THE PRACTICE OF ECLECTIC INSTRUCTIONAL DESIGN

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Eclectic instructional design is the process whereby a designer blends ideas from multiple learning theories to construct a learning experience that works better than a course designed from only one theoretical influence. Eclectic instructional designers are those who do not get hung up or rely consistently on any one theory for their designs. They consider learning theories and their associated methods more as a toolbox than as dogma. With this perspective, they design instruction that works better.

THIS IS AN ARTICLE about what works in instructional design. The approach, called *eclectic instructional design*, will help you design learning experiences that both deliver performance results and provide an experience that learners truly enjoy—so much so that learners are willing to stay after class to discuss the experience further with the instructor. A case study of an International Society for Performance Improvement (ISPI) award-winning instructional solution illustrates the eclectic instructional design approach.

We (Darryl and Peter) have had numerous collaborations over the years designing learning experiences for a variety of clients and situations. The relationship we have is best described as author and editor, two roles that we both seamlessly move between based on the needs of the situation. Sometimes Peter is the author and Darryl is the editor, and sometimes it is the other way around. Our roles of author and editor are unique in terms of the level at which we author and edit learning experiences. We are not talking about authoring and editing at the text level. We author and edit at the learning theory level. Our approach is eclectic, and it works.

Consider our work developing a new brand of learning experiences for a leading provider of information technology and management training. Peter was in the authoring role, and Darryl was in the editing role for an instructor-led course on gathering user requirements. This course would ultimately serve as the prototype for what would become a 32-course brand. We conducted our front-end analysis with our subject-matter experts (SMEs) and developed a good grasp of the conditions and outcomes associated with the learning experience. Based on the situation defined at that time, Peter established a constructivist framework for the course. Learners would assume the role of a requirements analyst. Their authentic task was to create a user requirements specification for a fictional, high-tech, nano-paint product that, when painted on walls, could be electronically controlled to change colors.

The learning experience evolved to reflect a process that mimicked expert practice. It started with providing learners a user requirements specification for a previously developed project. This established a model outcome based on the constructivist sequencing principle of "global before local." From there, the learning experience's sequencing followed the logical process of:

1. Analyzing user tasks through simulated customer interviews
2. Synthesizing the content gathered from those interviews to elicit user requirements
3. Writing individual user requirements
4. Organizing the user requirements into a specification document
5. Conducting walkthroughs of the specification document to validate the requirements

It was at this point that Darryl, in the role of editor, felt something was not right. While the design met the standards of a well-designed constructivist learning experience, the outcome lacked value. Darryl went back to the SMEs and asked, "What does the audience really

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want to be able to do after taking this course?" After considering the initial response and then asking why several more times, the SMEs responded, "to write well-formed user requirements." Looking at this response through a behavioral learning lens, Darryl suggested that how to realize that goal was what should be taught first and that it should be taught from a behavioral perspective to drive the level of precision and automaticity that learners (as well as the corporations sending them to the training) valued.

This story is an example of eclectic instructional design, an instructional design practice in which instructional designers blend two or more learning theories to create a results-oriented learning experience. In this article we discuss how instructional designers can use eclectic instructional design to create better learning experiences. It is a practice that works, and we demonstrate that by exploring the following:

- What eclectic instructional design is and what it is not
- How a designer should practice eclectic instructional design
- The results designers can expect from using an eclectic instructional design approach

HOW *NOT* TO BE ECLECTIC

A designer who is eclectic is one who is willing to derive ideas from a variety of influences. We see this as a desirable state towards which designers should move as their careers evolve. However, there are three forces, *affiliation*, *attack*, and *avoidance*, which can restrain a designer's eclecticism.

The first way of how *not* to be eclectic is to singularly label oneself as a designer strongly *affiliated* with a specific brand of learning theory. Just as some Harley-Davidson motorcycle owners tattoo themselves with the Harley-Davidson logo (and henceforth are resistant to any other

brand of motorcycle), instructional designers will brand themselves as being constructivist, cognitivist, social learning-ist, or behaviorist. We see this in the instructional design students we teach as well as in our own personal evolution as instructional designers. Readers of Peter's dissertation will easily see a single-minded pursuit of constructivist puritanism (Honebein, 1994). In this research, Honebein investigated the constructivist instructional theory of problem-based learning in the context of teaching second-year medical students to more effectively care for patients with diabetes. This was the first study of the use of problem-based learning for teaching chronic care. All problem-based learning studies reported in the literature up to this time focused only on acute care.

