Asynchronous vs. Synchronous Interaction

Tiong Kung-Ming
University Malaysia Sabah, Malaysia

Sim Khoon-Seng
Curtin University of Technology, Malaysia

INTRODUCTION

The rapid development of technology greatly influences computer-based learning in distance education. One of the most important aspects is interactivity, and this is threefold: student-student interaction, student-instructor interaction, and student-content interaction (Moore & Kearsley, 1996). As distance-education technology increasingly moves toward multimedia-oriented systems, a more effective synergy of synchronous and asynchronous interaction is required. As discussed by Garrison (1990), the quality and integrity of the educational process in distance learning largely depends upon sustained, two-way communication. In this article, we will look into the characteristics of both types of interaction and discuss their advantages as well as impact on the three forms of interactions. We will also look at some examples for both asynchronous and synchronous interaction technologies in facilitating distance learning. Finally, we look at some possible future trends in distance-learning interactivity.

THE NEED FOR INTERACTION

Undoubtedly, interaction will occur in any learning environment. Wagner (1997) believed that interaction consists of reciprocal events requiring two objects and two actions where interplay and exchange occur and individuals and groups influence each other. Barker (1994) highlights the importance of interactivity as an essential and crucial factor for acquiring knowledge. A virtual classroom environment tries to emulate classroom environments, albeit, with different tools and approaches. In Lynch (2002) it is shown how traditional classroom-based interactions (class discussions, role playing, case studies, question and answer sessions) can be translated into parallel forms of Web interactions using the various communication tools available. Kinshuk and Yang (2003) discussed some of the frustrations and limitations of the learning process in a virtual environment. Some of the major problems noted were the lack of (a) human interaction...
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Types of Online Interaction

Online interaction falls into two categories: asynchronous and synchronous interaction.

Asynchronous Interaction

Asynchronous interaction simply refers to interaction that occurs at different times, that is, not in real time. This is the major form of interaction in computer-mediated communications. Often, this form of interaction is closely associated with distance learning as it provides plenty of benefits to the learner and the online learning environment.

Advantages of Asynchronous Interaction

The widespread use of asynchronous tools is testimony to its importance. The advantages of asynchronous interaction are as follows.

Flexibility

It allows access to the learning material at anyplace and anytime (provided the necessary equipment and technologies are available) from home or workplace. Learners choose to participate when and if they want to.

Time to Reflect

There is no need to give immediate response. It gives the opportunity for learners to think, research, reflect, formulate, and back up their ideas and thoughts in a more coherent and concise manner. Learners can always access archived discussions to follow the flow of discussion in a constructive manner (Sproull & Kiesler, 1991). In other words, they have the records of what has been discussed and how they have been discussed. Learners can wait and input their ideas when they are comfortable with the discussion.

Anonymity or Pseudonymity

This encourages learners’ participation in discussion as it provides a democratic atmosphere where learners are more comfortable in giving their input. Learners feel more confident and contribute more as there is less pressure (Chester & Gwyne, 1998). This is especially true for learners who tend to be shy or laid-back in classes.

No Time-Zone Constraints

Global communication and participation is available at the time convenient to learners around the world (Johansen & O’Hara-Devereaux, 1994). This is particularly important in the present international education scenario where learners in an online environment come from different countries.
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