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## **MOOCs for LIS Professional Development: Exploring New Transformative Learning Environments and Roles**

**Michael Stephens**  
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# MOOCs for LIS Professional Development: Exploring New Transformative Learning Environments and Roles

Michael Stephens<sup>1</sup>

*Thanks to SJSU SLIS student Margaret Jean Campbell for her invaluable assistance editing and formatting this piece. Thanks to Kyle Jones, PhD student at the University of Wisconsin-Madison's School of Library and Information Studies and SJSU SLIS lecturer, for his incredible work designing the site architecture and for co-instructing the Hyperlinked Library MOOC.*

*The rapid development of emerging disruptive technologies is a driving force behind the evolution of the library and information science (LIS) profession and is causing a redesign of the traditional approaches to LIS professional development. Historically fairly static, LIS environments have evolved into dynamic reflections of the enormous societal changes occurring as a result of open communications and access throughout the Web. In addition, 21st century LIS professionals must consider and prepare for the new roles they might play in network-enabled, large-scale learning environments. Several decades of research on self-directed learning (SDL) have shown the social, non-linear, and serendipitous process to be transformational. LIS professionals, who once relied upon yearly conferences, employer-provided seminars and workshops, and association newsletters in order to update their knowledge, have embraced SDL opportunities to expand their understandings and skill sets. The first wave of SDL and networked platforms for LIS professional development (Learning 2.0) may have been precursors to the connectivist learning environments designed into the free, not-for-credit, massive open online courses (MOOCs). Because these new environments of participatory and transformative learning offer the potential for LIS professionals to test emerging technologies, experiment and play with new roles, and self-select teams for collaborative artifact creation, the author has adapted his existing online graduate course, called the Hyperlinked Library, at San Jose State University's School of Library and Information Science (SJSU SLIS) in order to explore how LIS professionals can use emerging technologies and participatory practices to serve their communities. Launched in September 2013, the Hyperlinked Library MOOC pilot (#hyperlibMOOC) provides a sandbox in which LIS professionals and students can play the roles of learner, connector, and collaborator in a self-directed yet social learning experience. Results from the pilot course will contribute to a better understanding of how the not-for-credit MOOC can serve as a transformative environment for professional development.*

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### Key Words

*LIS, professional development, information science, MOOC, connectivism, connectivist, collaboration, participatory learning, transformative learning, self-directed learning, collaborative learning, connected learning, SDL, andragogy, L2.0, learning 2.0*

## Introduction

**D**isruptive technologies continue to force the evolution of tried and true systems. Nowhere is this more evident than in the realm of education. The influx of technologies to connect learners to instructors and course material remotely has changed the very fabric of higher education, as well as continuing education and professional development. Dialing in, modem-based systems have given way to Internet-connected online learning environments, which in turn have evolved into experience-rich learning landscapes.

At the same time, those who support educational pursuits—librarians and information professionals—are faced with their own evolutionary transition. Disruptive technologies and trends impact library services as well. Recent library literature has featured coverage of e-book issues, the changing behaviors of information seekers, and the evolution of a profession once charged primarily with being the gatekeepers of collections into a profession that will include managing virtual communities for learning and research.

At the cutting edge of this horizon is the massive open online course (MOOC). MOOCs are touted by some as a means to transform teaching and learning for the 21st century, presenting an opportunity for global, open participation. Learners can access an educational opportunity from anywhere with peers from all over the world.

The emergence of network-enabled 24/7 learning presents challenges for those

supporting learners, specifically librarians. What roles will and should they play in future large-scale virtual communities and learning programs? When learning resources are openly available on the Web and organized within a MOOC, are librarians needed to manage the resources and facilitate access?

With the opportunities for global online learning come some considerations. This article explores emerging thought concerning MOOCs within a framework of the roles the library and information science (LIS) professional can play as learner, connector, and collaborator in large scale courses. In addition, this article presents a new initiative to offer a large-scale, open course for librarians globally as a mechanism for professional development and continuous learning.

## Methodology

**T**he methodology used for this article is based on “futures research” (Glenn, 2003) and blends the methods of environmental scanning, trend research, and scenario planning. “The purpose of futures methodology is to systematically explore, create, and test both possible and desirable futures to improve decisions,” notes Glenn (2003, p. 3), and it “provides a framework to better understand the present and expand mental horizons” (p. 3). Futures research “includes analysis of how those conditions might change as a result of the implementation of policies and actions, and the consequences of these policies and actions” (Glenn, p.3).

