Social interaction: a catalyst for a vibrant learning community

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Abstract

The technology utilized almost in all spheres of life today is delivering greater access of current information and knowledge for instructional use. The introduction of the Internet has basically brought forth a wide variety of educational possibilities for teaching and learning; however, innovative experience with these opportunities has yet to be explored for the great majority of lecturers and their students as well. Planning for effective and efficient use of the Internet can impact students' abilities to communicate and interpret information wherever they might be. The development of e-Learning, particularly, has been extremely amazing. Since it has settled down quite a while, there has been a gradual shift in the focus of conducting e-Learning activities. This time around social interaction seems to be the backbone of successful e-Learning communities. The process of social interaction cannot just happen without any supervision. Rather, it needs to be facilitated by providing proper scaffolding by the lecturers. In that case, responsibility does not belong to the lecturers only. It also belongs to the learners if meaningful and enriching learning atmospheres are to take place in the cyber world.

1. Introduction

Online learning is a rapidly growing form of learning and use of technology. There has been a high uptake from universities adopting this new technology. Online learning occurs when a learning environment is supported continuously by evolving,

collaborative processes emphasized on supporting or scaffolding individual students or group performances.

In recent years, the term distance education has become synonymous with online learning, or e-Learning. These terms are used interchangeably with, and at times in place of, many others: technology-mediated learning, computer-mediated conferencing, online collaborative learning, computer-supported collaborative learning, tele-learning, virtual learning, Net-based learning, Web-based learning (Conrad, 2003).

One of the major shifts in education today under the influence of information and communication technologies (ICT) is that classrooms at all levels are becoming technology-rich learning environments. As a result of that, the challenge is to integrate pedagogical and technological concerns through the design process to promote and foster the emergence of vibrant and stimulating learning communities. Apparently, as Lock (2002) indicates, communication, collaboration, interaction and participation are four cornerstones in a learning community framework.

Successful course creation for e-Learning means much more than just the use of documents uploaded, downloaded and electronically linked together. The course contents should be designed specifically for use with an interactive, electronic medium that is capable of accommodating different types of audiovisual information and social interaction among the community members.

In this paper, a suggested conceptual framework to enhance the success of e-Learning is offered. In order to achieve that specific objective, this paper will be divided into four main aspects, namely: technology rich environments, new learning styles, learning communities and moderated social interaction, as described in Figure 1.1.

