Theoretical Framework of Online Learning: A Student-Centered Model

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Theoretical Framework of Online Learning: A Student-Centered Model

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Introduction

While the topics of instruction and learning have long since been debated, current research is expanding to incorporate theories of online learning. While considering the theories presented by a number of others, it is the opinion of these authors that successful online learning must be student-centered through the processes of planning, designing, implementing and assessing online learning activities. It is through the provision of a collaborative and interactive learning environment, which focuses on the individual and specific needs of the learner, that online learning is optimized.

Background Information/Summary of Sources

Knowlton (2000) supports our theory that online courses must be student-centered in order to be educationally effective. He further suggests that students reach their highest potential only by working with others, through electronic collaboration and dialogue with both other students and teacher. When students become active participants in their learning, they construct their own knowledge. Learning is especially advantageous when students are engaged in real-world tasks and permitted to "broaden the learning arsenal by introducing things that transcend teacher control of course material" (Knowlton, 2000). As such, learning becomes more meaningful and relevant. Summers and colleagues (2005) support Knowlton's constructivist, interactive model for online learning, and further indicate that a constructivist pedagogical framework is perhaps the most important aspect of online courses.
Bruner (1960) also notes that students learn better within context than they do through isolated mastery of facts and techniques. As such, he suggests a practical approach be taken to learning and teaching, with students learning through inquiry. Bruner proposes the notion of a "spiral curriculum", advising that basic ideas be continuously revisited by the curriculum in order to be built upon for full understanding. Bruner puts forth the idea that intuition is an essential feature of productive thinking, noting that expertise in a field is demonstrated when one can “leap intuitively into a decision or to a solution to a problem” (p. 62). Bruner also indicates that the best stimulus to learning is an interest in the subject material.

Although the study of Chin and Williams (2006) examines seven key principles to support effective adult learning, these principles have been used to support online learning for younger students as well (Lovvorn et al., 2009). Chin and Williams (2006) note that the more relevant the subject matter is to the personal interests of the learner, the more significant the learning is that takes place. Learners benefit from the experiences of other participants in their group. It is important that students understand why they are learning what they are and they must be involved in the planning and evaluation of their learning. Learning activities can be based on the experiences of learners, including mistakes. Learners show greater interest in materials that have immediate application to their lives. Finally, learning should focus on problems rather than content.

The Community of Inquiry Model (Garrison, Anderson & Archer, 1999) has three essential elements: cognitive presence, which is vital to critical thinking and allows learners to "construct meanings for sustained communication" (p.89); social presence, which is the ability of students to portray themselves as real people within the group; and teaching presence, which is the responsibility of the teacher to design and facilitate the educational experience. Garrison and colleagues stressed the importance of collaboration in the cognitive development of learners.

All frameworks, including our own, support a constructivist theory of learning and stress the importance of subject matter being relevant to the learner’s life. Most authors also strongly support the idea of collaboration between the participants in an online learning environment and all indicate, in one form or another, that learning must be student-centered.

[edit] Our Framework: A Student-Centered Model

[edit] Diagrammatic Representation
Student-Centered Online Learning
We propose a student-centered theoretical framework for online learning, with all other aspects of online education revolving around the learner. While the online classroom exists within technology, technology itself is not to be the focus of learning (Knowlton, 2000). Students learn both independently (Dam, 1995; Holec, 1981) and through their relationships with others (Chin & Williams, 2006), such as peers, the instructor, and the community. Motivation and initiative are the driving forces behind a student’s will to sustain learning (Bruner, 1966). Interaction and collaboration, combined with inquiry, are essential to learning, for it is “only by working together (that) individual students reach their own highest potential” (Knowlton, 2000, p. 8). Content should be developed according to a student’s specific learning needs (Chin & Williams, 2006). Both the learner’s personal world and shared world must be considered (Garrison, Anderson & Archer, 1999). Students are more likely to acquire knowledge when subject matter is relevant to their interests and needs (Chin & Williams, 2006). Finally, assessment encompasses the framework, providing the support and guidance required to help students proceed more effectively with their learning (Siragusa & Dixon, 2005).

