, and, sequence content outside of the prescribed path.

Contribute anytime, anywhere

In order for learners to extend and expand the learning contexts of the entire learning community, learners must be able to create content, interact meaningfully with other learners, and interact meaningfully with content via their mobile devices. A mobile device is often an appropriate proxy for a learner’s unique physical and non-physical contexts. A physical context could be a location or geography; a non-physical context could be a creative or reflective state of mind.

*EXAMPLE* is 100% mobile organic. It was designed and developed for mobile learning. All instructional tools in *EXAMPLE* are accessible via mobile devices. Mobile interaction with content, instructors, and other learners is further reinforced through best practices governed by instructional design for mobile learning.

How *EXAMPLE* works

One App, One Course

Each course in *EXAMPLE* exists as an individual App. Instructors and learners install the course of choice on their mobile device(s) from the app stores. Apps can be downloaded onto multiple devices, across mobile operating systems. A learner gains access to the course through a secured
sign-in protocol, regardless of device(s) used.

**EXAMPLE’s** interface consists of a home page and three elements: Syllabus, Search, and MyPLE.

**Home page**
The home page is the course landing page. The home page contains basic description of the course. This includes but not limited to course title, course number, course section, instructor, number-of-credit(s), course pre-requisites, and navigational tools.
Syllabus

The syllabus is the space where learners gain access to instructor created content and activities. This is the instructor-prescribed path of learning area. The syllabus is composed of a series of instructional units chunked into modules, weeks, topics, and or other useful units of chunking. The first instructional unit of syllabus is About the Course. Faculty use this area to author logistical and administration information about the course.

Instructors author content either on mobile devices or on a computer. Instructor’s authoring capabilities include: text, media, documents, links, images, communications tools, and, assessments tools. In addition, instructors have the ability to allow students to create content associated with an instructional unit. Learners use content blocks to create content which is added and sequenced in that instructional unit.
Contribute

*Contribute* gives learners and other participants of the course the ability to author content via content blocks. Learners author content either on mobile devices or on a computer. Authoring capabilities include: text, media, documents, links, images, quizzes, chats, private messaging, and crowd sourcing.

All content created via the content blocks appears sequenced in the instructional unit that it was created in, as well as in the course database accessible via *MyPLE*.

My PLE

*MyPLE* or my personal learning environment is the space where learners can organize, select, sequence content outside the prescribed path of the instructor. For example a learner may need to review the material for a particular topic. MyPLE gives the learner the capability to organize the relevant materials to support a particular learning goal.
Search
All content created appears in the course database and can be searched and added to the content in MyPLE. Searches are commonly done via keywords, or by creators.

Manage Users
This is an instructor only area that allows instructors, TAs, and administrators to manage user accounts. Accounts information, approvals, and upgrades are performed here.
Manage Content
This is an instructor only area that allows instructors to author content.

Instructors are able to add instructional units to the course, as well as author content within each instructional unit.

Conclusion
The EXAMPLE prototype was completed in October, 2013. The system is currently fully functional and being used as a proof-of-concept in a number of initiatives. Immediate and near-term plans include improving the usability and scalability of EXAMPLE and stress-testing the system for enterprise-wide use. Individuals interested in finding out more about the EXAMPLE system or getting involved as a strategic partner can contact the authors of this paper for more information.

References

About the EXAMPLE Team
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