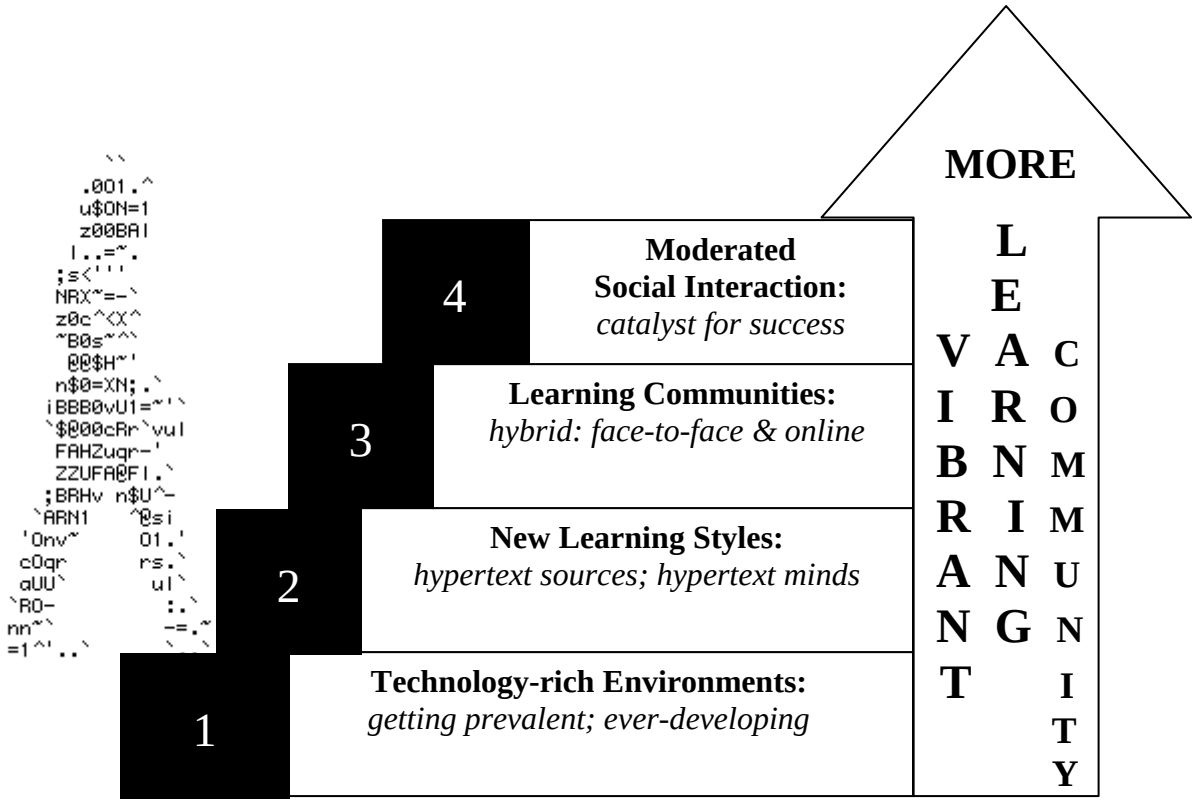

Figure 1.1. Conceptual Framework

The four stages are intertwined to one another in that the one below it is the foundation of the immediate upper stage. As the stages are built up higher, more attention will be allocated to practical things taking place in the real teaching-learning activities.

2. Technology-rich Environments

Leh, Kouba and Davis (2005) point out that advanced technology makes 21st century learning, communities and interactions unique and leads people to an era of ubiquitous computing. With this possibility, technology can be accessed anywhere; anytime. Technology is thus becoming pervasive in all areas of life, and the greatest impact, in our case, is in the field of education. This is not only because of the myriad ways of technology can be used to enhance or fundamentally change education, but

because of the impact of the introduction and use of technology on future generations and their abilities to function in an increasingly technology-driven society. Many of our day-to-day activities are now routinely technology-based, for example, electronic access to cash or shopping, making techno-familiarity inevitable. It is true that human beings are social creatures with an instinctive need and desire to exchange information with other people. The shaping of today's contemporary society can be recognized in the quick pace of the integration of technological developments in all sectors of life (Ng, 2006)

As for the relation between technology and education, Christie and Ferdos (2004) argue that educational and information technologies cannot be separated because the two aspects reciprocally support or influence each other. Otherwise, they might not yield any expected good results. It is really interesting in that the two writers also touch on the concept that "good pedagogy can inform and be supported by good ICT. Poor pedagogy can subvert the very point of using good ICT. A combination of bad pedagogy and bad ICT is a disaster for the future of e-Learning" (p.15).

According to Holmes and Gardner (2006), education systems are at this stage evolving to cope with or exploit massive changes in a number of key areas including:

- Access to more knowledge than ever before
- New learning skills for the twenty-first century
- The maximizing of learning opportunities through e-Learning
- The emergence of a society of lifelong learners
- A recognition of the interests and needs of the 'Internet generation'
- The implications of globalization for cultural diversity
- Greater inclusivity in education through e-Learning
- The removal of time and location limitations

With these key areas emerging as new phenomena in education, students are becoming more active and independent in their knowledge building. Thus, having

students shift into a learner-centered, active learning environment that fosters a network of social relationships and promotes leadership and collaborative learning does require an induction into this new paradigm. This so-called learner-centered learning requires students to set their own goals for learning, and to determine resources and activities that help them to reach their goals. This apparent paradigm shift should be made clear and students should try to accept it as a new learning style.

Schofield, Sackville and Davey (2006) express their concern that since technology is constantly changing, it needs to be harnessed for pedagogic purposes. The same concern is expressed by Beaudoin (2006) who signifies that the rapid proliferation of digital technologies, especially within the last twenty years, is having a dramatic influence on the academy and on conventional ways in which faculty teach and students learn.

2.1. Statistics for online users

Bowles (2004) provides impressive statistics concerning the use of the Internet, as described in Tables 1.1. and 1.2.

Table 1.1. Online population by region, September 2002

Region	Internet connections (millions)
Europe	190.91
Asia-Pacific	187.24
North America	182.67
Latin America	33.35
Africa	6.31
Middle East	5.12
Total	605.6

Source: Adapted from Bowles (2004, p.11)

Table 1.1. has given the fact that different areas are now getting exposed to the Internet. There is almost no corner in the world that can be reached by the Internet. Since the WWW, launched sometime in the 1990s, every part of the world seems to be wired as a global community (Bowles, 2004) and there was a surge of interest in the possibilities of e-Learning. The use of the Web as an educational medium was considered as a forerunner of profound changes for communities, organizations and markets.

