Openness in Three Acts: A Narrative Inquiry into Teacher Educators' Conceptions of MOOCs

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Abstract
This case study sought to listen to the organizational voices regarding an initiative of developing a MOOC for Hebrew-speaking student teachers, focusing on the Connectivist MOOC as an example of innovation and organizational change. Based on in-depth interviews with stakeholders at the college, and using a methodology for analyzing organizational transformation triggered by the adoption of computing technologies, a narrative network was constructed from story fragments with potential connections. The stories that emerged from the interactions with those people reflect how such an initiative involves an organizing of people in relation to a technology. In this case, the potential affordances of the technology at the center of the initiative were seen as having a possible destabilizing influence on the existing practices of the organization. Openness emerged as a key issue in the analysis and as playing a crucial part in one of the reconstructed stories, hence the title of this paper.

Keywords
Educational Technology, Connectivism, OER, Disruptive Innovation

Introduction
The data for this case study was gathered during 2012, hand in hand with the growing media hype about MOOCs in higher education (Watters, 2012). When rooted in the Connectivist origins, MOOCs are seen by the authors as representing an approach to learning that should be of interest to educators preparing their learners - the teachers of tomorrow - for life and work in a knowledge society. Connectivism is based on the idea that knowledge is distributed across a network of connections (Downes, 2007), and therefore that learning consists of the ability to construct and traverse those networks (Siemens, 2005). Connective knowledge is the knowledge that results from connections among properties of different entities. As a theory developed in an age of abundant information and connections, Connectivism assumes that the learner’s role is not to memorize or even understand everything, but to have the capacity to find and apply knowledge when and where it is needed (Anderson & Dron, 2011). In line with Bruns’s concept of ‘produsage’ (Bruns, 2008), Connectivist learning is also based as much upon production as consumption of content, while the role of the teacher is both a novel role – to enable collaborations with and among the learners in order to create and re-create content, and a constructivist role – to design interactions in which learners make connections with existing and new knowledge resources. Connectivism is an approach to learning and teaching requiring radical changes in thinking on the part of all stakeholders at the educational institution in which a Connectivist MOOC is to take place. The type of learning that often occur in Connectivist MOOCs appears to be based on processes that educators indeed wish to encourage in their students in order to better prepare them for the future. There is no doubt therefore that such a change in conceptualizing learning and teaching should be considered in colleges of teacher education; there is also no doubt that resistance will present itself. From a pedagogical point of view, the MOOC phenomena redefines what is meant by “learning,” “teaching,” and
“assessment,” and at the same time blurs the boundaries between them. It is not self-evident that the institution, which has its established content foci, instructional approaches, and organizational structure and practices, would welcome courses embodying such departure from what has been defined as normative.

The case study here reported sought to listen to the organizational voices regarding an initiative of developing a MOOC for Hebrew-speaking student teachers, focusing on the Connectivist MOOC as an example of innovation and organizational change. Based on in-depth interviews with stakeholders in the college, and using a methodology for analyzing organizational transformation triggered by the adoption of computing technologies, a narrative network was constructed from story fragments with potential connections. The narrative methodology – itself mirroring many aspects of Connectivism in the broad sense of emphasizing connections and networks – enables to compile stories told from different perspectives, based on encounters with the people identified as potential partners, and to trace actions and reactions when the idea of the Connectivist MOOC and its affordances were placed as the focus of the discussion. The stories that emerged from the interactions with those people reflect how such an initiative involves an organizing of people in relation to a technology. This paper focuses on one narrative made up from three sub-plots all focusing on the issue of openness, hence the title of this presentation. The paper first differentiates Connectivist MOOCs from courses that are labeled massive, open, and online but reflect theories differing from Connectivism in most essential respects. Next, an initiative of establishing a Connectivist MOOC at an Israeli college of education is described, using a methodology for analyzing organizational transformation triggered by the adoption of computing technologies. The paper concludes by depicting this analysis as a narrative network constructed from story fragments with potential connections.

