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Understanding Learner Interaction Patterns When Building an Online Learning Community

Abstract

The quality and frequency of learner interaction within an electronic learning environment is fundamental to the real and perceived success of this experience. Understanding learner interaction patterns when building an online learning community is vital to providing a solid foundation for student learning. This research seeks to answer the following question: What is the ideal learning environment and how do we create one, which works with a variety of learning styles? In answering this question, this paper seeks to understand the influences that impact how students learn, the process of changing how practitioners and facilitators think about the environment in which the process of learning takes place, the impact different learning styles and suggestions for the optimal mix of current technologies to achieve the best practical online learning experience.

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Introduction

Online learning is fast becoming the more than a passive novelty of the latest trends as technology becomes more reliable and easier to manage. Traditional brick and mortar University and K-12 schools are rapidly changing to meet the growing demand for online learning capability to meet the needs of the “MP3 generation”. Pallof and Pratt (1999) explain that institutions entering the distant learning area must be prepared to tackle new issues and concerns and to develop new approaches and new skills in order to create an empowering learning process (p. 6). This physical shift from a traditional classroom setting to a virtual classroom setting requires also a shift in thinking about how learning is to be taught by the instructors and how knowledge is to be acquired by the learners. At the heart of the matter is the participatory nature of a virtual classroom environment and how its value lies in the goals and purpose of the community and the quality and level of meaningful interaction of the learners.

This paradigm shift introduces a whole new level of skills and responsibilities from both parties. From the instructor perspective, he or she will need to become savvy with the technology, such as email, a threaded discussion board and instant messaging to begin with. Instructors also must deal with facilitating the different student learning styles that may be constrained by the technology, whereby the instructor must include in their course planning a strategy to meet this vital element that has the potential to shape the learners expectations and experience in a negative way that would preclude them from taking another online course. Along with the educational issues, instructors also must deal with a different set of emotional, physical and psychological concerns that may depend on how involved they are during the online learning process that Pallor and Pratt

alluded to. The new issues that instructors and students alike must deal with if the technology is used extensively can include carpal tunnel syndrome, back problems, headaches, in addition to becoming addictive to the technology (p.7). Professional development for online instructors in the form of mentoring, workshops and coursework can significantly enable a common approach for course design, adjusting teaching strategies, community building, and include methodologies for implementation and evaluation. Working in concert with institutional goals, cooperative collegial relationships must be established between the institutional leadership and the instructors because they are the direct influence (outside of parental involvement) toward learner success and achievement.

Influences of the Learning Process

- **Teaching Styles**

Many things influence online student interaction. The most common mix would include teaching styles; the influence of society and culture has on different learning styles online students bring to the table along with community acculturation. Individual teaching style comes predominately in two flavors, the authoritative style and the facilitative style. If we take a closer look at the traditional authoritative teaching style we understand it is mostly connected with the traditional classroom environment. An instructors teaching style coupled with his or her experience in facilitating an online learning community provides, can cast the widest net for helping all types of students succeed online regardless of learning style. However as Quitadamo and Brown (2001) point out, although instructor-teaching styles vary considerably; unfortunately, not all variations effectively promote student learning (p.2). This leads us to other ask if there

are an ideal set of teaching styles or characteristics instructors must acquire in order to be able to address the learning needs of a community of virtual learners through largely a text based computer mediated delivery system. Interestingly enough, many instructors are under the impression that the same teaching styles and approaches used in their traditional classes will also work in an online classroom (Diaz & Carnal, 2000). Liu (2004) expressed in her study that without the dynamics in a classroom, the instructors felt it is difficult to understand and engage students in the same way as in a traditional classroom (p.608).

- **Building Student Confidence**

In Quitadamo and Brown's recent study which over 75% of students participated, most overwhelmingly the majority of students strongly perceived the course instructor to give highest priority to building student confidence in their ability to learn difficult subject matter, was concerned with the academic success and assisting all course participants to learn, provided detailed, useful comments on assignments within a short time, and in general encouraged meaningful communication between the instructor and the students (p. 5). Every activity the instructor invokes must fall in line with the overarching goal of meeting the needs of the online learner. Conrad and Donaldson (2004) explain that the key to creating a positive learning experience is to identify the student's needs and incorporate activities that address the various learning styles (p.19). How the learner perceives how well their online needs are being met will directly reflect upon the instructor no matter who they are. From a strategic standpoint, the value an online instructor can bring to his or her presence may depend on how well they are organized, how frequent they communicate to all learners as equally as possible and how

enthusiastic they are about the content. Enthusiasm is contagious and for learners with various learning style needs, can alleviate anxiety and build confidence.