Table 1.2. also proves that the Internet is basically a world-wide phenomenon. The power of the Internet is so great that it has apparently become the needed tool for communication. It is without reason that it has become influential because of the innovative facilities it can offer.

Table 1.2. Internet use and household computer access by region, 2001/02-2002/3

	Australia		**Asia**		**USA**		**Rest of World**	
	2001-02	**2002-03**	**2001-02**	**2002-03**	**2001-02**	**2002-03**	**2001-02**	**2002-03**
Internet Use	7.2m	9.3m	150.5m	201.1m	142.8m	155.0m	192.5m	227.1m
Household PCs	10.0m	11.0m	132.2m	140.4m	178.0m	190.0m	201.7m	215.4m

Source: Adapted from Bowles (2004, p. 11)

In addition to that, Gagné (2005) has also collected statistics regarding the growth of online learning in the USA. In 2002, more than 350,000 students were enrolled in online degree programs, which generated an income of $ 1.75 billion in tuition revenues for institutions. The data showed a growing increase of 40% and over the coming years there could be more than 2.3 million students utilizing e-Learning. The same trend was

also occurring in industry and the government. Revenue in both sectors had grown at approximately 50 % every year, expecting to reach a figure of $ 750 million by 2005.

Such impressive developments are not surprising as Waterhouse (2005) states that there are three factors which help explain why e-Learning is rapidly rising. These factors are the availability of inexpensive personal computers, the widespread availability of Internet connections, and dramatic improvements in software tools for creating e-Learning resources.

2.2. Improvements in other countries

Lynch (2004) provides data that countries like Singapore, Taiwan, Korea, Hong Kong, and mainland China are in the process of developing their e-Learning programs and have all made significant technology investment and the provision of an effective technology- based infrastructure. Each of these countries has made plans for the future of information and communication technology (ICT) in education as evidenced by their education department websites and each deems effective use of technology-rich learning environments as pivotal in the development of their country. Without doubt, the desire to improve technology-rich educational learning environments is becoming a priority at the government level for many countries. Rickards (2003) also reports the same trend that Vietnam is also trying to improve the provision of effective technology-based infrastructure.

Lynch (2004) further provides more evidence that even in countries with poorer economies (e.g., many African countries, India and Sri Langka, and much of Latin America), the Internet has become a key ingredient in economic growth and education.

Many of these countries have been given assistance to build the computing infrastructure needed to support Internet commerce and education.

She goes on to argue further that there is quite a range of online education offerings, from 'no-name' colleges to offerings from Harvard, Cambridge, and Queensland. However, she points out that many programs, even at legitimate educational institutions, are not very mature, and therefore the actual quality of the course or program may vary from institutions to institutions and from lecturer to lecturer. To get the full benefit of online learning, there is a need to have a high degree of interaction, high-quality assignments, and online mentoring from experienced faculty.

3. New learning styles

Traditional methods of education and learning are changing as a result of the integration of technology into the classroom, work place, and home. e-Learning basically offers new opportunities for both lecturers and learners to enrich their teaching and learning experiences, through virtual environments that support not just delivery but also the exploration and application of information and the promotion of new knowledge (Holmes and Gardner, 2006).

Watkins (2005) further argues that online courses can effectively use Internet technologies to facilitate e-Learning that is exciting, interactive, purposeful, and beneficial for online learners. Accordingly, the role of technology in education will always be twofold; to enhance education and to increase the technological adeptness of students so they can function in the workforce (Neal and Miller, 2006).

When using new technology in learning environments, new ways of teaching, learning, and knowing need to be established (Pea, Wulf, Elliott, & Darling, 2003). Traditional ways may have become obsolete and not compatible with the needs for education in the 21st century (Pea et al., 2003). New ways of teaching, learning and knowing clearly imply the need for conceptually new instructional designs within the field of e-Learning. That is why classroom education is changing because of the technology in particular, when the technology itself is creatively harnessed.

Along with this, at present, as stated by Neo (2005), constructivism is becoming a dominant educational learning theory as proved in recent years where more and more people are adopting it in their teaching-learning activities.

