WHITEPAPER

FROM COURSE ***MANAGEMENT*** TO COURSE ***NETWORKING***:

Conceptualizing a New Learning Environment Based on Social Networking

Ali Jafari, *Professor / Entrepreneur*

Amy L. Baylor, *Research Advisor*

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From Course *Management* to Course *Networking*

ABSTRACT

The conventional Course or Learning Management System (CMS / LMS) approach is limited by its focus on course delivery and management. The Course Networking model that we propose not only supports course management, but also generates new learning opportunities with social networking as the foundation for learning. We describe how learning in the Course Networking approach builds upon social networking paradigms to which the Millenials in particular are accustomed, leading to socially-mediated learning that is rewarding, engaging and entertaining. Drawing from the limitless Internet, the Course Networking model includes massive resources to support expansive and student-driven learning. The technical framework of this approach allows the environment to scale and supports massively populated learning that is intercultural in nature and fundamentally free. Importantly, these new learning opportunities are supported by a business model that is driven by educational goals rather than for-profit motives.

MOVING BEYOND THE COURSE MANAGEMENT MODEL

It is time for a major redesign of learning environment tools for classroom and online learning. The conceptual design of Course or Learning Management Systems (referred to here as CMS), focuses primarily on the "management" aspects of courses, mostly informing and guiding students on what they should do next in their role as a student. In many cases, the main reason that students log on to a CMS is to learn what tasks are upcoming, review forthcoming assignments, submitting assignments and to assess grades.

As evidenced by systems such as Facebook and Twitter, a new communication and networking paradigm has changed the way people communicate and socialize globally. Millenials (those aging from 13-30) in particular find social networking natural and comfortable. As described by Keeter and Taylor (2009), Millenials are the first generation in human history who regard behaviors like tweeting and texting, along with websites like Facebook, YouTube, Google and Wikipedia, not as intriguing innovations of the digital era, but as everyday components of their social lives and their search for understanding. Building on this new communication paradigm, a course networking model for learning focuses on student engagement, collaboration, and activities above and beyond what students can do in a face-to-face classroom.

The conventional CMS approach is based upon connecting the *limited* members of a given classroom, creating a closed environment only accessible by members of a single class. Similarly, based on its business model, a CMS is designed to run and licensed only within a single licensed campus or a system school. Even if another campus is using the same CMS environment, it cannot participate as part of the larger group using the same platform. By contrast, the Course Networking model allows for the elimination (if desired) of traditional classroom "walls" and supports learning as open, free, and collaborative, consisting of interconnected content from postings and intercultural collaborations throughout the world.

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Except for a very few recently marketed systems, CMS are designed with little attention to human factors and user-focused design. In many cases, a very basic function may require several clicks, and prior instruction or experience may be needed before faculty and students are comfortable within the environment. Even emerging systems that are gaining in popularity are designed to offer increased functionality and more capabilities, rather than being focused on a more intuitive and user-friendly design, a model that runs counter to the Apple design philosophy of "less is more" or "less is better" inspired by Steve Jobs (Jobs & Beahm, 2011).

DEFINING FEATURES OF THE COURSE NETWORKING MODEL

A number of integrated feature sets distinguish the Course Networking model from the traditional Course Management approach. These feature sets may appear as a set of distinct tools or a new set of features that, when integrated, offer unique functionality that cannot be found in the conventional CMS approach. These feature sets are described below, followed by a discussion of learning opportunities provided by these features.

- **Comprehensive posting and reflection tools** allow learners and instructors to create postings with a variety of media attachments, including files, images, YouTube videos, and links. Members with appropriate access permissions can "like" a post or "reflect" upon it.

- A **reward system** provides reward points or badges to learners as they engage in social learning, knowledge sharing, peer assessments, and collaboration. Such gamification techniques make learning more fun and engaging (see Kapp, 2012). Within our learning environment, theCN.com, the Anar feature is a reward system that monitors student activities and offers real-time points via a smart software agent.

- **An extensive notification system** provides notification messages via smart phone, email and the website based on each member's personal settings. With these notification features, members are no longer required to sign in to a learning environment to look for assignment due dates or to review classmate reflections on their work.

- **Personalized social networking** offers the capability of creating learning groups (Courses), interest groups (Conexus), and groups of courses within the same or similar learning categories. Both official instructors and authorized course members can create an online course or a MOOC (Massive Open and Online Course) to be shared with their respective learning communities.