[edit] Definitions

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<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Student (also referred to as Learner)</td>
<td>An individual who, using technology, acquires and creates knowledge through an active interaction with their environment and their community (Chin &amp; Williams, 2006; Knowlton, 2000; Papert, 1993).</td>
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<td>Technology</td>
<td>Information and communication systems which serve as the basis for the online classroom, allowing course activities to take place (Knowlton, 2000; Tavangarian et al, 2004).</td>
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<td>Independent Learning (also referred to as Learner Autonomy)</td>
<td>A situation in which the learner takes charge of their learning and is able to determine their own needs and purposes for the learning task in a self-sufficient manner (Bruner, 1960; Dam, 1995; Holec, 1981).</td>
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<tr>
<td>Peers</td>
<td>Equal members of a learning community, participating with the learner in acquiring knowledge and skills through active help and support (Topping &amp; Ehly, 1998). The instructor’s role is that of facilitator, they are the binding element within an online classroom, assisting students to become more aware of their learning needs and guiding them towards a deeper level of knowledge (Easton, 2003; Garrison et al., 1999; Siragusa &amp; Dixon, 2005).</td>
</tr>
<tr>
<td>Instructor</td>
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**Community**

The social context that influences the learner, affecting the nature of learning outcomes and activities (Garrison et al., 1999).

In the constructivist perspective, the learner is the builder and the content (information) is the material needed to build. The emphasis should always be on teaching content within context and in a way that can easily be transferred to a real world situation (Bruner, 1961; Chin & Williams, 2006; Papert, 1980).

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### Definitions of Links and Relationships

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<tr>
<th>Link or Relationship</th>
<th>Definition</th>
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<tr>
<td><strong>Interaction</strong></td>
<td>An important part of Web-based learning environments, interaction allows learners to improve their understanding of materials through describing, explaining, questioning, discussing, supporting and assessing each other’s work (Bandura, 1977; Forsyth, 1996; Ralph, 1998; Wagner, 1998). A relationship that develops within a group learning situation in which each individual depends upon others within the group. Positive social interdependence is created with the giving and receiving of help, exchanging of resources and information, giving and receiving of feedback, challenging and encouraging each other, and jointly reflecting on progress and process (Curtis &amp; Lawson, 2001; Chin &amp; Williams, 2006; Gunawardena et al., 2006).</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td>The student is experiencing all content in online learning through the lens of technology, allowing the student to personalize their learning. The more relevant the subject matter is to the interests of the learner, the more significant the learning will be (Chin &amp; Williams, 2006; Ziegenfuss, 2010).</td>
</tr>
<tr>
<td><strong>Knowledge Acquisition</strong></td>
<td>All relationships within the online classroom are experienced through technology, changing traditional social interactions. Relationships within the online learning experience can vary greatly depending on synchronous versus asynchronous learning (Chin &amp; Williams, 2006). Motivation is the driving force which helps learners achieve goals. Intrinsic motivation is interest in learning for learning’s sake, which is considered to be an essential factor for successful learning. A learner requires self-direction and initiative in online learning. The learner must define what they want to learn and then meet their goals through online exploration (Choi &amp; Johnson, 2005; Draves, 1999; Entwistle &amp; Ramsden, 1983; Hoskins &amp; Van Hooff, 2005).</td>
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<tr>
<td><strong>Learning Relationships</strong></td>
<td>A dynamic process that allows learners to seek information by questioning and exploring difficult</td>
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subjects, beginning with the curiosity of the learner (Bruner, 1960; Bruner, 1961; Dewey, 2009). The process of documenting knowledge and skills through the progression of learning, allowing students to receive guidance and feedback on their performance while helping them to proceed more effectively. (Siragusa & Dixon, 2005).