By combining a literature review with the qualitative methodologies of environmental scanning and trend research in this paper, we can outline various scenarios and the potential roles for LIS professionals in evolving and expanding learning environments.

Library service provider OCLC used such methodology in the 2003 OCLC Environmental Scan: Pattern Recognition report to its membership to identify and describe emerging trends that were impacting libraries (De Rosa, Dempsey, & Wilson, 2003). Reports and research from OCLC on the impact of social media, sharing and trust in a networked society, and the transformative power of libraries also use this methodology (De Rosa et al., 2003).

Scenario planning is a process of presenting and discussing multiple combinations of ideas as a way of quickly coming to a collection of plausible possibilities for the future (Johnson, Adams Becker, Cummins, Estrada, Freeman, & Ludgate, 2013). Scenario planning allows us to identify potential roles that LIS professionals might play based on current trends and scanning as well as on insights from the literature.

## Literature Review

### *Self-Directed Learning (SDL), Professional Development, Learning 2.0, and MOOCs*

A brief literature review of pertinent topics provides a foundation to explore the potential roles of LIS professionals in networked, participatory learning environments. These include roles in SDL, professional development, Learning 2.0, and the emerging MOOC environments.

### **Self-Directed Learning (SDL)**

Candy's (1991) model of SDL included such defining characteristics as learner-created, learner-managed, and learning-motivated explorations. SDL is a key assumption of andragogy, a learning model that provides an alternative set of assumptions to the pedagogical models that focus on instructor dependency. Andragogy assumes that adult learners prefer a self-directed environment where they can draw upon their reservoirs of experience to explore task- and problem-oriented, real-world situations (Knowles, 1980). Some theories suggest that the ability to engage in SDL is situational (Grow, 1991), and the theory of transformative learning (TL) argues that an instructor functioning as a facilitator and provocateur can influence learners and groups toward greater SDL (Mezirow, 1997). SDL, as a component of both andragogy and TL, provides a theoretical framework for exploring the potential of MOOCs. Candy (1991) summarizes several decades of findings concerning SDL that include a social component or interaction with others:

- SDL features interaction with other people as a motivating factor.
- SDL is nonlinear in nature.
- SDL relies on serendipity.
- SDL is rarely a solitary activity; it is often social in nature. (p. 199)

Later acknowledging more findings, Candy (2004) argued that a better descriptor for SDL would be "learner control," in which learners "take control over a narrow range of choices" (p. 50). Candy (2004) also encouraged online education endeavors to allow the learner to explore beyond the range of choices in specified course material.

## ***Professional Development for Library Staff***

The literature focused on professional-development (PD) activities in libraries includes how-to style manuals for creating training programs as well as studies of the various ways library staff may participate in and benefit from PD. Emphasis is placed on concepts such as support of management, encouraging environments, employee circumstance, and quality of formal PD offerings (Chan & Auster, 2003; Havener & Stolt, 1994). Topics for learning in the library setting over the years included the reference interview, collection development, and the reader advisory. With the advent of technology in libraries, the emphasis for PD courses shifted, as did the delivery mechanisms. These include conferences, workshops, staff development days, and invited speakers.

Emerging technology also emphasized the need for LIS professionals to continue to learn and engage with new formats, mechanisms for delivery, and communication tools. Sayers (2007) concluded that academic libraries should maintain a positive emphasis on continuing support for PD to retain and recruit academic librarians.

Broadbent and Grosser (1987) surveyed special librarians and information center managers in Melbourne to gauge the effectiveness and challenges of PD activities. Results included suggestions to focus on teaching librarians to be learners in early coursework, to involve various institutions and associations in ongoing PD activities, and to increase institutional resources to support PD. Ultimately, however, it is administrative policy for PD that is needed for successful advancement of librarians' learning, argued Chan and Auster (2003). Their study also reported that a supportive manager and an environment that fosters learning are necessary for positive results (Chan & Auster, 2003).

Varlejs (1999) found that more than 75% of American Library Association members participated in SDL over more formal PD opportunities and noted for librarians an eagerness to learn is "an attribute central to one's professional life" (p. 194). Almost fifteen years later, the opportunities for library professionals to learn online have grown exponentially.

