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INTERACTIVITY IN E-LEARNING

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Abstract

The attempt in this paper is to look at interactivity from a pedagogical perspective and define an interactive framework for E-Learning – one that takes into account both the pedagogical and technological (computer-based) dimensions.

Introduction

The concept of interactivity in E-Learning seems to appear like the chicken and egg situation. Did interactivity as a concept exist before the advent of the computer era or did the computer era introduce the concept of interactivity? Most definitions of interactivity that you find today veer around computers and software. This almost seems to prove the point that interactivity is associated with computers. Look at the following definitions of interactivity.....

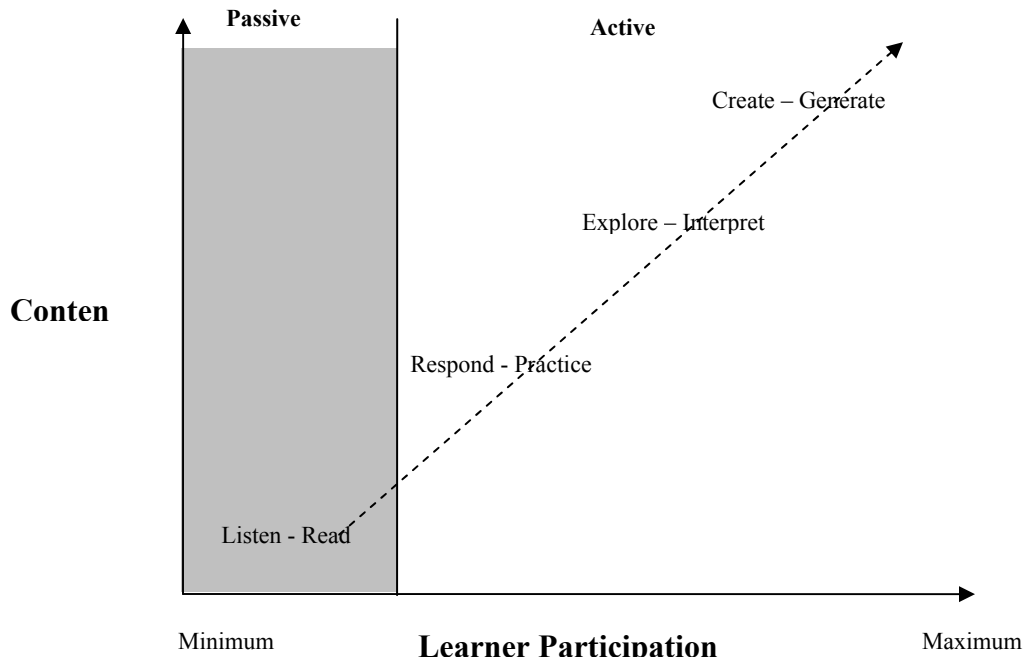
- *“the extent to which a computer program and human being may have a dialog”.*
- *“**interactive** refers to software which accepts and responds to input from humans -- for example, data or commands.”*

However, professionals in the field of education and training know otherwise. While computers may have indeed made the term popular, the concept of interactivity has been in existence for long. The attempt in this paper is to look at interactivity from a pedagogical perspective and define an interactive framework for E-Learning – one that takes into account both the pedagogical and technological (computer-based) dimensions.

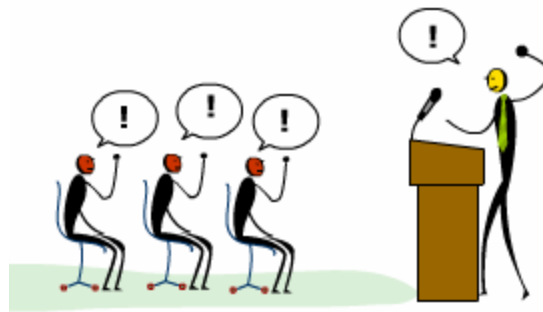
Interactivity Types

In the traditional classroom situation, we can define interactivity as the extent of learner participation in the learning process. This can range from being a passive recipient of content to being an active participant in creating content. Given this framework, we can identify four types of interactivity. These are:

- Listen – Read
- Respond – Practice
- Explore – Interpret
- Create – Generate



Listen - Read



This is the lowest form of interactivity from a pedagogical perspective. In this type of interactivity, the learner is seen as a **passive participant** in the learning process. The learner's role is limited to receiving information that is provided by the teacher/facilitator. This information may be provided in the form of a lecture or by guiding the learner to read the right material. In short, the content is determined and identified by the teacher/facilitator and the learner is expected to read and learn just that.