The change in the nature of learning has also influenced how students process information. Brown (2003) observed that today's learners are always multiprocessing and multitasking. Digital forms of expression are increasingly replacing printed forms and, therefore, the way information is communicated and disseminated. Electronic texts that are based on hypertext and hypermedia technologies are now being used in many classrooms to support literacy learning (Stylianou-Georgiou, Vrasidas, Christodoulou, Zembylas, and Landone, 2006).

A unique attribute of hypertext systems is the nonlinearity of information units. Instead of looking at one unique, predetermined sequence of text, pictures or graphics, hypertext provides students the ability to follow multiple reading paths. Unlike books, hypertext has no beginning or ending. Hypertext users can browse through the domain freely and choose when and where to leave the system.

4. Learning Communities

Lewis and Allan (2005) define learning community as: ”a supportive group of people who come together to collaborate and learn together, they are usually facilitated or guided to achieve a specific outcome or agreed learning objectives” (p. 8).

Irwin and Berge (2006) prefer to use the term ‘socialization’ and mention that it is very broad and that it also means different things to different people. They define that socialization is about people being able to mingle and establish connections on one or more levels. These people communicate to one another, share ideas and information, and confirm the connections made through a particular means. Following the constructivist viewpoint, this approach can be very important to improve a student’s zone of proximal development because they are about to build their knowledge together in a learning community.

4.1. Purely online world

Palloff and Pratt (1999) argue that technology has apparently also contributed a change in the concept of communities, which affect how people interact so that it is important to redefine the meaning of communities. The internet has really created a new form of social interactions and social interdependence, which then results in forming new communities whenever it is possible for us to get connected via the Internet.

Alfonso (2006) provides a definition of virtual community as “a circumscribed group of people that act and interact in cyberspace in a shared, meaningful, and negotiated context, for a stable period of time, while driven by common goals and guided by common norms and values” (p.145). Based on the definition, it is clear that a virtual

community can become an intellectual environment (which represents a never-ending source of information), a social environment (providing chances for collaborative learning) and a cultural environment (gathering cultural experiences). To the extreme, without any learning communities, online programs may not run smoothly and successfully as expected.

Fisher and Baird (2005) support the idea that in an online environment, a sense of community is important. Even, asynchronous learning environments can be designed so that they foster a sense of community. There seems to be a definite connection between connectedness and learning. The course is viewed as a roadmap and the lecturers as guides, offering suggestions and supporting students as they construct the knowledge they are seeking to meet their intrinsic needs.

On the other hand, the students need to have the ability to process, develop and improve their knowledge communally. If this can happen, it is really the hallmark of the constructivist view point in conducting online programs. This community needs to be developed also in order to sustain its efficiency and effectiveness, particularly when personal or emotional bonds have been formed among the students. It is only through this way that an online program can be improved significantly to meet the demands. In such learning communities, guidelines and procedures should be loose and free-flowing. However, they also need to come to certain agreements as to what ethical considerations to apply while they are online.

Naturally, it is a good place to promote a sense of autonomy, initiative, and creativity as well. With such learning communities, students are free to express themselves. They are free to interact to find sources, to share ideas, to help other people

solve their own problems. This will be important to the student's previous experiences in order that learning can be reinforced and that is why learning is taking place. At the same time, it is also a good place to encourage questioning, critical thinking, dialog, and of course collaboration or team work.

Otherwise, the learning objectives will not be realized. The activities will become fruitless because the activities are not systematic, well-planned, and students tend to be involved in doing something else. Students need to actively participate in the activities. It is the responsibility of the lecturer if there is one student who is inactive. This should be stated in the course outline and given in the beginning of the course so that everyone knows what the expectations are for the learning community. Consequently, different activities should be fostered in order to maintain interactivity among the learners. This is because each learner may have a different learning style.

Moreover, there is strong evidence that communicating through text on screen is a new genre in its own right and that most people are still grappling with it. Many traditional lecturers are surprised at how much learning can go on through structured online networking. However, as Nicol, Minty and Sinclair (2003) observe there is a need that contributions to online discussions should not only be compulsory but be an assessed component of the module as well.

Rovai and Barnum (2003) also state that the amount of interaction in an online course seems to be an important factor of course effectiveness. For that reason interaction focuses on the interpersonal behaviours in a learning community. If the course encourages interactions, active learning models that follow the constructivist viewpoint ensure that successful learning is likely to result in. The technology itself is not self-

implementing, and effective course design and pedagogy are required to achieve high quality educational outcomes. Morrison, Ross and Kemp (2004) emphasize the need that learning should be more effective and efficient. Thus, the main goal of all instructional designers is to create sound instruction that will lead to appropriate learning.