**MOOC as a Pedagogical Innovation**

"MOOCs have been around for a few years as collaborative techie learning events, but this is the year everyone wants in", says a New York Times article in November 2012. “MOOCs (Massive Open Online Courses) are the educational buzzword of 2012”, adds Sir John Daniel. The media hype about MOOCs in higher education has focused on their massive scale; however, the real revolution – as Daniel puts it - is that "universities with scarcity at the heart of their business models are embracing openness" (Daniel, 2012). The first MOOC took place in 2008 as an open online course at the University of Manitoba, Canada. The course, Connectivism and Connective Knowledge (CCK08) was facilitated by George Siemens and Stephan Downes, who have been developing the pedagogical theory of Connectivism and have regarded MOOCs as practical implementations of their theory. The term itself was coined by Dave Cormier who joined in facilitating several other MOOCs, including PLENK2010 - "Personal Learning Environments, Networks and Knowledge" (http://connect.downes.ca) that has been described as “a conglomerate consisting of various layers: live sessions…recordings…a complexity of discussion forum… the course Wiki and Blog…and the unique aggregator named the Daily” (Levy, 2011). MOOCs of that type were later labeled “Connectivist MOOCs” (c-MOOCs), to distinguish them from the current wave of MOOC offerings that share a little with Connectivist pedagogy. Learning in c-MOOCs reflects

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1 "The Year of the MOOC" http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?pagewanted=1&_r=1
processes in which information is characterized by rapid change and renewal, is collectivized, poorly organized, and incompletely evaluated (Kop & Hill, 2008). The challenge is for each learner to construct a personal learning network (PLN), by eliciting what is personally meaningful from the network of information and interactions. Such learning is “…highly social. The learning comes from content presented by a lecturer, and then dialog via social media, where the contributions of the participants are shared” (Quinn, 2012). In addition to the abovementioned CCK08 and PLENK2010, two noteworthy c-MOOCs are the eight-month long Change11 (http://change.mooc.ca/) and the short six-weeks MOOC about MOOCs offered by Hybrid Pedagogy (http://www.moocmooc.com/). More Connectivist MOOCs offered since 2008 can be found in http://mooc.ca/.

These c-MOOCs are revolutionary in that they erase existing boundaries between the institution and the world “outside” it. Such Connectivist-based MOOCs call into question academic responsibility and institutional accountability. However, the seeds that were first spread as practical implementations of Connectivist theory have been supplanted by others, which have developed into a different “flower” entirely.

Right until the fall of 2011, the term “MOOC” was not used much by educational technology scholars and was not acknowledged at all in the mainstream public discourse. The turning point seems to be with the Artificial Intelligence experimental open online course offered in the fall semester of 2011 by two well-known computer scientists from Stanford. During the spring of 2012, numerous news articles, blog posts, media interviews, and social networks posts flooded the Internet with new MOOC announcements, calls for participation, and critiques. The original MOOCs were only later labeled “Connectivist MOOCs”, to distinguish them from the current wave of MOOC offerings that share a little with Connectivist pedagogy and are sometimes labeled x-MOOCs (Downes, 2012). While the “O” that stands for “open” is thought to be the dominant letter in the original Connectivist branch of MOOCs, “M” seems to be the dominant letter in the Stanford branch.

Both types are considered to provide new models for learning at a time when traditional school learning is widening the rift between learners’ experiences in and of the world and their experiences in formal school settings. Our work, however, is based on the Connectivist vision of the MOOC. In addition to the obvious technological innovation, we see this model as aiming to bring about change and innovation to the college of education on a number of levels:

- **Pedagogical** – with a redefinition of what is meant by “learning”, “teaching”, and “assessment”. The redefinition of pedagogy will affect learners and teachers alike.
- **Content** – once a traditional course (even a traditional online course) becomes a MOOC, it demands deep-level revision of content. In addition, as the content is distributed and takes on a “life” of its own, independent of its point of origin, a Connectivist MOOC necessarily involves the erosion of traditional boundaries regarding content creation and development.
- **Organizational and cultural** – the MOOC instructors have to collaborate in ways that they have probably not before experienced and restructure their courses.