## ***Learning 2.0***

We could draw some interesting parallels between the development of Learning 2.0 (L2.0) programs and MOOCs as large-scale online learning programs. L2.0 programs, created in 2006 to include all library staff at the Public Library of Charlotte Mecklenburg County in a learning activity and available for replication via a Creative Commons license, have been reported by practitioners as a successful way to engage staff with emerging technology use in libraries (Stephens & Cheetham, 2012b). A globally offered L2.0 program, hosted by School Library Journal and facilitated by the author of this article, was intended to bring teacher librarians together in an atmosphere of exploration and chaos (Bromberg, 2008).

Delivered via a blog site or wiki, the self-directed and often replicated program of online learning modules has been lauded as transformational (Abram, 2008) and celebrated for its ability to bring staff together in a common goal: learning emerging technologies. "The Learning 2.0 program had a great impact on staff, who now know they are capable of learning new technologies," noted Lewis (2008) in a case study of an early program, and Gross and Leslie (2008) reported success in an academic library setting. A later, expanded case study by Gross and Leslie (2010) detailed the program's implementation and offered insights to make

**Table 1.** Professional Development (PD)

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Traditional approaches	<ul style="list-style-type: none"><li>· How-to training program design manuals</li><li>· Examples and studies of PD effectiveness</li><li>· Emphasis on concepts: management support, work environments, employee circumstance</li><li>· Topical focus: reference interview, collection management, reader advisory</li><li>· Delivery: conferences, workshops, staff development days, invited speakers</li></ul>
Learning 2.0 (L2.0)	<ul style="list-style-type: none"><li>· Online learning modules</li><li>· Self-directed learning (SDL)</li><li>· Learner created and managed, self-motivated</li><li>· Open educational resources (OER)</li><li>· Creative Commons license</li></ul>
MOOCs and new culture of learning	<ul style="list-style-type: none"><li>· Online (blogs, wikis), participatory, connected SDL</li><li>· Usually no cost and not-for-credit</li><li>· Open educational resources (OER)</li><li>· Interaction through forums, study groups, peer review</li><li>· Automatic assessments</li></ul>

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it more effective. Stephens and Cheetham (2011, 2012a, 2012b) mounted a large-scale study of L2.0 in Australia and detailed the benefits of the program for library staff and library service.

### *A Brief History of MOOCs*

The term MOOC was first used in 2008 by George Siemens and Stephen Downes to describe a free, online course taught at the University of Manitoba for 2,300 students (Educause, 2011). Since then, a growing number of educational institutions have been experimenting with MOOCs, and an increasing number of individuals across the globe are enrolling in MOOCs. One reason for this growing interest is that MOOCs make content and learning more accessible and affordable. Many MOOCs are offered at no cost to students, who receive no course credit. Typically, they include open educational resources, easily accessible course sites (e.g., a blog or wiki), and interaction with other students via online forums, study groups, and peer review of assignments. In some MOOCs, student performance is automatically assessed via tools such as online quizzes.

Several new companies, including Coursera, EdX, and Udacity, recently started offering for-credit MOOCs that are not free. The New York Times reported that in fall 2012, Harvard University and the Massachusetts Institute of Technology (MIT) enrolled 370,000 students in MOOCs, while Coursera reached more than 1.7 million students (Pappano, 2012).

Although educators and scholars are debating the advantages and downsides of MOOCs, with many asserting that MOOCs have the potential to provide new insight regarding online learning, research regarding MOOCs is in its infancy. A recent study by The Chronicle of Higher Education found

that 79% of MOOC instructors believe MOOCs are “worth the hype” (Kolowich, 2013). Daniel (2012), in “Making Sense of MOOCs: Musings in a Maze of Myth, Paradox and Possibility,” explores emerging issues that educators should consider and scholars should research: technology platforms, for-profit versus not-for-profit models, effective pedagogy, and student success within large learning environments. A scan of recent research includes assessments of the experiences of students and professors in MOOC environments and evaluations of various MOOC platforms and their impact on student learning. Clearly, evaluating MOOC environments is an area ripe for exploration.

We can trace a thread of cohesion from SDL concepts woven into professional development opportunities for library staff to Web-based learning programs replicated and offered to thousands of library staff. The next frontier blends these concepts and can be exemplified in the development of a MOOC designed to enable social learning and offer a professional development opportunity.