[edit] Examples

The following examples provide suggestions for the application of our student-centered theoretical framework to an online learning environment.

[edit] Student

Students are responsible for constructing their own knowledge and should “determine the direction of a course through their active engagement with course materials” (Knowlton, 2000, p.13). The course, Online Technology in Education (EDUC5103) is an example of student-centered learning. The professor has a guide and outline and yet students are permitted to choose their own foci for seminars. Students rely on technology to gain access to the course/class, materials, and research, but technology is not focus of the course. Students learn independently through research opportunities outside of class, but collaboratively with peers and the professor during class time, blogs, tweets, wiki, chats, emails, etc.

[edit] Content

In a student-centered online learning environment, content should be dynamic. Content should change based on the learner’s needs, skills, knowledge, etc. Content should be evaluated throughout the duration of the course – from onset through to end – to ensure it meets the learner’s needs and expectations (Knowlton, 2000). At the end of the course, students should rate high levels of learning, given that content should have been modified to suit their needs. Content guides learning and learning goals are achieved through each individual student’s motivation/initiative (Shea & Bidjerano, 2009).

[edit] Technology
Technology is used as the medium for the online learning. The framework can be used to assess how technology is being utilized by students, and how students are effectively using it as both an independent and community-based learning environment, as well as a collaborative tool.

**[edit] Peers**

This framework could be used to evaluate how a communicative environment is fostered, and how it provides various avenues for communication between student and peers, professor and community. For instance, using different social networking tools such as WebCT, Adobe Connect, email, blogs, wikis, Twitter, etc., allows for a means of communication between participants. Peer-to-peer learning is the reciprocal process of exploring each other’s reasoning and viewpoints in order to construct a shared understanding (Siragusa and Dixon, 2005). For example, in EDUC5103, Wiki provides the setting for collaborative knowledge building and group metacognitive development. It also facilitates socially-mediated metacognition by enabling students to reflect on their development process as a group, as students critique each version of work edited by group members.

**[edit] Instructor**

The instructor’s role in the online field of learning can be evaluated with our framework. The role of the instructor is to keep online discussions on track, weave discussion threads, and maintain group harmony (Easton, 2003 & Garrison et al., 1999). The instructor can ensure that facilitation is being provided without simply disseminating knowledge and therefore interfering with students’ personal learning goals (Knowlton, 2000). In EDUC5103, the instructor frames the knowledge and allows students to explore the knowledge to their own breadth and depth.

**[edit] Collaboration and Interaction**

Many studies show that interaction in online learning provides a mechanism that allows the learner to apply knowledge accurately and therefore increase his or her understanding (Christiansen & Dirckinck-Holmfeld, 1995; Kearsley & Shneiderman, 1998; Moller, 1998, as cited by Knowlton, 2000). Online learning allows for a variety of mediums through which collaboration and interaction can take place. For example, when students interact through Adobe Connect, collaboration and interaction occur. In addition, break out rooms provide for a more intimate opportunity for discussion and sharing of ideas.

**[edit] Assessment**
In an online learning program, assessment is crucial to ensure that learning is meaningful for the student. As students receive feedback and guidance, they are able to proceed more effectively (Siragusa & Dixon, 2005). For example, students in the process of narrowing down a topic for research opportunities require guidance from their instructor before they can solidify their final intentions. Self-assessment and instructor feedback continue to guide the process during research through to project completion.

**[edit] Conclusion**

An online classroom must be in a constant state of change, focusing on the needs and goals of the learner. Content must then adapt accordingly, allowing for a dynamic environment. Independent learning will be shaped through collaboration and interaction with peers and instructor. With guidance and feedback, provided through regular assessment, a student’s individual learning goals are met, affording the learner a high level of satisfaction in their online learning environment.

**[edit] References**


Lovvorn, A. et al. (2009). Lessons Learned From Lessons Learned: The Fit Between Online Education “Best Practices” and Small
School Reality. Online Journal of Distance Learning Administration, Volume XII, Number IV.