- **Course pairing** allows for courses to be mapped based on same or similar subject categories. This provides group to group social learning opportunities that expand beyond the immediate classroom, providing dynamic networking among learners from courses within different institutions and countries.

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- **Access control** features securely control the access permissions for every post and of personal profile information, allowing the user to define the viewing rights of classmates, students taking similar courses, followers, colleagues, the public, or some combination thereof. This enables the instructor or course creator to determine whether a course functions as a standalone, closed course (as within a traditional CMS) or as an open course or MOOC, offered to millions throughout the world.

NEW LEARNING OPPORTUNITIES

These feature sets lead to new learning opportunities within the Course Networking model, as described next. See the table below for a visual representation of how these features directly contribute to the learning opportunities.

System Features

Learning Opportunities	Posting & reflection tools	Reward system	Notification system	Personalized networking	Course pairing	Access control
Socially-mediated learning	√		√	√		
Reflective learning	√		√			
Rewarding learning	√	√				
Engaging learning	√	√				
Entertaining learning		√	√	√		
Massive resources for learning	√				√	
Student-driven learning	√			√	√	√
Expansive learning	√			√	√	√
Massively populated learning				√	√	√
Free learning				√	√	√
Intercultural learning				√	√	

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SOCIALLY-MEDIATED LEARNING

As a networking environment, the Course Networking model is inherently social and collaborative. The collaboration that is part of this learning experience incorporates peer reflection - e.g., liking each other's posts and reflecting upon them. These contributions are socially mediated, leading to knowledge that is co-constructed by and among a broad base of students (Greenhow, 2011).

REFLECTIVE LEARNING

The core interactions within this environment involve students' reviewing and reflecting on each other's postings within and beyond the classroom, providing a type of peer review that is key for learning. Because students are primarily writing to an audience of peers in this model, they are communicating in an authentic way, putting information in their own terms. Importantly, these postings serve as direct and indirect supports for more effective learning.

REWARDING LEARNING

With incentive points such as the "Anar seeds" in theCN.com environment, learners realize extrinsic rewards for behaviors such as quality posting, reflecting, and contributing to the course dialogue. The system can send daily emails to students to advise them of their progress in attaining these "seeds." Reward systems such as these provide incentives to students and recognition for their participation, serving as positive reinforcers for learning (Kapp, 2012).

ENGAGING LEARNING

Not only does the Course Networking model support extrinsic motivation through rewards such as Anar seeds, it also supports intrinsic motivation by engaging students in the learning process. Students have the freedom to select topics of personal interest, supporting their individual autonomy, which directly impacts their intrinsic motivation (Deci & Ryan, 2002). For example, a student who is passionate about the environment can share relevant postings about global warming for a geology class or the public. In contrast to the Course Management approach where students must wait for faculty feedback on a course assignment, the Course Networking model provides ongoing feedback from peers in a global setting.

ENTERTAINING LEARNING

In the Course Networking model the learning experience is fun and interactive. Participation resembles activities students already engage in through activity on Facebook and Twitter. Some examples of possible interactions might include an American student who can choose to collaborate with an Italian student for a course project in Calculus or share a popular YouTube music video that is directly relevant to an American Studies course. Receiving a "like" or a positive "reflection" from others enhances personal satisfaction and makes contributing fun.

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MASSIVE RESOURCES FOR LEARNING

Students have the entire Internet and its huge multimedia resources at their disposal to complement their learning resources beyond what is provided by the instructor. In the Course Networking model, accessing those resources and sharing with peers is just a click away with endless possibilities. When there is confusion on a course concept such as the definition of equilateral triangles, for example, a student can provide an explanatory post (e.g., animations, video) from a variety of perspectives to further explain concepts to others in the course. In contrast to the Course Management model, in the Course Networking model the teacher is no longer the only provider of resources and knowledge. Instead, each student can play the role of a teacher, drawing from a massive amount of complementary resources and knowledge.

EXPANSIVE LEARNING

Building from the massive resources of the Internet, learning within the Course Networking model provides choices for students to expand their learning possibilities beyond the course learning objectives. In a particular course, if a student wants to go in-depth regarding the Baroque period in a music seminar, she can focus her postings on that topic. If another student wants to get an overview on all related course topics, he can divide his time accordingly. As part of an informal learning process, students contribute to the course knowledge and expand learning outcomes beyond the initial more formal course objectives.