The second way of how *not* to be eclectic is to *attack* a particular learning theory. With religious zeal, behaviorists have attacked cognitivists, constructivists have attacked behaviorists, and so forth. Over the past couple of years when we have written articles that appear to have constructivist tendencies (including this one), an editor or a colleague would send us Kirschner, Sweller, and Clark's (2006) attack-dog article that purports to be an analysis of the failure of constructivist learning. We then have to remind the editor or colleague that we doubt Kirschner, Sweller, and Clark could have systematically analyzed all the possible situations that would render such constructivist-oriented methods as discovery and problem-based learning effectively neutered.

A third way of how *not* to be eclectic is to *avoid* any theoretical influences, knowledge, or practice from a non-instructional domain. Csikszentmihalyi (1997, p. 9) states, "Creativity generally involves crossing the boundaries of domains." This means that to design creative instructional systems, one must look to other domains (engineering, medicine, computer science, marketing, etc.) for inspiration. For example, Peter's Instructional Strategies course at Indiana University's School of Education shocks students in the second week of class by assigning readings from a book about marketing and customer experiences. Students initially feel that their humanistic, education-oriented class has been poisoned by a text from the greed-oriented business school. However, as students explore and discuss the principles associated with this reviled domain, their personal theories of instruction become richer.

As these non-examples suggest, eclectic instructional design reflects a designer's willingness to consider the various learning theories as potential influences for crafting a learning experience. That willingness, combined with a model that embraces eclecticism (see the following section), are the building blocks for developing learning experiences that work.
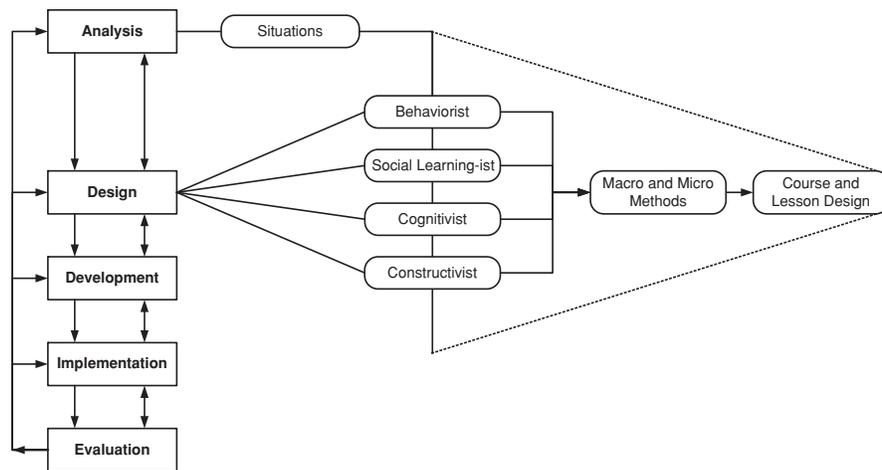
Adapted from Sink, D (2008). Instructional Design Models and Learning Theories. In E. Biech (Ed.), *ASTD Handbook for Workplace Learning Professionals* (pp. 195–212). Alexandria, VA: ASTD Press. Used with permission.

FIGURE 1. THE ECLECTIC INSTRUCTIONAL DESIGN MODEL

HOW TO PRACTICE ECLECTIC INSTRUCTIONAL DESIGN

Practicing eclectic instructional design benefits from a good understanding of learning theory (we recommend Bell-Gredler, 1986, as a good place to start) and a willingness to integrate some additional components into your instructional design process. This article is focused on the latter, which is illustrated in Figure 1.

The first easily recognizable part of the eclectic instructional design model is the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model. It is a generic, systematic process that results in the creation of effective instruction. Eclectic instructional design is process model–independent, meaning that it is compatible with any instructional process model so long as the model has some type of analysis and design phase. The process model that works best for you should be both systematic and dynamic (Farrington, 2012), which is illustrated by the arrows in the ADDIE model.

Branching out of the analysis phase is the second part of the eclectic instructional design model, situations (Reigeluth & Carr-Chellman, 2009). Situations refer to the conditions and values associated with the learning experience. Conditions include factors such as needs, audience, content, context, and so forth. Values include factors such as desired outcomes, in terms of effectiveness, efficiency, and appeal, and opinions toward methods and learning goals. Situations are the foundation in instructional theory, since the situation influences the designer's choice of methods. As illustrated in Figure 1, the influence of situations acts as a boundary or box that is present throughout the design phase that guides the selection of methods. It becomes more and more specific

and constraining as the instructional methods transition from macro to micro.