It is against this background that a Connectivist MOOC was seen by the authors as representing suitable preparation for developing, not only specific content knowledge, but also the 21st
century literacies and pedagogies. We therefore initiated a conversation within our college of education, focusing on the idea of developing a Connectivist MOOC for Hebrew-speaking student teachers, while listening carefully to the personal, pedagogical and organizational voices involved in the conversation.

**Methodology**

The analysis of interviews with stakeholders whom we identified as potential partners in the initiative to establish a c-MOOC at the college of education was directed towards constructing a narrative network (Pentland & Feldman, 2007), which is thought of “as a device for representing patterns of ‘technology in use’.” (p. 781). Pentland and Feldman use the term network “to draw attention to both potential and realized interconnections between actants and actions and the fluidity of these interconnections” (p. 781). The “narrative” aspect is rooted in a philosophical perspective that “different interconnections make different stories” (p. 781). This approach has roots in actor-network-theory (ANT) (e.g. Latour, 2005).

In our case, each story involves a number of actants: the authors, the potential coalition partners, and the idea of the MOOC with its affordances. In ANT, actants include both human players (actors) and non-human entities such as an idea, a tool, a computer interface, etc. (Latour, 2005). An affordance refers to the possibilities latent in any part of the environment vis à vis an agent. Gibson (1977), who first coined the term in relation to animals interacting with their environment, defines an affordance as the opportunities for action provided by a particular object or environment. Norman (1988) applied the concept of affordances to understanding people’s interactions with everyday things and computer interfaces alike. Just as an everyday object like a door handle offers possibilities for opening the door by turning it while simultaneously pushing or pulling the door (and something in the design of the object will hint at its use), so computer interfaces should be designed in such a way that their use is suggested to the user. Norman’s ideas have significantly contributed to the field of human-computer interaction (HCI) and influenced the development of principles of usability in the design of computer interfaces.

What is specifically relevant to the present paper is that the concept of affordances foregrounds the notion that things – in our case, the Connectivist MOOC – can be characterized by a “psychology” or that they have embedded within themselves properties for action. However, as Kirkeby points out: “Affordances are emergent properties of objects in the environment but only in relation to actors through potential activities” (Kirkeby, 2003, p. 10).

The narratives that emerged from our interactions with people whom we identified as potential partners reflect how such an initiative involves an organizing of people in relation to a technology. In our case, the potential affordances of the technology at the center of the initiative were seen as having a possible destabilizing influence on the existing practices of the organization. That disruptive influence is described in what follows.

**Findings: Three Narratives of Disruption**

The narrative methodology – itself mirroring many aspects of Connectivism (in the broad sense of emphasizing connections and networks) – enables us to compile stories told from different perspectives, based on our encounters with the potential partners we contacted, and to trace actions and reactions when the idea of the c-MOOC and its affordances were placed as the focus
of the discussion. Each story presents the perspective of at least one potential partner in interaction with us (the authors) as initiators of the c-MOOC idea. This methodology is reflected in Pentland and Feldman’s (2007) observation that “anything that influences the ‘plot structure’ is organizationally significant” (p. 784). The analysis resulted in three reconstructed narratives, briefly presented next.

"Don't shake the ground"
The title of the first story reflect the arguments used by one of our interviewees that discussed with us the tension she saw between the potential transformations the Connectivist MOOC initiative might bring about, and the existing organizational practices. However, alongside the arguments she brought against establishing a Connectivist MOOC in the specific context we proposed to her, she was in favor of the general idea of establishing a MOOC at the college and encouraged us to pursue the initiative in relation to an alternative disciplinary field. We therefore reconsidered the plan and decided to direct our efforts to finding a more appropriate context.

Openness in Three Acts
A second and more complex narrative deals with the issue of openness. It cuts across at least three sub-plots, each a few months apart from the others. Most of the actants (people and technologies) were the same, or they referred to one another across the story plots. The connection between the chronologically first narrative and the two later ones became apparent to the authors only a short while before a second interview with Beth, coordinator of the Social Involvement program of the college. The reflections on these connections are deliberately presented as interruptions to the chronological sequence since it is the reflections themselves that helped us put together the analysis.