### **New Environments for Learning: Hyperlinked, Connected, and Transformative**

#### *The Hyperlinked Library MOOC*

Models persisting in LIS research indicate that the exploration and use of new information technologies has a beneficial impact on the profession and on library service. Clyde (2004) called for librarians to adopt emerging tools, such as blogs, because they could prove useful for their mission. And long before there were blogs or Facebook, Buckland (1992) noted that computing tools could be used for more

than traditional tasks and urged librarians to learn to use the new tools to further their mission and improve library services. Delivering services to the end user—wherever they happen to be—was a goal Buckland (1992) offered, forecasting the onslaught of mobile and handheld devices that now offer always and anywhere access.

The author has worked for several years researching and refining a model of future library service called the Hyperlinked Library. This model is synthesized from data collected on emerging societal trends, scholarly and socio-technical publications, and burgeoning technologies used in library service. The methodology used to build the always-evolving, always-in-beta model and also used as a framework for this article is futures research (Glenn, 2003).

In an article for *Serials Review*, Stephens and Collins (2007) defined the Hyperlinked Library model as:

... an open, participatory institution that welcomes user input and creativity. It is built on human connections and conversations. The organizational chart is flatter and team-based. The collections grow and thrive via user involvement. Librarians are tapped in to user spaces and places online to interact, have presence, and point the way. (p. 255)

In September 2013, the San Jose State University's School of Library and Information Science (SJSU SLIS) launched its first open online course, the Hyperlinked Library MOOC (#hyperlibMOOC). It is adapted from the existing online graduate course offered to SJSU students enrolled in the Master of Library and Information Science (MLIS) program and is intended to serve as a professional development opportunity for librarians, library staff, and professionals who work in archives and other types of information centers. The SLIS MOOC is free and is not offered for academic credit.

It explores how libraries are using emerging technologies to serve their communities.

This MOOC site was built using the open-source content management system WordPress along with a comprehensive suite of plug-ins, called BuddyPress, that provides the social experience. It was designed by Kyle Jones, one of the MOOC's co-instructors, and is powered by a number of additional plugins and themes to provide advanced functionality. Jones supervised a team of SJSU SLIS students during summer 2013 to build the site architecture and design the badge system. During the fall 2013 pilot, up to 400 MOOC students have the opportunity to explore the Hyperlinked Library model through recorded presentations and other content, as well as through practical assignments that encourage students to apply what they are learning. Badges are awarded as students move through the course, culminating with a certificate of completion.

### *Theoretical Framework for MOOCs*

Connectivist learning theories offer a theoretical framework to approach learning experiences within open online networks. Kop (2011) reported on one of the first studies of a MOOC as a connectivist learning endeavor and defines connectivist learning as enhanced by four major types of activity:

- 1) aggregation – access to and collection of a wide variety of resources to read, watch, or play;
- 2) relation – after reading, watching, or listening to some content, the learner might reflect and relate it to what he or she already knows or to earlier experiences;
- 3) creation – after this reflection and sense-making process, learners might create something of their own (e.g., a blog

Figure 1

**THE HYPERLINKED LIBRARY**  
A Massive Open Online Course for LIS Professionals

Home Course Blog Syllabus Weekly Modules Assignments Badges Learning Community Help

You are here: [Home](#) > Welcome to Module 1!

## Welcome to Module 1!

**The Hyperlinked Library**

Michael Stephens  
Announcements,  
Start of the Week  
Comments

The Hyperlinked Library is an open, participatory institution that welcomes user input and creativity.

Welcome everyone! The first module is up and ready for your exploration. You'll find a 26 minute presentation from me and a Google+ video "fireside chat" with Michael Casey (@michaelcasey). I'm honored that so many folks have joined the MOOC and been so eager to participate. I am looking forward to sharing, interacting and learning from you all.

If you haven't dropped a pin on your part of the world, please take a look at the post to do so: <http://mooc.hyperlib.sjsu.edu/blog/where-in-the-world-are-you/>

