

Does teaching drive technology or does technology drive teaching? What an interesting question! As one who is responsible for identifying, purchasing, installing, and instructing in all areas considered instructional technology, I recognize that each drives the other in a way that can only be described as synergistic. The more interesting the technology, the more varied the mode of delivery can be; the more globally the instructor pulls for materials, the more complex the technology becomes. There are many fields of study for which “technology” is simply a vocabulary word; the field has not developed to a point at which the “old ways” are ineffective. It may be that the old ways are still in effect and circumvent the requirement to learn the new ways.

One must be careful not to attribute the motivation of classroom technology incorporation to one “side” or the other. Instead, the question is really best examined in the context of society’s new reliance on easy access to information via the internet, and the refined skill-set necessary for effective (and efficient) navigation of the plethora of information. The responsibility for the training of these new and extra skills has fallen on teachers and professors. In this context, one might identify the motivator as the technology itself. Societal response has been to add *technoliteracy* to required curricula, essentially forcing educators to incorporate technology into their respective pedagogies (Kimber, 2002).

On the other hand, particular technologies have been developed in direct response to need in several fields of study. The ability to collect data electronically in the social sciences has led to tremendous computer innovation, including, for example, GUI development, and timing devices. It is the “teacher” whose own scholarliness is driving technology, serendipitously creating an environment in which technology is a primary tool for learning, even as the student gleans skills that will transfer to other learning situations.

Interestingly, as students and teachers become more technologically savvy, the two begin to demand the availability of more electronic resources. Even the teacher who still insists that learning will only take place in the face to face classroom will admit to the convenience of a reliable email program. The increased demand on the part of the users drives an increased variety of functional applications and hardware, which then feeds the need for enhanced skills. The cycle of synergy is maintained.

Bibliography

George, M. (2008). Online-learning communities. *MultiMedia & Internet@Schools* , 14 (6), 14-17.

Kimber, K., Pillay, H., & Richards, C. (2002). Reclaiming teacher agency in a student-centered digital world. *Asia-Pacific journal of Teacher Education* , 30 (2).

Sanders, M. (2006). Technology education leadership: Observations and reflections. *The Technology Teacher* , 66 (31).

The most obvious barrier to building a sense of community is the lack of actual face to face contact in an online environment. The online participant must be able to articulate his/her thoughts using only the “written” word; personalities must be described rather than experienced; collaboration or group work must be choreographed rather than simply defined. There is no naturally occurring opportunity for “making friends” in the online classroom. This phenomenon is exclusive to the online classroom in that technology actually seems to enhance a sense of community in the face-to-face classroom (Beatty, 2006).

According to Hudson, Hudson, & Steel (2006), a sense of community can and should be “orchestrated” in such a way that a functional sense of “interdependence” exists across groups of students, and across the community of groups. By intentionally creating an environment in which group members are dependent upon each other as mentors for identified pieces of a project, students will come to feel a sense of community connectiveness. Community development does not occur simply by virtue of the intention, however. The online course designer must carefully structure the groups, explicitly define the joint activity that is being asked of the group, and allow for leadership roles to surface naturally. (In the event that a leader does not become apparent, it is the responsibility of the instructor to assume the role.) Built into the orchestrated group model is a variety of assessment processes, including peer evaluation; this is in addition to the more traditional “grading” done by the instructor.

Lee (2006) goes so far as to assert that community is a function of the degree of the incorporation of the social constructivist philosophy in the online course design. That is, a sense of community will only occur when the design requires a certain variety of experience and learning styles in the online learners. The functional variety feeds a need for the formation of community collaboration and learning. At the point of the occurrence of a community of learners, constructivism becomes the “naturally occurring/preferred” pedagogy. Lee contends that community and constructivist pedagogy are synergistic and symbiotic, that is, one requires and feeds off the other.

The most predictable method for breaking the implicit barriers to a sense of community is to be aware of ways to create online situations in which the members of the community are essentially forced to rely upon each other as they navigate through the environment. Course designers who incorporate discussions, group activities, and peer assessment (formal or informal) produce learners who come away from a course with a sense of having participating in their learning, as compared to having simply attended an online course.