In the third part of the eclectic instructional design model—learning theories—eclecticism starts to emerge as the designer begins to consider the methods that best fit the situation. The four learning theories—behaviorist, social learning, cognitivist, and constructivist—are briefly described in Table 1. These learning theories give rise to learning strategies, tactics, experiences, and learning environments that are consistent with the theory (Sink, 2008). In our review of instructional designers' personal theories of instruction,[1] we noticed that designers tend to gravitate to a learning theory that best fits the situation in which they work. For example, a K–6 special education teacher will be drawn more to behaviorism as the primary theory guiding practice. A corporate trainer teaching risk management in a progressive organization will be drawn more to constructivism. It is natural for one to be drawn to a primary influence because it makes it easier to get an instructional design started. Not having a primary influence is like staring at a blank sheet of paper—a root cause for writer's block.

The fourth part of the eclectic instructional design model is the selection of macro and micro instructional methods. According to Reigeluth (1983), micro instructional methods reflect instruction for a *single* idea (fact, concept, principle, or procedure), whereas macro instructional methods reflect instruction for *more than one* idea (e.g., sequencing, synthesizing, and summarizing). There is a wide variety of macro instructional methods affiliated with each of the learning theories, such as programmed

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[1]In Peter's instructional strategies class at Indiana University, the final paper involves students defining their own personal theory of instruction.

TABLE 1	FOUR LEARNING THEORIES AND THEIR INFLUENCE ON INSTRUCTIONAL DESIGN
LEARNING THEORY	INFLUENCE ON INSTRUCTIONAL DESIGN
Behaviorist	Behaviorists concentrate their efforts on what is observable learner behavior and reinforcement. Drawing on the research and theories of B. F. Skinner (Bell-Gredler, 1986) on stimulus-response learning, behaviorist training programs focus on observable behavior. Main tasks are broken down into smaller tasks, and each small task is treated as a separate learning objective. Input and practice, followed by reinforcement (positive or corrective), are the base components of the behaviorist approach.
Social learning	Social learning theories elaborate behaviorist theories. The focus remains on observable behaviors, which may be learned by observing live models, receiving verbal instructions, or viewing media (print, animation, movies, or television) which contain the content being taught (Bandura, 1977). Vygotsky's (1978) "zone of proximal development," which explains how much a learner can do without help from a more experienced person, is another example of social learning.
Cognitivist	Cognitive theories focus on what is happening to learners internally—in essence, trying to understand understanding (Clark, 1999). The cognitive approach has contributed what we know about internal cognitive processes to the field of instructional design. The focus of cognitive theories is on how information is processed, stored, and retrieved in the mind, rather than on how behavior changes (Foshay, Silber, & Stelnicki, 2003). Cognitive approaches to training have given rise to more in-depth strategies and tactics for helping learners acquire cognitive skills. Gagné's (1985) nine Events of Instruction are foundational for many cognitive training designs.
Constructivist	Constructivist pedagogy revolves around the notion that "knowledge is constructed by the learners as they attempt to make sense of their experiences" (Driscoll, 2000). Constructivist theory sees learning as knowledge construction and is based on the idea that learning occurs when a learner actively constructs a knowledge representation in working memory. Constructivist learning experiences involve carefully crafted authentic activities, multiple perspectives, and learner-driven knowledge creation. These techniques result in tasks similar to those learners would encounter in the real world, with the natural complexities that surround those tasks.

instruction and teaching machines for behaviorists and goal-based scenarios and problem-based learning for constructivists. For micro methods there is less variety, because the recipes for teaching facts, concepts, principles, procedures, and so on have been fairly well defined.

The fifth and final part of the eclectic instructional design model is course and lesson design. This is the stage where the design of the entire learning experience comes together in terms of methods, media, sequencing, and timing. It is at this stage that the results of an eclectic approach finally coalesce in a complete, well-formed design that can be built in the development phase and then implemented and evaluated through standard industry practices.

The parts of the eclectic instructional design model shouldn't be anything new to a trained instructional designer. In fact, one should recognize all the parts as "good practice" for instructional design. What's new is the model's implied permission for designers to pick and choose, mix and match, and emphasize and deemphasize the variety of influences and resources learning theory and instructional theory offer.