4.2. Hybrid method

Yanes (2004) has revealed that the combination of face-to-face and online modes has specifically enhanced the learners' capabilities in constructing their knowledge. Both the lecturers and students achieved higher satisfaction with the way they experienced the process of learning in spite of the fact that they had to do some extra work in accomplishing all of the tasks assigned, such as: replying to emails, getting involved in chat rooms, presenting projects, being engaged in discussion forums, and dealing with the automated content quizzes, to name some of them.

Nicol, Minty, and Sinclair (2003) claim that online relationships are more quickly consolidated when there has been some earlier type of previous communication among the community members while getting involved in traditional modes of communication.

Besides, collaborative activity is important in both face-to-face and online classes because it promotes the following:

- development of critical thinking skills
- co-creation of knowledge and meaning
- reflection
- transformative learning

Collaboration, as the hallmark of constructivism, has often been defined as the 'heart and soul' of an online course or, for that matter, any course that bases its

theoretical foundation in constructivism. Although collaboration takes more time, the outcome is actually a deeper, more efficient, and complete learning process.

Sousa (2001) presents a diagram for instructional methods, devised in 1960's by the National Training Laboratories of Bethel, Maine. The pyramid is as follows:

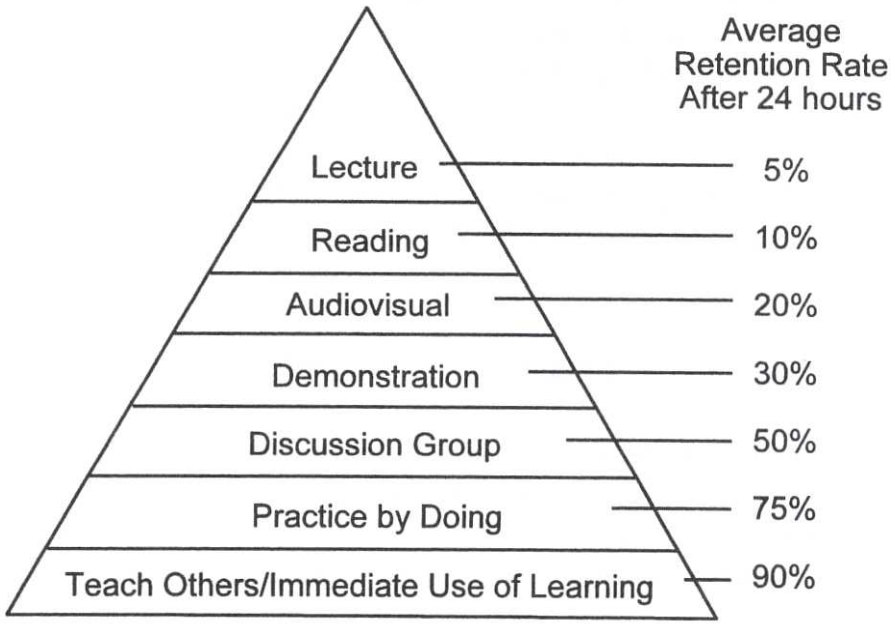

Figure 1.2. Average Retention Rate after 24 hours

Based on the retention rate diagram, teaching others or immediate use of learning has the highest percentage. In their collaborative activities, students are encouraged to teach others or use their knowledge immediately. In that case, the retention rate can be maintained longer.

5. Moderated Social Interaction

In its course of development, the community life cycle needs to be carefully monitored. A very active community is one that involves a lot of discussions and contributions either from the lecturers and students alike. Such a community does need individuals who are active and dedicated. This should ideally be monitored so that the spirit of joining in the community itself will not fade away.

As a consequence of that, the role of the lecturers is crucial in order to sustain the life span of this vibrant online community. A minimum of 4-5 active people are required to activate the community and engagement in the collaboration of constructing knowledge.

In his e-Learning matrix, Watkins (2005) classifies group sizes into three categories. A small group consists of 1-7 people. A medium group consists of 8-15 people. A large group consists of more than 16 people. If a group is too small, collaboration may not be that successful. The medium group might represent an appropriate number of participants to make this an effective place to collaborate. A large group will be difficult to control, particularly when everybody contributes their ideas.

