Open Participatory Engagement Network (OPEN): An Instructional Design Meta-Framework for Creating Participatory Networked Learning Environments

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Abstract: Open education is experimenting with various types of learning environment designs. The Open Participatory Engagement Network (OPEN) Instructional Design (ID) Model is a meta-framework for creating participatory networked learning environments. It is specifically for creating Anchored Open Courses (AOCs), which are essentially traditional higher education courses designed such that they are open. These courses emphasize transparency and freedom through reduction of barriers, which enables and encourages access, sharing, learner agency, and connection. These courses utilize the concept of Personal Learning Environments (PLEs) in order to provide for digital collaboration and practice. The OPEN Model is rooted in open systems theory, constructivist learning theory, and technology theories. It is also informed by other ID models.

Introduction

Digital technology is changing the educational landscape. Thriving participatory education cultures have emerged which operate on principles of openness and engage in collaborative networking for the sake of learning. These cultures are bolstered by the advent of near zero costs for dissemination of content, open and lesser-restrictive intellectual property licensing, social media, and experiments with open digital learning environments (Brown & Adler, 2008; Brown, 2006; Lai, 2011; Lessig, 2008; Weller, 2011; Wiley, 2006). Openness is interacting with the larger society in interesting and important ways (Baker III, 2012; Peters & Roberts, 2012; Peters, 2012), and has the potential to improve teaching, research, service, and learning in higher education (Digital Connections Council of the Committee for Economic Development, 2009).

Pragmatically, openness involves having a high degree of transparency and freedom in a process, procedure, product, or system. Transparency has to do with visibility and ability to see and access various parts of a system. Freedom has to do with the ability to change, access, operate in, or use tools and other parts of a system in ways determined solely by the user. These include a lack of barriers and rules preventing specific uses of tools and content. Openness is a concept that can be differentiated into three primary approaches regarding education: procedural openness, normative openness, and revolutionary openness (Baker III & Surry, 2013; Hill & Tunnell, 1975). Each of these approaches emphasizes very different values, goals, and priorities. Learning environments operating under each of these types of openness have very different design features as well. The various learning designs are collectively known as Open Educational Designs (OEDs) (Baker & Surry, 2013), however, this paper is focused with a specific design under the procedurally open approach category. This approach involves modifying traditional education structures, design features, regulations, and procedures in order to enhance the educational goals through enabling openness (Baker & Surry, 2013; Hill, 1975).

The Open Participatory Engagement Network (OPEN) model is a meta-framework instructional design model designed to help designers attend to the procedural support structures needed for creating an Anchored Open Course (AOC). An AOC is essentially a traditional higher education course with normally registered students that is also open to some degree. Openness involves having a high degree of transparency and designing freedom through reduced barriers into the environment or system. Among a variety of other possibilities, this could mean that learners from outside of the course can meaningfully participate in the course, or that learners within the course can freely access, share, and distribute content. The OPEN model is intended for use by instructors and instructional designers who are designing courses emphasizing participation in a community of practice through the use of technology for engaging content, people, and resources collaboratively and socially. The OPEN model is intended for use in higher education courses or training situations in which participation, collaboration, feedback, and flexibility are desired.

OPEN Model Overview

The OPEN model is an instructional design meta-framework model used to create the procedural support structures of an AOC. The model is holistic in that it considers the AOC as part of a flexible and responsive adaptive open system. Specifically, input from the environment and the suprasystem (the institution and instructional designer) determine the levels of transparency and inhibitors in the AOC. These in turn enable the specific design characteristics of the open activities (a subsystem). The products of these open activities (an outflow of ideas and products) are then fed back to the suprasystem and environment where they are taken in, digested, and reacted to authentically.
High degrees of transparency and freedom enable other activities, referred to in the model as the open activities of access, agency, sharing, and free connection. These can operate without restriction in the AOC environment that is fully open. These activities allow learners to participate more fully in social learning environments through engaging content and people, obtaining proper scaffolding, modeling, and support, and by being able to respond flexibly to feedback and changes in the environment. The learners have the advantage of both learning in a guided manner with a semi-structured environment and schedule, and of participating in an authentic community of practice relevant to the content area being taught; they are both guided by experienced instructors and able to connect with experts and enthusiasts in their content areas on their own terms (Freeman, 2004). The purpose for implementing the OPEN model and creating an AOC is to enhance the benefits and experience of the registered learners. The non-registered learners are a secondary consideration and should not infringe upon the experiences of the primary learners.

**OPEN Model Components**

The OPEN model considers the AOC learning environment, which consists of a course hub and PLEs, and the larger environment, which consists of people and resources among other things. This is illustrated in Figure 1. The primary concerns for creating with the OPEN model are establishing a high degree of transparency and reducing inhibitors both within the AOC learning environment and between the AOC and the outside environment. This subsequently enables the activities of access, agency, sharing, and connectivity.