Bibliography

- Beatty, B. & Ulasewicz, C. (2006). Online teaching and learning in transition: Faculty perspectives on moving from Blackboard to the Moodle Learning Management System. *TechTrends*, 50 (4), 36-45.
- Diedrich, D. (2005). Creating a collaborative environment: Instructional and Learning Services. *Proceedings of the 2005 ASCUE Conference* (www.ascue.org). June 12-16, 2005. Myrtle Beach, South Carolina.
- Hudson, B., Hudson, A., & Steel, J. (2006). Orchestrating interdependence in an international online learning community. *British Journal of Educational Technology*, 37 (5), 733-748.
- Lee, J., Carter-Wells, J., & Glaeser, B. (2006). Facilitating the development of a learning community in an online graduate program. *The Quarterly Review of Distance Education*, 7 (1), 13-33.

There are many similar forces that have – and currently do – contributed to the exponential growth of online learning. Not surprisingly, the more frequently cited cause is that of the need for off-premise professional development. An interesting response to the increased need for distance and online education is the return to a modern interpretation of Mr. Dewey’s learning theory, that is, simply, *constructivism*. The need for the pragmatic incorporation of the recognition of a variety of learning styles into the online course design has re-ignited the understanding and use of the same in face-to-face classrooms.

Rather than attempt to “crunch” all of the comments made across a collection of articles into a couple of paragraphs, it seems it may be more valuable to “discover” the consistency of attributed causes in the context of the researchers’ article references. The following list is a quick “pull” of those causes and the respective authors.

Beatty, B. & Ulasewicz, C. (2006). Online teaching and learning in transition: Faculty perspectives on moving from Blackboard to the Moodle Learning Management System. *TechTrends* , 50 (4), 36-45.

- ...file sharing, communication, access to content
- Increased frequency of visual and adult learners (f2f and distance)
- Variety of pedagogies...

George, M. (2008). Online-learning communities. *MultiMedia & Internet@Schools* , 14 (6), 14-17.

- Professional development requirements
- Self-contained learning environments
- Cost-efficiency, affordability – for both the student and the institution
- Sustained professional collaboration
 - Fresh ideas
 - Mentoring
 - Facilitates professional dialog
- “infuses technology” into course content – the opportunity to learn the tool while studying anything else

Gresham, J. (2006). The divine pedagogy as a model for online education. *Teaching Theology and Religion*, 9 (1). 24-28.

- “Online education may foster...” communication through the blending of the home and the classroom

Hale, S. (2007, November). Being online. *Academe*, 93(6), 28-32. Retrieved February 20, 2008, from Academic Search Premier database.

- Economics – online is cheaper for everyone
 - Transportation, textbooks, day care, etc.
- Student demographics are changing – increased diversity, need, etc.
- Increases the market

Hudson, B., Hudson, A., & Steel, J. (2006). Orchestrating interdependence in an international online learning community. *British Journal of Educational Technology* , 37 (5), 733-748.

- Global collaboration

Kimber, K., Pillay, H., & Richards, C. (2002). Reclaiming teacher agency in a student-centered digital world. *Asia-Pacific journal of Teacher Education* , 30 (2).

- “speed and increasing sophistication” [of computer technologies]
- “literacy practices”

- “scope of literacy practices....” => serendipitously learning the tool
- Student familiarity and comfort
- “social justice issues” require equal and effective training for all students

Pittinsky, M. (2005, June). No teacher left behind. *THE Journal*, 32(11). Retrieved February 20, 2008, from Academic Source Premier database.

- No Child Left Behind (NCLB) Act requires timely, efficient professional development
- Dynamic flow of knowledge (personal and professional)
- Networks of learners
- Distance v proximity to physical classrooms
- Professional community building

Russell, M. (1999, Summer). Online learning communities: Implications for adult learning. *Adult Learning*, 10(4), 28. Retrieved February 20, 2008, from Academic Search Premier database.

- To produce adult (non-traditional) learners

Sanders, M. (2006, November 1). Technology education leadership: Observations and reflections. *Technology Teacher*, 66(3), 31.

- Need for more educators – online addresses the proximity problems and issues.