STUDENT-DRIVEN LEARNING

In Course Networking model, students can also pursue topics of personal interest by joining other courses or Conexus (special interest) groups. They can also "follow" individuals who impress them for one reason or another, and watch for postings that interest them. Additionally, if a learner is interested in a topic but is not formally enrolled in a course in that topic within an institution, he or she can start his or her own Course or Conexus, for example in theCN.com and to invite other interested users to join the group and contribute to the ensuing dialogue.

MASSIVELY POPULATED LEARNING

Unlike the Course Management approach, which is limited to students enrolled in a given course, in the Course Networking approach, students from all over the world can participate if desired. There is no limit to the number of participants who can join the network, allowing even more possibilities for collaboration, reflections, contributions, and increased learning opportunities.

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FREE LEARNING

Building upon the unlimited resources available from the Internet, learning within the Course Networking approach is fundamentally free. Whether students are part of a MOOC, online course or lecture-based course, they are supported. With the Course Networking approach, the course learning resources are no longer limited to the textbook referenced by the course instructor; instead, individual students can contribute from the massive amount of free reference materials

INTERCULTURAL LEARNING

Students from all over the world can participate in the Course Networking approach, adding a global dimension to the overall experience. This is in contrast to the Course Management model where classmates are limited to the registered members of a class. Translation tools such as the translate tool within theCN.com allow for easy translation of postings. Instructors and Moderators can deliberately connect their courses with other courses around the world to increase learner perspectives and cultural competencies.

Overall, the goal of the Course Networking approach to learning is not to perpetuate a closed, learning environment that mirrors the traditional model of education. In our proposed Course Networking model, learners are encouraged not only to take responsibility for their own learning but also to contribute to the learning of their peers in a way that is authentic in the context of their interests, needs and social perspectives. The goal of the Course Networking model is to "change the way the world learns" from the past, passive and isolated experiences, to a globally relevant mode of rewarding collaboration.

BUSINESS MODEL

Built upon this Course Networking model, our theCN.com learning environment is supported by a new business model. The company, CourseNetworking, LLC, is envisioned as a massive, collaborative entity, owned and developed by educational institutions and academics rather than venture capitalists. Furthermore, the revenue model that will create a sustainable business requires unique streams of income. Because the model offers free services globally, specifically to learners in developing countries, funding will not be secured through the traditional licensing agreements or participation fees of CMS providers. Instead, theCN.com will generate and maintain revenue through multiple discrete categories of income

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TECHNICAL FRAMEWORK

In the Course Management model the expandability of the system is limited to the total number of students and instructors within a walled campus or a system institution. In contrast, the Course Networking model requires a new technical framework so that the environment can scale to hundreds of millions users within a single environment. In lieu of this difference, theCN.com is hosted in the cloud and available design using the NoSQL framework.

CONCLUSION

Overall, in contrast to traditional Course Management Systems (CMS/LMS) that *manage* online and classroom-based learning, our Course Networking model provides *networked* learning founded on social connections among learners, instructors and other members in a global context. This environment affords learning that is socially-mediated and ultimately rewarding, engaging and entertaining. Building upon the massive resources from the Internet, our model supports an expansive view of learning with room for significant student choice.

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Ali Jafari, Ph.D. is Professor of Computer and Information Technology at Indiana University Purdue University Indianapolis (IUPUI) and CEO and Founder of CourseNetworking, LLC. As an entrepreneur, Jafari has created and founded several high profile systems and companies including Indiana University Oncourse (now Sakai), ANGEL Learning, Epsilen Environment, and most recently theCN.com.

Amy L. Baylor, Ph.D is a learning experience strategist, specializing in the design and evaluation of advanced technologies for learning. She was formerly Lead Program Officer for Human-Centered Computing at the National Science Foundation and a tenured professor of Instructional Systems and Information Technology at Florida State University.

CourseNetworking, LLC is headquartered in Indianapolis Indiana and was created with funding from Indiana University and other prospective academic institutions to develop and market the next generation of learning environment based on social networking. In March 2012, CourseNetworking LLC released its academic social networking site called CN (theCN.com), free to anyone anywhere in the world. In November 2012, theCN.com had registrations from 59 countries.

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