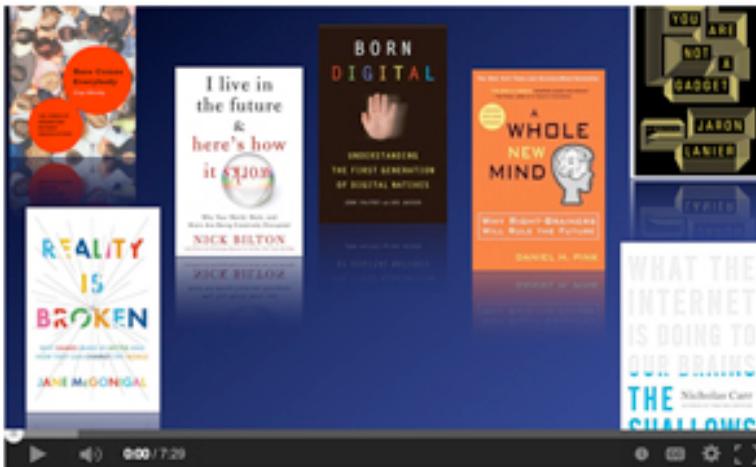
### About the Course Blog

The course blog is written by @michael and @kyle, your instructors for the course. Check back often to see new updates, module release announcements, and more. It's also easy to follow the [RSS](#) feed or subscribe for [e-mail notifications](#).

### Calendar

September 2013

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[Welcome to the Hyperlinked Library  
http://mooc.hyperlib.sjsu.edu/blog/welcome-to-module-1/](http://mooc.hyperlib.sjsu.edu/blog/welcome-to-module-1/)

post, an account with a social bookmarking site, a new entry in a Moodle discussion) using any service on the Internet, such as Flickr, Second Life, Yahoo Groups, Facebook, YouTube, iGoogle, NetVibes, etc.; 4) sharing – learners might share their work with others on the network. This participation in activities is seen as vital to learning. (Connectivism section, para. 2)

### ***Connected Learning***

**M**OOCs have their foundations based on the pedagogical assumptions in connectivist learning theory, which recognizes that knowledge exists in dynamic relationships and external connections and expands with increased access to networks of people, materials, and tools (Clarà & Barberà, 2013). Jenkins (2012) uses the term “connected learning” to describe emerging methods of connected participation in online learning: “It’s social. It’s hands-on. It’s active. It’s networked. It’s personal. It’s effective. Through a new vision of learning, it holds out the possibility for productive and broad-based educational change” (para. 24). Connected learning includes three important components: a shared purpose, a production-centered approach, and an openly networked environment. Clarà & Barberà (2013) propose that MOOCs that encourage connected participation in joint activities, in environments facilitated by experts, offer the best opportunity for internalization and transformation. The Hyperlinked Library includes all three of the connected learning components as a foundation for the course:

Shared Purpose: MOOC students will explore the Hyperlinked Library model as a means of studying emerging technologies and emerging thought related to future libraries. Although each individual

will bring his or her unique paradigm, the goal of looking forward is shared across all of those participating.

Production Centered: MOOC students will collaboratively create a series of artifacts indicative of their learning that can be used in their libraries and information centers. These include emerging technology planning guides and briefs relating to new service initiatives. Artifacts might be text-based or be shared via video, still image, infographic, etc.

Openly Networked: As noted above, the Hyperlinked Library functions as a WordPress- and BuddyPress-enabled community site accessible by anyone with a connection to the Web.

### ***Transformative Learning***

**T**he MOOC will also incorporate concepts from TL. Mezirow (1997) describes a learning process that grows in quality as a result of critical reflection on experience: “Transformative learners move toward a frame of reference that is more inclusive, discriminating, self-reflective, and integrative of experience” (p. 5). In other words, as learners encounter new ideas, new approaches—and in the MOOC, new technologies—they constantly update and broaden their knowledge and understanding of the world around them. Applying this theory to new models of learning about information technologies provides a useful framework for understanding how information professionals and library staff integrate new tools into library service.

The act of blogging reflections by MOOC students supports this concept. Thomas and Brown (2011) noted this in *A New Culture of Learning*:

Blogging is also a personally transformative experience. Because a person's blog is subject to change and revision by others, the influence of the collective can powerfully and meaningfully shape the blogger's view of the world, just as the blogger, at the same time, can shape the collective. (p. 66)

Transformation, then, potentially occurs as individuals encounter new paradigms and as groups encounter each other's shifting paradigms.

### *MOOC Meets Learning 2.0*

The parallels between the MOOC movement, connectivism, and L2.0 programs merit consideration. Might we argue that L2.0 programs, offered in hundreds of organizations since 2006, are connectivist precursors to the evolving, open, and large-scale learning landscapes we're experiencing now?

