LEARNING MOTIVATION IN TECHNOLOGY-RICH TRAINING

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Introduction

It is no secret that learner motivation is linked to achievement. Students that are intrinsically motivated are more engaged in learning and "[tend] to have higher success rates" (Simonson, Smaldino, Albright, and Zvacek, 2009). While there are many factors that affect student motivation, including parental involvement, instructor prowess, and external factors (Beeland, 2002), this paper will focus on the effect a technology-rich training environment has on learner motivation.

Studies have shown that technology can "influence student academic performance" and "improve student motivation, attitude, and interest in learning" (Roblyer, & Doering, 2010). Beeland reports that "technology can be utilized to create a motivating classroom environment where students are engaged in a learning," which can lead to improvements in learning as well as in teaching (Beeland, 2002).

Manners of Motivation

Technology can motivate learners in a wide variety subjects, from math and writing to science and music. It can also motivate learners in ways that are not directly connected to curriculum subject matter. It can help students with confidence issues gain more self-esteem (and consequently be become motivated to perform better) as well as empower students that struggle with traditional classroom mechanics become motivated to participate and achieve. Following is a discussion of technology's affects on motivation in the general classroom environment as well as writing and foreign language acquisition. The potential of classroom technology to motivate students with confidence issues and students that struggle with traditional classroom mechanics will also be explored.

Technology and General Classroom Motivation

Integrating technology into training doesn't just mean setting up a row of computers at the back of the room. Technology-rich training can be found in the form of telecourses, computer games and activities, simulations, film presentations, handheld computing devices, and interactive whiteboards. After conducting studies and surveys on the subject, the Department of Education found that, whatever the technology, the most common teacher-reported effect on students was an increase in motivation . Some of the general motivational effects cited were "overall orientation toward working on schools tasks, satisfaction with the immediate feedback provided by the computer, or the sense of accomplishment and power gained in working with technology" (U.S. Department of Education, 1995).

Beeland conducted a study that inquired after the specific motivational effects of using interactive whiteboards in the classroom. The data included "the frequency with which text, graphics, video, and sound were used during the course of the lesson" as well as "the number of times that students and the teacher made physical contact by touching the board was recorded." The study found that the interactive whiteboards did increase student motivation and engagement within the learning process. "The primary reason appears to be the visual aspects of using the whiteboard," Beeland concludes. "School and technology leaders need to be aware of the potential these whiteboards have for increasing student achievement through increased student engagement" (Beeland, 2002).

Technology and Writing Motivation

Studies have been done on the effects of specific technologies on specific academic areas as well. Swan, van 't Hooft, Kratcoski, and Unger conducted a study that the inclusion of mobile computing devices in K-8 classes helped students become more motivated to participate in writing assignments. "Students said that they preferred using the mobile devices over writing by hand and that using them for writing assignments made the work 'easier' and 'more fun,'" they reported. The handheld technology not only motivated the students to write, but also motivated them to write more than they would by hand. "The one benefit I've noticed is that they do write more with the [mobile computing devices]," one instructor reported. "And . . . the more you write, the better a writer you become" (Swan, van 't Hooft, Kratcoski, and Unger, 2005).

The researchers contested that handheld computing devices are a compelling choice for technological integration in the classroom, given their relatively low cost and portability. The teachers involved in the study "agreed that their students' motivation to learn and engagement in learning activities was improved by their use of mobile computing." This resulted in increased student productivity and improved work (Swan, van 't Hooft, Kratcoski, and Unger, 2005).

Technology and Foreign Language Motivation

The motivational factors of technology are not limited just to writing. Simonson, Smaldino, Albright, and Zvacek discussed a study that "compared learning outcomes of an interactive telecourse in introductory high school Japanese with those of a traditional class." Over 2,000 students were involved in the study. "The researchers observed that the older students in the distant class were highly motivated," they reported. "This had

significant impact on her achievement, much more than the fact that they learned at a distance" (Simonson, Smaldino, Albright, and Zvacek, 2009).

Raising Self-esteem with Technology

The U.S. Department of Education has published findings that support the notion that technology can also help raise learners' self-esteem. "Teacher reports regarding increased student motivation and self-esteem were supported by our classroom observations," the department reports. During site visits, students were exited to share computer-supported projects and findings. The department reported that "the feeling of mastery, as well as the social recognition that often accompanies such accomplishments, truly make a difference in one's sense of efficacy as a learner" (U.S. Department of Education, 1995).

The same study also cited technology's ability to "providing a venue in which a wider range of students can excel." They found that many students that had a history of struggling to achieve with traditional classroom mechanics performed much better in technology-rich environments. They wrote that instructors and learners "are sometimes surprised at the level of technology-based accomplishment displayed by students who have shown much less initiative or facility with more conventional academic tasks" (U.S. Department of Education, 1995).

Concerns and Issues

It is clear that the inclusion of technology in a learning environment has been shown to increase student motivation. It is not a surefire solution, however, and it is not without its concerns. Cost, the tendency for technology to become obsolete quickly, and the difficulty of training instructors to integrate technology effectively are all issues that

must be taken into consideration when considering the pros and cons of a technology-rich training environment.

With educational funding being cut across the country, the money for technology in public education is becoming scarce. The economy is not treating many private companies well either, and training budgets may not have room for technology integration. And there are plenty of stakeholders in the private and public sectors that are hesitant to invest money in new technologies, especially when it has the potential to quickly become obsolete as better innovations become available.

Even when technology is available, many instructors have trouble including it effectively. Swan, van 't Hooft, Kratcoski, and Unger note that "the current generation of K-12 students is growing up more technologically literate than children their age were a decade ago" but that "teachers are struggling to integrate technology into their curriculum" (Swan, van 't Hooft, Kratcoski, and Unger, 2005).

Another issue to keep in mind is the danger of sacrificing sound instructional principles in favor of using the latest gadget or software. Obviously, installing an interactive whiteboard in a classroom or thrusting a smartphone into the hands of a learner will not magically cause them to be more motivated in a learning environment. The use of technology is only effective insofar that it helps instructors and learners reach the instructional objectives of the curriculum. Technology for technology's sake will not solve many problems or further much education.

Critical Remarks and Conclusion

While the motivational effects technology-rich training can have on learners are impressive and exciting, I believe that thoughtfulness, deliberateness, and care should be

exercised when schools and training departments consider integrating technology in their training curricula. It is very difficult to weigh qualitative issues like student motivation with quantitative issues like cost. And, as stated before, nothing can substitute teaching based on proven instructional methods. Technology is no substitute for good teaching, but it can supplement it with careful, deliberate planning.

It is my hope that training departments, schools, and instructors will integrate technology properly and thoughtfully as they strive to provide a learning environment that will keep students motivated, engaged, and excited to succeed.

References

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