Openness involves having a high degree of transparency and freedom in a process, procedure, product, or system. Transparency and freedom through low inhibitors are continuous constructs, and the instructor or designer can adjust their levels according to what is determined at the time to be best for the learners given the specific contextual constraints and particular situations facing the AOC. The adaptive and flexible nature of the AOC course means that these adjustments can be made midstream if an issue becomes apparent. It is important to emphasize here that the primary governing factor for all of these decisions should be the impact on the learners who are registered in the course (not the open participants, who should be a secondary concern).

![Figure 1. Open Participatory Engagement Network (OPEN), an instructional design model](image)

**The Role of Transparency**

The first concern in designing an AOC with the OPEN model is determining a proper level of transparency and then designing that into the course. The designer here is designing the starting level of transparency, as the levels of transparency can change in response to various things throughout the course. The more that designers make the operating rules visible (i.e., transparent, e.g., making guides, processes, procedures, rules, regulations, course materials, and other content digital and accessible), the better the learners and other people, both inside and outside of the course, are able to interact and respond in proper ways. As seen in Figure 1, transparency is pervasive in the entire system including the environment, the AOC, the PLEs, the mechanisms for access, sharing, connection, etc.

Things should be as transparent as possible for all parties to be better able to fully participate, and only potentially sensitive or delicate information should be withheld; however, once information is let out, it is hard to put the genie back in the bottle. Also, standard copyright and fair use rules apply normally to all of the content not created originally for the course. There is a balance here that will depend on the situation and should be considered carefully.
The Role of Inhibitors

The second concern in designing an AOC with the OPEN model is determining the proper level of inhibitors and then designing them into the course. The designer here is designing the starting level of the various inhibitors, as they can change throughout the course in response to various things. There are a wide variety of inhibitors to implementation and adoption in web-based instruction in higher education. Some examples are the role of financial resources, infrastructure, and support in colleges of education (Surry, Grubb, Ensminger, & Ouimette, 2009), the role of attitudes and perception regarding technology adoption (Rogers, 2000), or cultural inhibitors in technology implementation (Chen, 2007). In Figure 1, inhibitors are represented as primarily inhabiting the space between the AOC and the environment. In many ways, this is the primary area where they are most active; however, this is by no means the only place where inhibitors exist. In fact, inhibitors can exist within any interaction in the entire system. In the OPEN model, inhibitors refer to any rules, procedures, factors, or other issue (such as intellectual property licensing permissions) that inhibit the free functioning of people, processes, and systems.

There are a wide variety of inhibitors that can be active within the learning environment, and there can be a wide variety of issues and rules that impact each one. For example, using reading assignments that are available through the university library but must be paid for outside of that system would limit the ability of the larger population of participants to engage the material and thus their ability to interact with the learners in a class. On the other hand, the best articles may be locked away behind a paywall, and so an instructor could be providing sub-par service to registered students in looking out for the larger population and only using open access research articles (one reason why this model emphasizes benefits to the registered learners over the larger population). Sometimes limiting access is a result of an attempt to protect learners. While this is not likely such a widespread issue in higher education environments, the impact of limiting access can have serious implications for learning (Meeder & Meeder, 2005).

Encouraging a culture of diversity and inclusiveness in the classroom will aid in ensuring that no learners are left out of the mix. Obviously, decisions must be made here, and these decisions will necessarily depend on the context of the situation and the goals of the course. A good rule of thumb is to use content that is as open as possible, and reduce inhibitors as much as possible, but with the registered learners as the primary concern and reason for the modification.

Open Activities

The open activities are designed into the learning environment, but are heavily impacted by the levels of transparency and inhibitors within the AOC and the system itself. Openness is inhibited when learners from inside or outside of the AOC are unable to access resources, see project guides, or consult course procedures (transparency) and when learners are restricted by policy on what content is admissible into the environment or if their only point of internet access has restrictions placed upon it (inhibitors). Assuming that the levels of transparency and inhibitors are sufficiently proper, there are four primary areas where designers and instructors can enable open activities for the learners in the AOC. These include sharing, access, agency, and connectivity.

Sharing is important because this is where the product comes from for the AOC. Also, this is one major way for instructors to see how well the students are grocking the material. In the PLE process, learners access and intake information and then engage in a digesting, or sense-making, process where they internalize the content and react to it (Jarche, 2012). After the content is digested, and sense has been made, the learner shares the content with his or her PLN through the PLE platform so that others can take the information in, digest it, and share. This is part of an information cycle where ideas are accessed, internalized, modified, and shared.

Access means the learner can freely see, locate, obtain, use, and share content, resources, texts, and other materials, and that they can freely see, locate, connect and consult, and share with other people. Enhancing access means using free and/or open tools, research, textbooks, media, and other content for the course. It also means creating an environment where connecting is commonplace and learners are encouraged to reach out to people and bring in resources from the environment.

