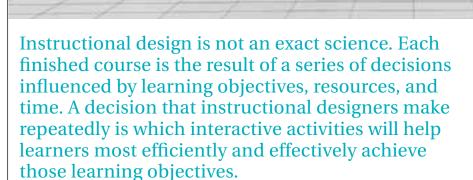There are numerous ways to build learner interactions that don't seem to be "time wasters" and that support the learning objectives.

Building the Right
INTERACTION

By Hadiya Nuriddin

Instructional design is not an exact science. Each finished course is the result of a series of decisions influenced by learning objectives, resources, and time. A decision that instructional designers make repeatedly is which interactive activities will help learners most efficiently and effectively achieve those learning objectives.

Instructional interactions are reciprocal events between the learner and the learner's environment that mutually influence one another. The overarching purpose of interaction is to change learners and to move them toward accomplishing a goal. Interaction also contributes to the authenticity of the learning experience. Learners can be given real-world tasks that present the same type of cognitive challenges as those back on the job.

But there is no blueprint for building the perfect interaction, so it's easy for designers to slip into incorporating interactions based on factors that have little to do with learning objectives. Meaningless interactions frustrate learners. Individuals may not identify the interaction's tenuous connection to the learning objectives as the source of their frustration, opting instead to deem the activities a "waste of time" and responding accordingly. While it's

probable that any type of interaction may facilitate learning better than no interaction at all, using the most appropriate interaction may lead to greater student satisfaction and educational returns.

How do instructional designers select the most effective interaction? The key is to understand the different types of interactions and determine how each one influences learning. Armed with the right information, instructional designers can build interactions that promote learning and move learners closer to meeting course goals.

Michael Moore identified three interaction categories in his essay "Three Types of Interaction" in the *American Journal of Distance Education*. His categories are applicable to all forms of delivery, though they were originally designated for distance learning.

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Group activities are more effective if it is highly probable that learners will gain new knowledge by discussing the content with others. Also, if most learners will identify with the content immediately, elaboration may not be necessary.

Moore's interaction categories focus on who or what engaged the learner during the instructional interaction:

- *Learner-content interaction* describes how the learner interacts with the subject matter.
- *Learner-learner interaction* focuses on peer group interaction.
- *Learner-instructor interaction* describes how the instructor directly engages the student throughout the learning process.

Interactions in each category are beneficial to the learning process if well designed and used in the most appropriate learning situations.

Learner-content interaction
What it does. Moore defines *learner-content interaction* as interaction between the learner and the subject of study. Learner-content interaction must happen because, according to Moore, it's the interaction with content that influences "the learner's understanding, the learner's perspective, or the cognitive structures of the learner's mind." Moore's focus on the cognitive impact of interaction is a reminder that the success of an interaction should not be measured in the number of clicks or the number of times learners get out of their chairs.

Success should be measured by the cognitive impact on the learner. David Jonassen, an instructional system researcher at Pennsylvania State University, writes that the manipulation of physical objects or simulations

of those objects is not always necessary and that "generating a hypothesis or intention to act" and then arguing for it may suffice.

Learner-content interaction is nearly ever-present in all learning situations, but examples of exclusively learner-content interaction include reading text and viewing or listening to multimedia modules. Examples may also include activities that require the manipulation of tools or other objects, such as building, writing, completing worksheets and case studies, and working through interactions in online learning modules. This could also include creating new content or objects based on learned information.

When to use it. There are times when using an activity that is exclusively a learner-content interaction may be the most appropriate choice to ensure that the interaction is authentic. For example, if the learner has to master a task that is completed by one person, such as completing a form, emulating the real-world experience through learner-content interaction alone may be the best option.

Learner-content interactions can also emulate the process of studying information and then acting on that information in a group context. For example, the learner can read a case study by himself, as opposed to the instructor walking him through the text, because that is how he will encounter the information in the real world. Once he has read the information and interpreted its meaning for himself, he can engage in a role play exercise that simulates how he will use the information provided in the case study.

Learner-learner interaction
What it does. Moore defines *learner-learner interaction* as interaction among learners, with or without the presence of an instructor. The benefits of group learning are widely known. Students learn from one another when they hear stories that reinforce the course content. Students also learn from sharing their own stories because verbalizing and elaborating on their

own ideas increases recall and makes content more meaningful. Sharing knowledge also encourages the group to reconcile individual experiences with the group's knowledge, which leads to the construction of new knowledge. This new knowledge serves a variety of purposes, including making connections between the content and the learner's experience.

When to use it. To create authentic interactions, learner-learner interactions are an excellent choice when the task that learners are mastering requires a group effort back on the job. Instructional designers should keep in mind that groups are not inherently collaborative, so putting a group of learners together and assigning a task does not mean that the group will work together. Interactions must be deliberately designed to facilitate the construction of new knowledge created through the collaboration process.

Learners benefit by exploring complex topics in groups so that they can check and validate their understanding of the subject matter with other learners. *Complexity* is the key because learners become irritated when elaborate group discussions are built around simple topics that they deem to be "common sense." Group activities are more effective if it is highly probable that learners will gain new knowledge by discussing the content with others. Also, if most learners will identify with the content immediately, elaboration may not be necessary.

Learner-instructor interaction
What it does. Moore defines *learner-instructor interaction* as interaction between the learner and an expert. Instructors facilitate learning by using various strategies to present, demonstrate, and reinforce content. Instructors also provide support and encouragement throughout the learning process. Many researchers have noted that learner-instructor interaction is highly desirable to learners partly because of the immediate access to feedback that allows the learners to judge the quality of their performance.

While discussion teaching may appear to be automatically inclusive and participatory, designers need to intentionally ensure that the learner-instructor interactions are collaborative and go beyond the review question-and-answer format.

While learner-instructor interaction is primarily used to deliver content, the interactions can be made more authentic through learner-instructor discussion because using the content back on the job may require learners to explain and implement ideas. In his book *Discussion as a Way of Teaching*, Stephen Brookfield defines *discussion* as an effort by a group to share views and engage in mutual and reciprocal critique. He suggests that discussion serves four purposes: to help participants further understand the content, to enhance self-awareness and the ability to self-critique, to foster an appreciation for the diversity of opinions, and to act as a catalyst for informed action.

When to use it. Discussion encourages learners to explore, explain, and defend their ideas, similar to what they may have to do when they return to their jobs. While discussion teaching may appear to be automatically inclusive and participatory, designers need to intentionally ensure that the learner-

Photo by Veer

instructor interactions are collaborative and go beyond the review question-and-answer format.

The learner-instructor interactive discussion is best used for in-depth explorations of topics. This may only be the case for topics that reinforce the learning objectives. Discussion is also encouraged in learning situations where learners need to develop strengths in analysis and critical thinking.

Broad, interactive discussions could be kept to a minimum when building a knowledge base that requires delivery to more directives. In addition, when a vast amount of material must be presented in a defined timeframe, discussion teaching is not the optimal approach, as it takes more time for process and interactions.

Building interactions is a challenging task for instructional designers because of the wide array of choices, most of which may lead to the same outcome. The question is which choice will get learners to the desired outcome as effectively and efficiently as possible. Understanding how different types of interactions influence the learner can help instructional designers make informed choices as they build their classes one decision at a time.

Hadiya Nuriddin is a human resources professional based in Chicago; hnuriddin@ yahoo.com.

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