In the E-Learning medium, this type of interactivity can be seen in courses with a linear navigation. The learner is passive and reads/listens to the information presented through the E-Learning course. Learner interaction in these types of courses is limited to those

required to advance with the presentation – typically using **Next/Back buttons**. In some cases, the content pages may be designed in a **Click and Display** format to create another layer of interactivity.

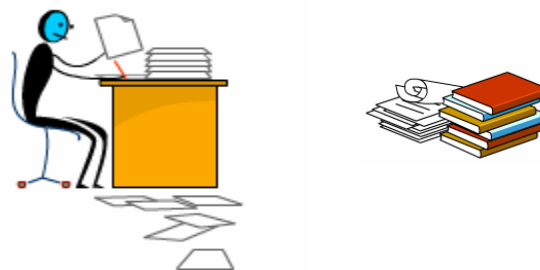
Respond - Practice



From a pedagogical perspective, this is a higher form of interactivity as compared to Listen - Read. In this form of interactivity, there is **limited participation** on the part of the learner. They make simple responses to instructional cues. In the traditional classroom situation, this may be seen as questions that a teacher/facilitator poses to the learners to elicit a response. Or, it may be simple linear procedures (lab experiments) that learners perform with guided directions from the teacher/facilitator. The purpose of this interactivity is to reinforce and remedy.

In E-Learning the Respond-Practice type of interactivity is designed in two ways. One is in the form of **simple questions** in which learners are prompted to select an **option(s)**. Based on the learner response, **feedback** is displayed – to reinforce the correct answer or to remedy the incorrect understanding. **Procedural and guided simulations** are also examples of this type of interactivity.

Explore – Interpret



In this type of interactivity, the content to be imparted is **less structured** for the learner. The learner plays a much more **active role** in the learning process. While some amount of structure would still exist, the learner is provided the freedom to explore, gather and interpret information. In the traditional classroom situation, this form of interactivity is designed as project work assigned to the learners – where learners achieve the learning objective on their own by referring to various kinds of resources, such as books, articles etc., and interviewing and discussing with experts.

In E-Learning, this type of interactivity may be designed using **branched navigation**. The learning objective is to complete a task or solve a problem, which is achieved by the learner by making a selection from a variety of options. The learning path is dependent upon these selections and responses made by the learner and would vary based on the selections made. Supporting material for completing the task may include **resources** designed and presented in the form of **reference material, articles, expert help** etc. At a more complex level, this type of interactivity can also include **computer evaluation of student responses and generation of time and error scores**.

Create – Generate



This is the highest level of interactivity from a pedagogical perspective. In this type of interactivity, learners are viewed as **active participants** in the learning process. Brainstorming, debating, discussing, collaborating etc. are typical features of this type of interactivity. The idea is to provide a learning environment that is free of any form of structure so as to promote complete participation by the learners. In this form of interactivity, content is not pre-defined but is generated as a result of the learning process.

Real-time participation by the learners is one of the key features through which this type of interactivity is achieved in the E-Learning domain. This may either be in the form of real-time simulated games or real-time communication. **Simulation and communication tools** are deployed to enable collaboration through the internet. **Discussion Forums and Webinars** are examples of this type of interactivity in E-Learning.

A Final Word

An E-Learning course would normally be a mix of two or more interactivity types. When designing an E-Learning course, it is important to remember that the interactions that are embedded within it fulfill the need of the overall training goal or objectives. As with other design parameters, the interactivity type(s) that you select should be based on content, audience and training need analysis.

About the Author

Purnima has been working as the Head of Knowledge Platform's instructional design function for the past two years. She has almost nine years of experience in the field of computer-based training and instructional design. In addition, she has also designed and delivered many classroom training programs in Instructional Design.

Purnima has also written papers on instructional design and performance improvement, which have been published and presented in forums such as International Society of Performance Improvement (ISPI), American Society of Training and Development (ASTD) and Brandon Hall.

About Knowledge Platform

Knowledge Platform is one of Asia-Pacific's leading instructional design, e-learning content development and learning technology solutions companies. Established in early 2000, Knowledge Platform has offices in Singapore, Tokyo, Delhi and Islamabad. By providing services such as E-Learning Content, Instructional Design, Training Solutions, and E-Learning Technology Solutions, Knowledge Platform helps its clients to increase their learning efficiency. Knowledge Platform has a rapidly growing, blue chip enterprise, banking, educational, and government sector client base.

The products division of Knowledge Platform specializes in creating generic and proprietary e-learning products on subjects relating to business processes that enhance operations and reduce risk. The company has demonstrated leadership as a valued resource, subject matter expert and service provider in the areas of compliance including information security and privacy, code of conduct and anti-money laundering.

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