WHAT RESULTS DOES ECLECTIC INSTRUCTIONAL DESIGN DELIVER?

To return to the story told at the beginning of this article, you have probably been wondering whether Peter graciously took Darryl's eclectic advice or stubbornly refused it. Fortunately, our collaboration has a rule for such situations. It is called, "Yes and" (in contrast to "Yes, but"). Rather than skeet shooting (a sport where a person with a shotgun shoots targets traveling through the air) new ideas, we aim to beach ball them. What's beach balling? At sporting events, spectators sometimes bring deflated beach balls to the event. When they blow up and release a beach ball into the crowd, the collective effort of the crowd is to keep the beach ball (in our case, the idea) in the air for as long as possible to see where it ends up. The objective of skeet shooting, on the other hand, is to destroy ideas as quickly as possible. We think beach balling is an appropriate analogy for the practice of eclectic instructional design.

The "Yes, and" in this case was not only to integrate Darryl's idea but to look through the entire course with an eclectic eye to find similar opportunities for improvement. We agreed that constructivist theory should be dominant while other instructional activities associated with other theories should be subordinate. We ultimately represented our eclectic design graphically, as shown in Figure 2.

The arrow in the diagram represents the constructivist-influenced "main path." The main path starts with an authentic input (task, problem, scenario, stimulus materials, etc.), continues with an authentic process (practice activities that are scaffolded and coached—similar to the
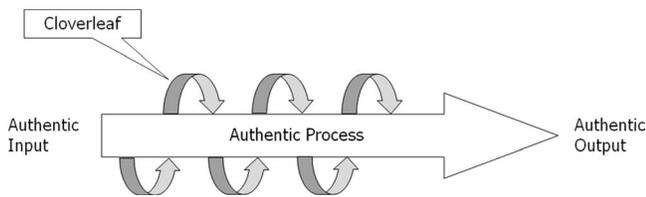
FIGURE 2. GRAPHICAL REPRESENTATION OF A CONSTRUCTIVIST-INFLUENCED ECLECTIC COURSE DESIGN

support a master gives an apprentice) (Collins, Brown & Newman, 1990), and ends with an authentic output (user requirements document, process map, and prototypes). The cloverleaves along the main path illustrate instructional methods associated with other theoretical influences into which learners take short detours.

Here is how this approach worked for the actual course design. The core of the course is represented by inputs, processes, and outputs related to a simulated, realistic task. The course begins by attendees receiving business documents and other supporting materials ("authentic inputs") from the instructor. During the class, attendees work through a process to create a User Requirements Document ("authentic output"). Integrated into the courses are videos that help tell the story of the project. Through these videos, attendees might find themselves as a participant at a meeting where they learn the business drivers for a project or virtually participating in a meeting in which user requirements are reviewed and prioritized.

As attendees work through this process, they participate in short, focused lessons influenced by other learning theories that build expertise and examine best practices (the cloverleaves). Some of these are instructor-led, while others are modeled using videos. For example, to teach the skill of writing requirements, the instructor taught a behaviorist-influenced lesson on writing well-formed requirements. To teach the skill of eliciting requirements from a customer, the instructor presented a social learning–influenced video in which an expert requirements analyst modeled a customer interview. To visually illustrate user requirements, the instructor taught a social learning– and cognitivist-influenced demonstration for how to construct a process map.

So, did the course work? Yes! The Level 1 (immediate reaction), Level 2 (change in knowledge and skills), and third-party Level 3 (change in workplace) evaluation results we collected demonstrated the efficacy of the solution. We also submitted the course to a jury of our peers, who nominated it for an International Society for Performance Improvement (ISPI) Award of Excellence for Best Instructional Solution, which it won in 2008.

Eclectic instructional design is the process whereby a designer blends ideas from multiple learning theories to construct a learning experience that works better than a course designed from only one theoretical influence.

SUMMARY

Eclectic instructional design is the process whereby a designer blends ideas from multiple learning theories to construct a learning experience that works better than a course designed from only one theoretical influence. Eclectic instructional designers are those who do not get hung up on any one theory for their designs. Instead, they will likely have a primary theoretical influence that aligns with the common situations in which they typically work. They will also consider learning theories and their associated methods more as a toolbox than as dogma. With this perspective, they will design instruction that works better. ◣

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