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REALDESIGN
PERSPECTIVES FROM THE FIELD OF INSTRUCTIONAL DESIGN

REALDESIGN is a regular feature that brings leaders in our field to you discussing their challenges in actual design contexts. For the next issues, we have invited the authors of the soon-to-be-released next edition of *Designing Effective Instruction* (Morrison, Ross, Morrison, & Kalman, in press) to share some of their practical design experiences.

Is it information or is it instruction?

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An architect house hunting. A chef dining out at a restaurant on vacation. A professional musician attending a concert. Picture yourself as an expert, engaging with your professional environment in a non-work context. I suspect that the chef may be particularly critical, and the musician, uniquely attuned to the lines played by each member of the group. Experts in their respective fields likely have a challenging time letting go of their professional lens when in these sorts of situations. The same is true for me. My background in instructional design is rarely muted when I encounter instruction or training materials.

Whenever one of us has to take the refresher course for human-subjects research, there's sure to be some grumbling and general frustration that we have to endure training that's just so tedious. The training is online and involves an assessment at the end of the course. It's one of the "nonexamples" of good instructional design where someone just dumped a manual with definitions of terms into an online platform. Perhaps they went the extra mile and divided content into "modules." Sure, each course may have behavioral objectives presented at the start, but in no way, shape, or form does the design of the course actually support attainment of the objectives. At the end, you're presented with a quiz consisting of application-type multiple-choice questions that you must pass in order to receive your certificate allowing you to conduct research for the next few years. The good news is that while you have the quiz open in one screen, you can open the modules in another to reference. You can also retake the quiz and just memorize the correct answers for the next go-round. While I'm confident none of us are violating any principles, the course is certainly not helping one to truly understand the concepts and principles of conducting responsible research.

Given my frequent experience with bad online training, it's no surprise I was skeptical of the online course I'm taking as part of the process to register my dog, Faya, as a therapy dog. The registration process involves two parts: a behavioral assessment for the dog and the owner's completion of a handler course, which is administered online. I was a little apprehensive when I saw it had seven different lessons. I paid the fee, made a cup of coffee, and prepared myself for the worst. I briefly considered what else I could do while "watching" the lessons.

To my pleasant surprise, this online course was in stark contrast from what I'd expected! The lessons were presented using a simple platform, and without any fancy/frivolous animations or "flash." Rather than dumping some printed manual online and calling it a course, the authors began each lesson with three or so well-written behavioral objectives. Then, they presented only the relevant content that supported the objectives, including forward and back buttons to offer learners control of their progression through the materials. What was most impressive was that the instructional approach employed was thoughtful, encouraging the learner to engage with the content.

What do we mean by engagement with content? Wittrock (1974, 1989) describes the importance of learners making sense of instruction through creating meaningful relationships between concepts and between new information and existing knowledge. A designer might incorporate instructional strategies to encourage learners to more deeply process content and ultimately attain the objectives for the instruction. Jonassen (1988) identified four categories of generative strategies including recall, integration, organizational, and elaboration. Examples of strategies one might employ include mnemonics (recall), paraphrasing (integration), categorizing (organizational), and explanations (elaboration), among others. There's a vast body of research demonstrating the effectiveness of these strategies, but the strategies you might use vary based on the type of content learned and whether the learner should be able to recall or apply the content.

Our expanded-performance content matrix (Morrison, Ross, Morrison, & Kalman, in press) uses content categories to prescribe appropriate instructional strategies. Merrill (1983) offered a tool to classify objectives and our expanded model adds categories to include psychomotor, affective, and interpersonal tasks. When designing instruction, we note that you must first classify the objective based on the content category (e.g., fact, concept, principles and rules, procedure, interpersonal, and attitude). Then, based on the type of performance the learner must demonstrate (e.g., recall or application), we offer prescriptions for strategies to encourage generative learning described by Wittrock (1974, 1989).

But, how does a designer employ such strategies in a self-paced online course? Sure, you could prompt a learner to paraphrase or explain why something is true, but there's also the importance of providing feedback to ensure the learner is on the right track. One option consistent with the audiotutorial method (Postlethwait, Novak, & Murray, 1972) is to present the learner with a model answer and have the student compare what they wrote and analyze what might be missing or different. The therapy dog handler's course (Pet Partners, n.d.) is an excellent example of another approach for how one can engage learners without needing an instructor to weigh in on the generative content the learner produces. Take, for example, the three concepts of proactive, reactive, and inactive handler behaviors with dogs. The course presents definitions of each concept, followed by an example for the learner to examine. The categorization results in immediate, elaborative feedback, describing why a response is correct or incorrect.

Designing instruction that engages the learner in content is challenging and takes more effort on the part of the designer. But, this approach to instruction is similar to the concept of a proactive handler setting their animal up for success in performing what we want them to do. We can all do the same by incorporating instructional strategies to set our learners up for success. That is, preparing them to demonstrate the performance described in the instructional objectives through encouraging engagement and sense-making of new content.

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