The Hyperlinked Library will incorporate certain emphases culled from the author's L2.0 research. The L2.0 model has an emphasis on play, experimentation, and social interaction with other learners as part of the programs. The group becomes the learning collective. Thomas and Brown (2011) note that a collective is "a community of similarly minded people who [help an individual] learn and meet the very particular set of needs that [s/he has]" (p. 21).

A focus on play, innovation, and experimentation is needed for 21st century learning success, argue Thomas and Brown (2011). Jenkins, Purushotma, Clinton, Weigel, and Robison (2006) defined play as "the capacity to experiment with one's surroundings as a form of problem-solving" (p.4) and argued that play is one of the most important emerging social literacies and valued skills for the changing landscape of education. The L2.0 model combines play

and opportunities to explore new technologies into a unique, self-directed yet social, and connected learning experience.

This will be replicated within the MOOC. Weekly modules covering concepts such as community engagement, transparency, privacy, and user experience will provide MOOC participants the opportunity to explore, experiment, and reflect on the ideas and challenges associated with these topics. The potential is present for learners to "play" with the ideas and potential solutions to problems encountered in their own information environments via reflection and the creation of course artifacts. Concurrently, the instructors expect participants to critically reflect on their own practice within this new learning environment.

### *Scenarios for Future Roles*

SDL encompasses the idea that learning can be situational and that people may behave differently in a range of learning environments and in relation to different subject matter (Grow, 1991). Leadership in online learning environments may involve fluidly transitioning through many roles in relation to users and participants. According to Grow (1991), one can expect to fluctuate from dependency through self-direction as a learner to coaching through consultancy as a leader. In addition, connectivist and connected learning approaches that purposefully challenge participants to play learner, connector, and collaborator in sustained, shared activities are being explored as optimum MOOC environments (Clarà & Barberà, 2013; Jenkins, 2012). This section explores the roles the LIS professional can play in large-scale courses as learner, connector, and collaborator—roles that may prove valuable beyond MOOCs to other places, virtual and physical, where LIS professionals practice. There must also be

consideration for students in LIS programs to gain experience with these roles and environments.

### **Learner**

The first role an LIS professional should play in these new learning environments is that of learner. This role is grounded in the “now” of these scenarios. As Jenkins (2012) notes, taking an active role in learning is part of the connected learning approach. Reading current news and articles about MOOCs might give librarians background knowledge, but actively participating has the potential to provide more depth of experience. Burkhardt (2012) writing for his library-focused blog argued, “There are a lot of good reasons though for librarians to sign up for a MOOC themselves” (para. 1). His reasons include exploring innovations in higher education and planning for future scenarios by updating skills, learning from great teachers, and allowing librarians to do something for themselves (para. 2).

This interest in continuous learning should be instilled in future LIS professionals from the moment they enter graduate school. Thomas and Brown (2011) note, “In the new culture we describe, learning thus becomes a lifelong interest that is renewed and redefined on a continual basis” (p. 32). Moving forward, an LIS professional might continue to utilize MOOCs as a means to keep current with emerging ideas and issues in librarianship as well as specific subject areas of interest.

The Hyperlinked Library MOOC may be the beginnings of a model that evolves into a rich set of learning communities offering lifelong learning for LIS professionals. Future research will gauge the effectiveness of the model.

### **Connector**

The LIS professional may also find the role of connector to be a prominent part of future duties. A connector is someone who can facilitate a group to make connections between learning, ideas, and practice. Also, this person is a leader of sorts who connects people within organizations and lets those connections grow.

Because MOOC content is typically free and open on the Web, the role of librarians seems nullified in this environment. Instead of locating and sharing resources, LIS professionals working actively within large learning environments may help learners locate and connect with others in the community who may share similar or discordant ideas. This person may also connect groups to ideas and resources to further their conversations.

In the Hyperlinked Library, groups of MOOC participants will self-select into “tribes” of people interested in the same topic, avenue of librarianship, or service population. The moniker was chosen to relate to Godin’s concepts of groups and leaders. Godin (2008) posits that a tribe is simply “a group of people connected to one another, connected to a leader, and connected to an idea...a group needs only two things to be a tribe: a shared interest and a way to communicate” (p. 1). In the MOOC, SJSU SLIS students, who are not participating in the MOOC, serve as participatory learning guides (PLGs), who keep an eye on the sharing, connected learning, and joint activities within assigned groups of participants. PLGs also submit periodic critical reflections on MOOC effectiveness and participant progress. We might also call PLGs “connectors.”