Teacher- Learner Interaction

Peters and Armstrong (1998) introduce the notion of the existence of three types of teaching and learning. In summary they explain type one naming it “*teaching by transmission, learning by reception*” whereby the pedagogical relationship flows from the teacher to the student, the teacher being the sole source of information the student needs (p.78). This is clearly a one-sided relationship by reason that the instructor provides goals, expectations, and selection of content and implementation of the process with no input from the student whatsoever. The student does have one option, which is to accept the terms or drop the course. This mode of instructional delivery is commonly done by lecture and the type of learning experienced by the student is individual learning (p.78). This style of teaching in and of itself would not be conducive to meeting the needs of different learning styles within an online environment because it is not directly “open”, offering only a one-size fits approach.

- **Learning to Learn**

To accommodate different learning styles in a traditional environment often requires instructor availability after class or during specific office hours in order to gain clarification or the learner teams up with peers who appear to grasp the content and can work within the structure. An online instructor must be sensitive to the needs of his or her students in order make sure they understand and can manage their own learning experience. Peters and Armstrong call type two teaching and learning, “*teaching by*

transmission, learning by sharing” (p.79). This process enables the students to become part of the construction of knowledge because the instructor has essentially relinquished part of the responsibility to the students to take what was received in the lecture and have open discussions among themselves. This can have positive impact on student learning styles in an online environment because it provides an open door for students to share experiences and understandings in a non-threatening way among peers. Finally, type three teaching and learning is characterized by the combination of individual and group learning that provides a foundation for collaboration and community building.

- **Role Changes**

The instructor becomes more of a facilitator and co-learner in that he or she manages the process and provides the stimulus for learners to take control of the learning progression by contributing to meaningful discussion threads about the subject matter. There is a 3-way direction in which learning flows according to Peters and Armstrong and that is learner-to-learner, learner to group and group to learner (p. 79). This form of teacher-learner interaction varies between learning environments and is largely dependent on the instructors teaching style and understandings of collaborative learning. In an online environment, type three teaching and learning is the best suited strategy instructors should use to get the most out of the online teaching experience because they are constrained by the delivery system, which shifts away from the physical, aural, visible cues and social dynamics of the serendipitous nature of a traditional classroom.

Culture and Learning Styles

Understanding the impact a students' culture may have on their learning style would help provide a greater sense of community within an online learning environment. Each person brings to the table a unique and personal learning style that comes from both societal and cultural experiences. From within each cultural group, we see this as being a great influence as norms, customs and traditions not only establish group identity but shape the world view of its members. When brought to into the education system (within the context of American society), the learning style preferences are manifested in the classroom. Fierro (1997) explains that because cultural groups often share common values, the students who grew up with those values are reflected in their classroom learning behaviors (p.2). Fierro citing Sandu (1995, p.159), believes that the underlying philosophy of learning styles research is based on three major premises: all students learn, students learn differently, and students learn better when they are taught in their specific learning style. However, when experienced within the current education system, the cultural significance from many groups is lost by reason that the current framework for learning is conducive to those learners who are well acculturated (or have become assimilated) in the mainstream of society's values and traditions of how learning should occur.

- **Impact on Student Achievement**

A recent study (Brown, Anfara Jr., & Roney, 2004) looked to explain student achievement between high performing suburban middle schools and low performing urban middle schools. Among many factors, race, ethnicity, location of the school and socio-economic status (SES) (p.451) emerged as the most prevalent causing factors of

low academic performance. Even so, it is important to note that learning styles in context of group identity were not considered, just the implications of perpetual stereotypes often assigned to people of color. Dembo (1991) suggests that the diversity of the cultural backgrounds of students in American schools and the low academic achievement of many of these students require a greater understanding of how cultural factors may influence educational achievement (p. 89). He also notes proponents of culture differences point to the disparity between the students' home and school culture and the difficulties that minority students have in adjusting to a classroom with different social interactions, linguistic and cognitive (learning) styles (p.90).

- **Cultural Impact**

Fierro tells us that ignoring the effects of culture and learning styles would depress learning among non-mainstream students; if classroom expectations are limited by our own cultural orientations, we impede successful learners guided by another cultural orientation (p.10). This creates interesting challenges for online teachers and instructors to not fall into the trap of applying one teaching methodology to a group of diverse students. This not to say or imply that students of the same cultural background, values and experiences will all learn the same way therefore one teaching approach will suffice, on the contrary different learning styles exist among students as a matter of fundamental. Therefore this should be taken into consideration during course design throughout the learner analysis phase. Chem (2004) suggests that for the most part instructional design for online learning has largely ignored culture in the creation of online learning environments, and that understanding whether and how learners cultural characteristics may interact with a major delivery method such as online learning makes

possible the exploration and creation of alternative means of supporting learning in the construction of knowledge (p.183).