According to Lewis and Allan (2005), such a vibrant community does not only need active participants but also needs a good facilitator, someone who can moderate the discussions with the following qualities:

- motivated
- approachable
- visible
- explicit
- proactive
- discreet
- collaborative
- technically capable
- credible

It is also vital to realize that the roles of the facilitator might also change over time, in order to establish interactivity. Conrad & Donaldson (2004) introduce the changing phases of engagement between the lecturers and learners, as indicated in Table 1.3. As the interactivity progresses in the course, the lecturer provides less control over the students.

Table 1.3. Phases of engagement

Phase	**Learner Role**	**Lecturer Role**	**Weeks**
1	Newcomer	Social negotiator	1-2
2	Cooperator	Structural Engineer	3-4
3.	Collaborator	Facilitator	5-6
4.	Initiator/partner	Community member/ challenger	7-16

Source: Adapted from Conrad & Donaldson (2004, p. 11)

A major challenge facing online lecturers is not only how to become better facilitators of knowledge acquisition but also how to help learners become more self-directed and collaborative with peers than they might have had to be in traditional, predominantly lecture-based courses.

While technology plays an important role in facilitating communication between members of the community, it is the use of peer-to-peer mentoring that remains at the heart of the program. Online mentoring and peer support is one of the most effective ways that students use to learn how to use new technology, software and develop leadership skills.

The success of any e-Learning activity is dependent both on the active participation of the learners and the lecturers. Accordingly, in order for an activity to be successful, first and foremost, the lecturers must participate actively. Although lecturers are not involved in all of the postings, discussion groups, or chat sessions, they should be monitoring the participation and progress of the learners throughout any e-Learning activity. Gaining the active participation is accomplished both through the interest in the activity and the integration of the activity with the other aspects of the course.

6. Conclusion

Technology really changes quite rapidly and if we can make use of it to support learning, this tool provides us with a lot of opportunities to improve the quality of education. Beside that, we have to be able to make learning realistic and meaningful so that our students will get the best benefits of using this advanced technology. Otherwise, there will be a mismatch between what the lecturers expect and what the students produce in their learning. The change in the teaching and learning mode from the traditional environment to online environment presents a new way of teaching and learning for both lecturers and students (Chang & Fisher, 2003).

Learning in a virtual classroom also tends to be lecturer-led rather than based on participatory, two-way communication. At any point in time, lecturers should scaffold students enough so that they do not give up on the task or fail at it but not scaffold them so much that they do not have the opportunity to actively work on the problem themselves.

The use of e-Learning will continue to evolve and there is a need to ensure that good learning practices are at its core. Watkins (2005) implies that online courses can effectively use Internet technologies to facilitate e-Learning that is exciting, interactive, purposeful, and beneficial for online learners and thus e-Learning has the potential to impact positively on the entire spectrum of education.

References

Alfonso, A. P. (2006). Communities as context providers for web-based learning. In A. D. Figueiredo & A. P. Alfonso (Eds.), *Managing learning in virtual settings: the role of context* (pp. 135-161). Hershey, PA: Information Science Pub.

Beaudoin, M. F. (2006). The impact of distance education on the academy in the digital age. In M. F. Beaudoin (Ed.), *Perspectives on higher education in the digital age* (pp. 1-20). New York: Nova Science Publishers Inc.

Bowles, M. (2004). *Relearning to e-learn: strategies for electronic learning and knowledge*. Carlton, Vic.: Melbourne University Press.

Brown, J. S. (2003). *Learning, working & playing in the digital age*. Retrieved February 3, 2007, from serendip.brynmawr.edu/sci_edu/seelybrown/seelybrown4.html

Chang, V., & Fisher, D. (2003). The validation and application of a new learning environment instrument for online learning in higher education. In M. S. Khine & D. Fisher (Eds.), *Technology-rich learning environments*. Singapore River Edge, NJ: World Scientific.

Christie, M. F., and Ferdos, F. (2004). The mutual impact of educational and information technologies: building a pedagogy of e-learning. *Journal of Information Technology Impact, 4*(1), 15-26.

Conrad, D. (2006). E-learning and social change: an apparent contradiction. In M. F. Beaudoin (Ed.), *Perspectives on higher education in the digital age* (pp. 21-33). New York: Nova Science Publishers Inc.

Fisher, M., and Baird, D. E. (2005). Online learning design that fosters student support, self-regulation, and retention. *Campus-Wide Information Systems*, *22*(2), 88-107.