Enabling learner agency is an important step in a digitally enabled social constructivist learning environment (Dwight & Garrison, 2003; Kop, Fournier, & Mak, 2011; Kop, 2011; Richey, Klein, & Tracey, 2011; Rodriguez, 2012; Yakhlef, 2010). In the OPEN model, agency means that the learner has some level of control or ownership over various aspects of their education and learning environment. In the most open environments, ownership may be ubiquitous so that every learner has an equal share of ownership of course elements; every learner may have the right to modify or change things in and about the course (Baker III & Surry, 2013; Raymond, 1999; Rodriguez, 2012). For example, an openly licensed syllabus and properly regulated AOC may allow and enable the learner to add or modify assignments, or correct mistakes. When learners have some control over elements of their learning,
they are more engaged (Trowler & Trowler, 2010; Van Dijck, 2009). Learners can have a large degree of agency through their PLEs and in flexible assignment and course regulations.

Free connection is an essential element in a participatory environment (Kop, 2011; Veletsianos & Kimmons, 2012). Learning occurs from connecting with individuals and collaboratively interacting with content and ideas, and one never knows which connections will be beneficial and which will not. Because of this, the ability for anyone to freely connect and break connection with anyone else without imposed consequence means that learners can engage the community, content, and other people where they are most interested, and therefore most likely to be motivated to learn and grow. Constructivist approaches to designing learning environment can promote collaboration and reflection, which can result in high levels of learning (Chitanana, 2012).

The AOC Learning Environment

An AOC is a higher education course with a group of normally registered students that is designed to allow and encourage those students to have access to people and resources in the outside environment, to have some level of agency over their education, to build and use digital platforms for sharing content and products, and to have free range to make and break connections at will (Baker & Surry, 2013).

The AOC learning environment component in the OPEN model is made up of a course hub and Personal Learning Environments (PLEs). Van Harmelen (2006) provides a brief, but good, outline of the basic aspects of Personal Learning Environments, describing them as a collection of distributed online services that learners can use for knowledge and content management in their self-directed learning. The AOC enables and encourages participative engagement among the learners with content and resources (i.e., readings, videos, websites, ideas, articles, texts, etc.) and people (i.e., mentors, peers, experts, interested outsiders, etc.) both in and outside of the classroom space. As learners connect with each other and people from the environment they form Personal Learning Networks (PLNs) with whom they can access and share content and ideas that fit shared interests. There is a history of successful AOC implementations in higher education starting in 2007 with David Wiley’s Introduction to Open Education course (D. Wiley, 2007), and carrying on with the further iterations of that class and with Groom’s DS106 (University of Mary Washington, 2011), Couros’ EC&I: 831 (Couros, 2011), and others.

AOC Components

**PLEs and PLNs**

Some of the learning outcomes for participating in AOCs will ideally involve digital literacy so that learners become capable of properly accessing, differentiating, digesting, and creating/synthesizing relevant content in a digital environment (their PLE). Jarche calls this process content curation, and his Seek-Sense-Share model considers three steps in the process: seek information and content, sense-making (digesting or making sense of the content), and sharing the content with a specific audience in mind (Jarche, 2012).

The instructor of an AOC must necessarily be digitally literate and have a functional PLE and PLN if they hope to lead and facilitate learning in such an environment, as many of the open activities take place in the learners PLEs and between the learner and his or her PLN.

The Seek-Sense-Share process enables an information cycle where the product shared with one’s PLN is accessed and digested by others in that PLN as well as in their networked PLNs. This results in the dissemination of ideas and information that is then consumed, modified or grown in some way, and shared back. There is no clear beginning or end to this process. The shared product of these interactions between PLE, PLN, and information are aggregated in the course hub, the central shared space for the AOC learning environment.

**Course Hub**

The course hub is the core of the learning environment and may be parallel in some ways to the classroom in a physical learning environment. The content, instructions, announcements, resources, etc. are usually posted to this central digital location. Learners connect with each other through their PLEs and PLNS, but they are initially introduced through the course hub and it serves as a community board where new assignments and instructions are fed out, and resultant products and ideas are fed back into the course from the learners’ PLEs and shared with others through a course feed or some similar aggregated content where the work of all members of the course can be located in one place.

**Conclusion**

The OPEN model will rely heavily on digital technologies, social constructivist learning perspectives, and is intended for situations where divergent thinking, connection, and participative engagement is desired. The OPEN model provides a guide for constructing a framework upon which the course content, sequencing, and assessment
designs can be built. It is a meta-environment design model that informs subsequent design decisions without limiting them to a given set of content or restricting a type of domain. The OPEN model has some potential limitations, but the resulting system should be responsive and provide a surplus of feedback for use in formative evaluation and development of the model. The OPEN model is informed by similar and supporting ID models as well as several theories; especially open systems, social constructivist, and technology theories.

The OPEN model is an experiment in the potential of new social instructional design models that value the practices and beliefs of openness, participatory culture, and seek to create learner engagement with people and resources both within the learning environment and with the larger environment through technology enabled networks. It is informed by similar explorations in pedagogy and instructional theory, and is representative of culminating theories, research, and beliefs about the nature of collaborative learning in adaptive technology enabled social scenarios.

References