Online Community

When establishing an online learning environment, it is important that the instructor/facilitator understands what it takes creativity to establish and maintain collaborative electronic learning community. This is due to the fact that learner perceptions about participating in a virtual classroom need to be shaped in a way that enables them to overcome the isolation and dependency on technology that interfaces to the instructor, content and process. Lee (2000) citing Grint (1989), who examined learner perceptions of online learning in order to identify obstacles to student achievement, noted that the lack of spontaneity and real time interaction was a disadvantage because it diminishes naturalness and discourages the motivation for continuous participation. However, learners who have the appropriate level of system access and utilize adequately the benefits of the online human interactions tended to have more positive learning styles, and have demonstrated better learning performance (p. 3).

Understandably, some of the techniques used by facilitators to develop strong electronic learning communities come directly from traditional classroom methods and are extended and changed to meet the needs of the virtual environment. One example used by instructors to begin the process of developing an online learning community is called the “ice breaker.” In a traditional classroom where there is a collective visual presence of everyone in the class; the instructor may introduce himself or herself, perhaps talk about their research interests and maybe why they chose the field they are in. He or

she may in turn ask each person to do the same, which may include their name, what they expect to get out of the class, and their personal interests and hobbies. This approach tends to help relax everyone and set a positive atmosphere as the course proceeds.

- **Getting Started**

In an online environment, facilitators need to take a different approach to “breaking the ice” as the online environment moves asynchronously as opposed to a synchronous classroom setting. Conrad and Donaldson (2004) suggest that an effective icebreaker should humanize the technology-mediated experience so that trust can be built among learners (p. 47). Some online learning environments accomplish this by having user’s setup personal profiles of them which could include a picture, personal interests and other biographical information. In addition to the profile, ice-breaking techniques are initiated immediately between learners, as often the sharing between peers can create a sense of camaraderie and point of encouragement to venture forward. Doran (2005) asserts that the psycho emotional needs of students must be considered and supported when implementing collaborative learning in an online course; noting that students will vary in their willingness and initial ability to function, therefore needing extra scaffolding and coaching and instruction (p. 5).

- **Student Involvement**

Participants in an electronic learning community have a responsibility to stay involved throughout the duration of the course. Geer (2001) points out that through constant interaction, individual efforts are merged resulting in the culmination and achievement of a common and explicit goal, noting collaborative interactivity is a

combination of learning tasks and rich discursive interaction (p 558). Unlike a classroom environment whereby a simple nod of the head is an acceptable form of agreement and participation. At the same time one putting their head on a desk sends a strong message to the group as well. Online, however it is easy for one to hide in the shadows and lurk, however that posture actually becomes counter productive to the group and defrauds the other participants of his or her perspective. An electronic learning environment is a collaborative one and the role of each member needs to see their contribution as a piece of the construction of new knowledge all members are seeking to obtain. This leads us to focus on improving unequal participation and non-participation within groups.

- **Human Factors**

Online communities form often from a common interest. In an online learning environment, the common interest takes the form of a specific class or formal education program. Common interest forms communities for both pedagogical and other social activities such as a classic car club. Graves (1992) describes *a sense of community* as an environment in which people interact in a cohesive manner, continually reflecting upon the work of the group while always respecting the differences individual members bring to the group. In an online learning environment, previous experiences from the traditional classroom environment often become the reference points that shape the comfort level as to how well, how often and perhaps how interactively one participates. Some learners with timid or introverted personality traits may feel uncomfortable in a traditional classroom environment where clearly the “spotlight” is placed on him or her when he or she is asked for input to a discussion where in most other times he or she

would participate as little as possible not because of an inability to grasp the content or have an opinion, but the fear of public speaking. These personality types often come alive in an online environment, as the risk of becoming terrified of public speaking has been removed by an asynchronous, non-threatening, semi-anonymous conversation.

