The Learning*Online* Network with CAPA Initiative

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Abstract - *With funding of the National Science Foundation Information Technology Research program, the LearningOnline Network with CAPA (LON-CAPA) Initiative aims to create and sustain a cross-institutional distributed platform for content creation, sharing, and delivery. LON-CAPA will allow groups of organizations (schools, departments, universities, commercial business) to link their online instructional resources in a common marketplace, thus creating an online economy for instructional resources.*

The leaders of most traditional educational institutions feel the urge to establish an online presence, yet there are few established mechanisms to handle these new media in an academic setting. Initial successes were often due to individual faculty members ("early adopters" of this new technology), who worked long hours to develop material more or less single-handedly. At this point, several years later, a number of these pioneering faculty members are experiencing burn out, in part due to a lack of reward for their efforts. Frequently, they are leaving behind scattered projects, which are of little use for the institution as a whole and far less for the larger academic community. Even though the institution might endorse or even demand it, the main body of faculty sees little or no incentive to generate and then improve, or even to utilize online resources given the large time commitment involved.

Our assumption is that this situation could be remedied by the creation of an appropriate market-driven infrastructure for resource sharing, which for example provides the following functionality similar to that of a digital library:
- publication, cataloging, versioning, searching and retrieval of resources intellectual property protection usage metering and royalty flow calculation

Beyond this functionality, the system has to provide functions similar to and beyond those of an instructional management system, for example:
- tools to easily and dynamically combine resources from various authors and institutions into resources of higher granularity up to the level of online "course packs"
- a set of content handlers to generate and serve for example individualizing assessments
- course management tools such as integrated grading spreadsheets
- tools for learner-learner and learner-instructor communication and collaboration
- feedback mechanisms to assess the effectiveness and quality of resources
- means to set up peer-reviewed libraries of standardized assessments

Having its roots in successful online content delivery and individualized assessment systems already developed at MSU, namely CAPA [1] and Lecture*Online* [2] (serving a total of 7,000 students at MSU), as a model system, we plan to continue building the Learning*Online* Network with CAPA (LON-CAPA) [3]. LON-CAPA is currently (spring 2001) in beta-test with two courses at MSU.

Over the coming five years with support by the National Science Foundation, we plan to transform this system beyond the boundaries of MSU's campus into a dynamic online collaborative community of faculty authors, commercial publishers, and learners. The project currently has 17 pilot user institutions, and involvement from four major publishing companies and RedHat software. Additional collaborators are actively sought.

We believe that quickly scaling up this effort while accommodating a diverse user community is crucial to reach a critical mass of educational content, which could transform this network into a nationally used pool of online instructional resources. Further on, a large diverse user community will allow researchers to gather statistically significant data regarding online teaching and learning, as well as regarding market dynamics in an online educational economy. We plan to eventually develop this network into an independent, possibly not-for-profit organization, which remains driven by faculty and is part of the academic community, yet at the same time involves commercial partners and contributors. Further on, the LON-CAPA software tool itself will be made freely available in open-source under a GNU public license.

References

[1] http://capa.msu.edu/
[2] http://www.lite.msu.edu/kortemeyer/lecture.html
[3] http://www.lon-capa.org/

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