The role of connector, then, is one that encourages participation, sharing, and the furthering of connectivity and joint action in a group. Godin (2008) shares an illu-

**Table 2.** Professional Development (PD) in a MOOC Environment

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Roles that LIS professionals may play

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Learner	<ul style="list-style-type: none"><li>· Active participation as a learner brings more depth of experience than passive reading</li><li>· Technological skills automatically exercised and updated through participation</li><li>· Access to wide variety of mentors and teachers</li><li>· Self-directed exploration available 24/7</li></ul>
Connector	<ul style="list-style-type: none"><li>· Locating, curating, and sharing information is social and participatory—anyone can be the leader or connector on any topic or number of topics</li><li>· Discordant ideas and perspectives have new possibilities for interaction through active and open connectors</li><li>· Unrestricted opportunity to follow a passion, share, create, participate in, and lead groups or “tribes”</li></ul>
Collaborator	<ul style="list-style-type: none"><li>· Working together to solve problems, sharing expertise with technologies, building artifacts, organizing connected experiences</li><li>· Working with outside-MOOC entities</li><li>· MOOC participatory learning guides and interactive tools function as collaborators with learners</li><li>· Creating participatory learning tools is acting as a collaborator</li></ul>

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minating example that inspired this concept in the MOOC:

In the spring of 2008, I announced a paid summer internship for students. More than 130 well-educated students from all over the world applied. As an experiment, I set up a private Facebook group for the applicants and invited each on to participate. Sixty of them joined immediately. No tribe existed yet—just sixty strangers in an online forum. Within hours, a few had taken the lead, posting topics, starting discussions, leaning in and leading. They called on their peers to contribute and participate. And the rest? They lurked. They sat and they watched. They were hiding, afraid of something that wasn't likely to happen. Whom would you hire? (p. 57)

The same could be said for LIS professionals. How they encourage and facilitate a community's interaction might be a primary factor in future hiring decisions. The work of Skokie Public Library in Illinois to facilitate and connect the community is indicative of this set of skills (Buhmann, Greenwalt, Jacobsen, & Roehm, 2009). SkokieNet evolved from a static HTML site in 1995 to a Drupal platform that supports several websites and a community portal and information network. The development of an environment for vibrant online community interactions, supported by the library, happened through the efforts of far-sighted library directors and the collaboration of a consortium of area libraries.

### *Collaborator*

**T**he role of collaborator within learning environments is the third scenario for librarians. The collaborator might work with learners to create an artifact

or instruct learners on various technologies that might assist them in fulfilling course requirements. They might also collaborate with other entities on campus, in the community, or in other information settings to further the goals of the course. In the Hyperlinked Library MOOC, the PLGs will also perform the role of collaborator. A summer class of SJSU SLIS students worked to build resources for MOOC participants to utilize together as they navigate the course site.

This is a notable trend. From a recent policy brief on the future of American libraries from the American Library Association, Hendrix (2010) sees the confluence of two major trends, a focus on user and library adoption of popular emerging technologies and an emphasis on human relationships:

Combining these two schools of thought yields a fundamental and increasingly popular prediction about the future of libraries: collaboration will become a common and important focus. The concept of collaboration arises in almost all conversations concerning the future direction of American libraries. Libraries and librarians are expected to partner with many types of institutions, organizations, and individual users to provide both traditional and cutting-edge services and flexible, usable physical and online environments. (p. 15)

Bitter-Rijpkema, Verjans, and Bruijnzeels (2012) survey the impact of emerging, disruptive technologies on library learning and note the job description of the public librarian is moving "from information to knowledge worker with a focus on innovative co-creation of meaning" (p. 39). Libraries of all kinds are adding digital creation labs and makerspaces. The skills of the collaborator and co-creator will be necessary for these environments.

## Conclusion

Utilizing literature, scanning the current environment of higher education in flux, and developing scenario-based roles of future information professional work within large-scale learning environments are some ways to understand the sweeping changes disruptive technologies have brought to our landscape.

As we go forward, research centered on the Hyperlinked Library MOOC in fall 2013 will contribute to a better understanding regarding how free, not-for-credit MOOCs can serve as professional development tools as well as test some of the underlying theory and models the MOOC is based on. There is an eagerness to evaluate the SLIS MOOC, identify areas where the model is effective, and provide recommendations regarding how to improve the design of MOOCs in the future.

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