- **True Collaboration**

Collaborative learning based on relationships or “community” is the goal behind online learning, not simply applying a traditional way of thinking in a different environment seeking the same results. Collaboration means that people labor together in order to construct something that did not exist before the collaboration, something that does not and cannot fully exist in the lives of individual collaborators (Peters & Armstrong 199 p.75). Although student-centered learning is core to the design of online learning, it is within the context of a collaborative effort among members of the community is where it is realized. Reeves, Herrington and Oliver (2004) believe that through intensive engagement in the collaborative solution of authentic problems, the learning outcomes accomplished by these learners will be of the highest order...(p.53). Moreover, the construction of knowledge depends on the active and collaborative sharing of information and experience leading learners to understand that interaction with peers helps students forge new connections between formerly disconnected knowledge and identify similar experiences (Mouza, Kaplan & Espinet 2000 p.416).

Instructional Design

The author who is an instructional designer, believes that a thorough learner analysis can mitigate some risk associated different learner styles and the desired

outcomes of the instruction. The guiding question is often framed something like the following: What is it the learners are expected to know or do after they complete the instruction? Discovering as much as possible about the target population keeps the instructional designer from broadly assuming learners are alike even though they may have similar job titles, levels of education and work experience. This process can begin by establishing baseline categorical assumptions about the target audience (by what is already given) then moving towards collecting survey data to get a sense of each learner's attitudes and comfort level with learning under varying conditions.

- **Technology Mediated Learning**

Taking into account the shift in thinking about online learning from a traditional classroom that would include the various teaching styles, cultural influences, a paradigm shift in community building to support the collaborative construction of new knowledge, we now see that these entire dynamics hinge upon the current asynchronous/synchronous computer mediated technology. In recent years, the use of computer mediated technologies for the use of delivering online instruction has grown tremendously. In fact institutions are in competition to get their systems up and running seeking new ways to make them easier to use and cost effective. The proliferation of technology to deliver distant education is not without its problems. Despite the increased robustness of the technology and of the appeal of the delivery system, several challenges associated with the successful implementation of online instruction remain unresolved; the most significant being the level of interaction and support which are closely associated with high drop out rates and learner dissatisfaction overall of online courses (Hill & Raven 2000).

- **Adjusting to a Virtual Classroom**

Casual factors can be attributed to the lack of community integration or some students experiencing “culture shock” having to adjust to a non face-to-face virtual classroom. The study conducted by Hill and Raven offer a framework of strategies outlined in four categories as an approach to enhance learning and manage community building. In summary these are atmosphere, foundation, communication and technology. Create an atmosphere where values of trust and honesty are promoted and encouraged. Assist the learner in becoming dependent on the structure in which learning occurs. This can include an inviting user interface and efficient access to information. Staying connected through frequent and timely messages and being flexible with the technology to help students overcome their lack of skill and provide technical support. Encouraging Instant Messaging (synchronous) coupled with threaded discussion and email (asynchronous) can provide a balanced approach for online learners with various preferential learning styles to get the most out of an online session.

Both synchronous and asynchronous modes of online communication facilitate different type of activities within an online community. A synchronous mode involves very specific times learners need to login to the environment. Tasks that benefit well from a real time discussion would be meetings or activities that support short quick dialog. Asynchronous mode actually invokes a member driven dialog that provides depth and breadth that drives how the community takes shape. You could say a synchronous discussion requires a recognizable leader as in a traditional classroom. An asynchronous discussion takes shape whereby the facilitator is actually a member of the community. Each method has its place and its implementation depends on the goals of the

community. Interaction is crucial to the success of an online community. Chou (2002) points out that in a synchronous mode, learners demonstrate more social-emotional forms of communications. In an asynchronous environment, learners spend more time in task-oriented discussions. A balance of both modes can be used to build an effective online community.

Conclusion

There are many things that impact the individual learning styles of students. The shift to online learning doesn't make the process any easier. Institutions seeking to establish electronic learning communities must be prepared to tackle new issues and concerns and to develop new approaches and new skills in order to create an empowering learning process. In spite of the influence of society and culture has on students, an instructors teaching style coupled with his or her experience in facilitating an online learning community, can provide a environment that helps all types of students succeed online regardless of learning style. Strategies would include understanding the impact a students' culture may have on their learning style would help provide a smoother acculturation process enabling the student to venture forward and learn to become a member of a collaborative learning community.

Each person brings to the table a unique and personal learning style that comes from both societal and cultural experiences. When establishing an online learning environment, it is important that the instructor/facilitator understands that it takes creativity to establish and maintain a collaborative electronic learning community. Strategies at every level must be flexible for change since online learning is so dependant on asynchronous/synchronous computer mediated technology. The optimal mix of

strategies to meet the widest range of learning styles should include an honest and non threatening atmosphere, a solid foundational structure that is user friendly, enable and encourages frequent communication and follow up, and a flexible technological implementation that supports multiple access points, and provides convenient technical support.

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