Gagné, R. M. (2005). *Principles of instructional design* (5th ed.). Belmont, CA: Thomson/Wadsworth.

Holmes, B., & Gardner, J. (2006). *E-learning : concepts and practice*. London: SAGE.

Irwin, C., and Berge, Z. (2006). *Socialization in the online classroom*. Retrieved April 17, 2006, from http://www.usq.edu.au/electpub/e-jist/docs/Vol9_No1/Full_Papers/Irwin_Burge.pdf

Leh, A. S. C., Kouba, B., & Davis, D. (2005). Twenty-first century learning: communities, interaction and ubiquitous computing. *Educational Media International, 42*(3), 237-250.

Lewis, D., & Allan, B. (2005). *Virtual learning communities: a guide for practitioners*. Maidenhead, England New York: Society for Research into Higher Education & Open University Press.

Lock, J. V. (2002). Laying the groundwork for the development of learning communities within online courses. *Quarterly Review of Distance Education, 3*(4), 395-408.

Lynch, M. M. (2004). *Learning online: a guide to success in the virtual classroom*. New York London: RoutledgeFalmer.

Morrison, G. R., Ross, S. M., and Kemp, J. E. (2004). *Designing effective instruction* (4th ed.). Hoboken, NJ: J. Wiley and Sons.

Neal, L., & Miller, D. (2006). The use of technology in education. In H. F. O'Neil & R. S. Perez (Eds.), *Web-based learning: theory, research, and practice* (pp. 327-343). Mahwah, N.J: Lawrence Erlbaum Associates.

Neo, M. (2005). Web-enhanced learning: engaging students in constructivist learning. *Campus-Wide Information Systems, 22*(1), 4 - 14.

Ng, W. (2006). Web-based technologies, technology literacy, and learning. In L. T. W. Hin & R. Subramaniam (Eds.), *Technologies challenging literacy: hypertext, community building, reflection, and critical literacy* (pp. 94 - 117). Hershey, PA: Idea Group Reference.

Nicol, D. J., Minty, I., and Sinclair, C. (2003). *The social dimensions of online learning*. Retrieved April 17, 2006, from http://journalsonline.tandf.co.uk/media/0883le4tlrdxwn8pgw97/contributions/k/k/e/u/kkeux0vjh0rc427y.pdf

Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace: effective strategies for the online classroom* (1st ed.). San Francisco: Jossey-Bass Publishers.

Pea, R., Wulf, W., Elliot, S. W., & Darling, M. (Eds.) (2003, August) *Planning for two transformations in education and learning technology. Committee on Improving Learning with Information Technology*. Washington, DC: National Academy Press.

Rickards, T. (2003). Technology-rich learning environments and the role of effective teaching. In K. Myint Swe, & Fisher, D. L. (Ed.), *Technology-rich learning environments: a future perspective* (pp.115-132). Singapore River Edge, NJ: World Scientifics.

Rovai, A. A. P., and Barnum, K. T. (2003). On-line course effectiveness: an analysis of student interactions and perceptions of learning. *Journal of Distance Education, 18*(1), 57-73.

Schofield, M., Sackville, A., & Davey, J. (2006). Designing for unique online learning contexts: the alignment of purpose, audience, and form of interactivity. In A. D. Figueiredo & A. P. Afonso (Eds.), *Managing learning in virtual settings: the role of context* (pp. 117-133). Hershey, PA: Information Science Pub.

Stylianou-Georgiou, A., Vrasidas, C., Christodoulou, N., Zembylas, M., & Landone, E. (2006). Technologies challenging literacy: hypertext, community building, reflection, and critical literacy. In L. T. W. Hin & R. Subramaniam (Eds.), *Handbook of research on literacy in technology at the K-12 level* (pp. 21-33). Hershey, PA: Idea Group Reference.

Sousa, D. A. (2001). *How the brain learns*. Thousand Oaks, California: Corwin Press, Inc.

Waterhouse, S. A. (2005). *The power of elearning: the essential guide for teaching in the digital age*. Boston: Pearson/Allyn and Bacon.

Watkins, R. (2005). *75 e-learning activities: making online learning interactive*. San Francisco: Pfeiffer.

Yanes, M. J. (2004). Distance education in traditional classes: a hybrid method. *The Quarterly Review of Distance Education, 5*(4), 265-276.