1. **Story I: Vision of an Open Blog** - The first sub-plot took place about a year before the c-MOOC initiative was even conceptualized by the authors in May 2011. It involved a proposal by one of the lecturers in the program, Jake, to set up an open blogging environment for one of the courses in the Social Involvement program of which Beth is the coordinator. In retrospect, the blogging environment was to include many elements that also characterize c-MOOCs, but these were not identified as such by any of the people involved. The idea had not been followed and no such environment had been designed. Additional details on first sub-plot are presented below – as a flashback in the framework of the third sub-plot (**Story III**).

2. **Story II: Vision of an Open Learning Environment** - The second sub-plot is set in March 2012 when the authors approached Beth with a proposal to set up a c-MOOC in order to bring together various inter-linked aspects of the courses comprising the program. In our search to pinpoint an appropriate context, we decided that the openness of such an online environment might answer many of the needs arising from the courses. Each of these courses contains both a theoretical and a practical component, and as communicated to us by Beth, what was needed was some way of connecting between the theoretical and practical components of each course, and between all the courses pertaining to the program at the college. This potential connection between all the courses formed the focus of the meeting between us – the authors and Beth – in March 2012. We presented the theoretical background underlying MOOCs and explained how such an online environment could help to create connections between the various courses, and between the theoretical and practical aspects of the program. Beth clearly expressed interest but
requested that we continue to flesh out the idea and return to her with a more developed proposal that she could introduce to the course lecturers at a later date.

A few weeks passed, during which we reassessed the objectives of the c-MOOC initiative and came up with a plan. During this period, we met with the lecturer whom we considered would be a potential partner in the revised initiative, Jake, and realized that our initiative shares many similarities to the one he had presented more than a year earlier (see Story I).

3. **Story III: Openness vs. Control** - The setting for the third sub-plot was a second meeting with Beth on May 2012. Beth was asked to recall the prior initiative (Story I). This initiative – sharing similar characteristics to our conception of a c-MOOC although it had not been described as such at the time – had essentially been rejected. It is interesting to consider, in retrospect, the basis for the rejection since what happened then sheds light on the factors to be considered when proposing such an initiative within the educational establishment.

In her reconstruction of the earlier meeting, Beth mentioned that it had involved a number of people whose positions could have made them potential partners in the endeavor, including Jake. She mentioned that one of the main objections was that the open blog envisaged by Jake would bypass the college’s official Internet site, and that the issue of locus of control was also voiced by various attendees. Although, in retrospect, the authors consider the issue of locus of control to be the main one underlying resistance to the establishment and implementation of a c-MOOC in an institute of education, the objections at the earlier meeting focused mainly on the issue of the website as a marketing conduit. Beth's vision for the Social Involvement program was different than Jake's in a number of aspects. First, she had had a more modest agenda than Jake, and had felt she would be satisfied with a purely informational website about the Social Involvement program, which represented the official voice of the organization. Second, she herself did not come from the world of online social networks and blogging, so she did not fully appreciate how it could promote the agenda of her program. Third, only a small handful of lecturers in the program were actively engaged in social networking and blogging, so that they too would not have felt a need for it in the framework of their courses. Most important, the core part of the program was anyway taking place in the “real” (non-virtual) world. The real action was out there, and not in the social network of the blogosphere.

At the later meeting on which this third narrative is based, the authors raised the issue that the existing program website – while detailing all the related programs and participating groups – was characterized by a marked absence of links to other sites. The online “mirror” of the Social Involvement program was anything but social. Beth concurred with this observation, and shared her plans to revamp the material on her site and to connect it to other relevant sites. As it emerged during our analysis, the main obstacle to openness as is reflected by the c-MOOC idea is the fact that c-MOOCs may subvert the organization’s agenda by placing the locus of control outside the boundaries of the organization.

**Connectivist MOOC as a Disruptive Innovation**

The actants in this story are the authors themselves. Awareness of the broader contextual implications occurred when the authors began to consider how a Connectivist MOOC, almost by
definition, will break the boundaries of the institution that gives birth to it since the locus of control moves from the institution, or from the lecturer who is an official representative of the institution, to the students and people outside the institution itself.

