

Active Learning Online

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A

INTRODUCTION

Knowles, Holton III, and Swanson (1998, 2005) define learning as emphasizing the person in whom the change occurs or is expected to occur. Other scholars (Boyd, Apps, & Associates, 1980) consider learning as the act or process by which behavioral change, knowledge, skills, and attitudes are acquired. Gagne (1985) defines learning as a process that leads to a change in a learner's disposition and capabilities that can be reflected in behavior. Like human beings, animals also learn. However, the difference is, while animals learn via reflexes and behavior modification, humans learn through reflection (Wang & King, 2006, 2007). According to Dewey (1933), learners are faced with learning problems, and these learning problems perplex and change the mind so that it makes belief uncertain. It is this perplexity that leads to reflective thinking, hence learning. Without reflective thinking, learning may not occur.

Regardless of how learning is defined, there is widespread agreement upon the definition of learning. That is, learning is reflected in a change in behavior as the result of experience (Haggard, 1963, p. 20). In other words, learning must be associated with development and growth (Merriam, 2004). That is probably why Maslow (1970) sees the goal of learning to be self-actualization. And he explains self-actualization as the full use of talents, capacities, potentialities. Confucius, 25 centuries ago, views learning as focusing on the cultivation of the inner experience, both as a way of self-knowledge and as a method of true communion with the other (Tu, 1979, p. 103). To Confucius, the goal of learning is to free one completely from four things: arbitrariness of opinion, dogmatism, obstinacy, and egotism (Wang & King, 2006, 2007). Further, Confucius thinks of learning as emphasizing meditation to control oneself. Upon the basis of Confucius's thinking regarding silent reflection, scholars have made the distinction between active learning and passive learning. Learning does not take place in a vacuum. Learning takes place in any type of environment, including online. The purpose

of this article is neither to solely study active learning for its own sake nor to present an analysis of active online learning. It is rather an attempt to examine the relationship between active learning online and learners' intellectual growth and development. Towards this end, this article's background covers active learning and learners' intellectual growth and development. The next section is devoted to how various learning theories can make active learning occur online; hence, learners' intellectual growth and development. The last section of the article seeks to make a summary of this article and point out some future directions for active learning online. As modern institutions launch more and more online learning programs, what concerns educators and parents is whether active learning will occur online. Unless active learning occurs online (or growth and development occur online), online learning will lose its true meaning in this knowledge society and information age we currently live in.

BACKGROUND

Concern over active learning online is not without validity. Some people are not aware of the kind of research conducted on active learning many years ago. Active learning has to do with control and shaping (Knowles, et al., 1998, 2005). Control and shaping lie at the heart of Skinner's (1968) definitive treatment of learning. Skinner (1968, p. 10) found,

Recent improvements in the conditions which control behavior in the field of learning are of two principal sorts. The Law of Effect has been taken seriously; we have made sure that effects do occur under conditions which are optimal for producing changes called learning [control] and once we have arranged the particular type of consequence called a reinforcement, our techniques permit us to shape the behavior of an organism almost at will.

Out of Skinner's definitive research regarding active learning, Gagne (1985) posited a whole set of factors both external and internal to the learner that collectively may be called the conditions of learning. Gagne, Wager, Golas, and Keller (2005) further argue that external factors, like the learning environment, the resources in that environment, and the management of learning activities interact with internal conditions, such as states of mind that the learner brings to the learning task, previously learned capabilities, and personal goals of the individual learner (p. 7). It must be pointed out that it is these internal capabilities that affect active learning. Indeed, active learning would be meaningless if it were not associated with growth and intellectual development. Although it is not easy to explain growth and intellectual development, using just one theory, Bruner's (1966) explanations appear to be so authoritative that only active learning can achieve them:

- Growth is characterized by increasing independence of response from the immediate nature of the stimulus.
- Growth depends upon internalizing events into a "storage system" that corresponds to the environment.
- Intellectual growth involves an increasing capacity to say to oneself and others, by means of words or symbols, what one has done or what one will do.
- Intellectual development depends upon a systematic and contingent interaction between a tutor and a learner.
- Teaching is vastly facilitated by the medium of a language that ends by being not only the medium for exchange, but the instrument that the learner can then use himself in bringing order into the environment.
- Intellectual development is marked by increasing capacity to deal with several alternatives simultaneously, to tend to several sequences during the same period of time, and to allocate time and attention in a manner appropriate to these multiple demands. (pp. 4-6)

These classical studies on active learning have laid a solid foundation upon which scholars can draw from in order to develop an understanding on what may contribute to active learning online. The Internet presents

a totally different learning environment to learners and educators. Most people personally believe that the Internet is void of human interaction. Instructors lose control over learners simply because instructors and learners do not get to interact face-to-face. In fact, for active learning online to occur, there is a plethora of theories and principles for instructors to apply to the Internet environment. If used positively and correctly, all these theories and principles are geared to help learners achieve active learning online. The following section addresses the theories and principles that contribute to active learning online. Both educators and parents need to familiarize themselves with these theories and principles. Above all, applying them will make active learning occur online.

MAKING ACTIVE LEARNING OCCUR ONLINE

For active learning to occur online, the same principles of learning that are being applied to traditional classroom learning should be applied online. The principle of contiguity contends that the stimulus situation must be presented simultaneously with the desired response. To apply this principle to active learning online, an online instructor can give a student the task of classifying an example of a concept. For example, faced with a page of animals and the instruction to touch the elephant, the student touches the elephant via a radio button online and receives affirmative feedback from the instructor. The objective of instruction in this case is that the student identifies a picture of an elephant. Although the instructor may not see a learner face-to-face, feedback can be provided via a phone call, e-mail messages, videoconferencing, and even a Web cam. Nowadays, it is very popular for instructors and learners to communicate with one another via Yahoo or Hotmail instant messaging. Synchronous communication is no longer limited to chat rooms. Therefore, the principle of contiguity is totally applicable to the online learning environment.

The principle of repetition has been preferred in the third world countries and it means that the stimulus situation and its response need to be repeated, or practiced, for active learning to be improved and for retention to be more assured. A Chinese proverb goes like this, "if a learner reads a book a thousand times, the meaning of the book will be self-explanatory." This says a lot

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