Awareness of the potential tension between the affordances of the Connectivist MOOC and the institution’s organizational culture took place at a particular moment, when discussing the objections that had been raised in the first narrative titled "don't shake the ground" and when considering how to revitalize the initiative described in the second narrative titled "openness in three acts". It was then that we realized that Connectivist MOOCs may subvert the organization’s agenda by placing the locus of control outside the boundaries of the organization: “A MOOC goes beyond the time and space barrier reflected in traditional pedagogy, even in traditional online pedagogy. It breaks the barriers between the natural technological living space of the learner and the LMS set up by the instructor.” (Authors meeting, May 2012).

In an educational organization, “established” courses are those around which there is consensus by the “establishment.” The educational establishment may be understood in the broad sense of what is accepted by the society’s education system, and in the specific sense of what is accepted by the specific institute of education. Since the implications of these conclusions were far-reaching, we decided to verify them and approached Beth again, as well as additional persons whom we identified as actants in these events. This led to Story III presented above, titled Openness vs. Control.

**Connecting the Threads of the Narrative Network**

The stories gathered in our case study, few of which presented in more details above, would remain narrative fragments unless a deliberate attempt is made to show how they constitute part of an organizational network. Figure 1 was constructed in accordance with Pentland & Feldman (2007) example and depicts the narrative network of our c-MOOC initiative, including the three sub-plots abovementioned as well as other stories gathered throughout this case study. It is possible to see how parallel stories involving the same actants gained coherence as the authors connected the fragments into a single network. The narrative network can help to identify fragments that might get associated with other fragments in efforts to change organizational practices. For example, narrative fragments 7 and 8, referring to the authors’ awareness of what a c-MOOC really means in an educational organization as is presented in Story III above - can be foregrounded in any subsequent discussions on moving forward the c-MOOC initiative. It can be juxtaposed with narrative fragment D (which evolved from the vision described in Story I above), to exemplify how a c-MOOC initiative can be diverted in directions that, albeit compatible with the organization’s existing practices, contradict the organization’s vision and purported practices. The contrast between these two narrative fragments parallels the distinction made by Pentland and Feldman (2007) between the ostensive and the performative aspects of any organizational routine. Whereas the performative aspect refers to actual practices, the ostensive aspect refers to the participants’ awareness and understandings of these practices.
The narrative analysis of the actions characterizing the implementation of our initiative shows how the affordances of MOOCs may subvert the mainstream agenda of an organization and its established practices. This understanding, reflected in a node connecting between a number of narrative fragments comprising the stories presented earlier, seems valuable for making future plans to establish a MOOC in its appropriate context.

Summary
This paper echoes some of the organizational voices heard throughout the initiative of developing a c-MOOC for Hebrew-speaking student teachers at our College of Education. The narratives that emerged from our interactions with people whom we identified as potential coalition partners reflect how such an initiative involves an organizing of people in relation to a technology. Applying narrative network methodology to make sense of the events, the experiences are presented as a number of stories whose inter-connections become apparent following narrative analysis. The analysis has raised significant questions regarding the organizational context in which a c-MOOC may be implemented and has implications for understanding organizational transformations in light of technological innovation. In our case, the potential affordances of the technology at the center of the initiative were seen as having a possible destabilizing influence on the existing practices of the organization. In the stories
exemplified above, openness emerged as playing a crucial part, when one of the main objections
to both the vision of the open blog (Story I) and the idea of the c-MOOC (Stories 2, 3) was that
they would bypass the college’s official Internet site, directing Internet traffic and learning
opportunities away from the college site.

As can be heard by the organizational voices arising from this case study, a c-MOOC, almost by
definition, will break the boundaries of the institution that gives birth to it since the locus of
control moves from the institution, or from the lecturer who is an official representative of the
institution, to the students and people outside the institution itself. From an initial assessment that
the main issues in setting up a c-MOOC in our college of education would be technical, it
became clear that c-MOOCs can turn education on its head as "control is no longer with the
teacher or teaching agent as in behaviorism, or with the learner, as in constructivism, but
distributed, everywhere, and nowhere…” (Authors meeting, May 2012). We believe that the
analysis has implications for understanding organizational transformations in light of
technological innovation that reach far beyond our college of education.

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