The Creative Spirit of Design

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Abstract

If instructional designers hold limited views about their practice they sometimes adopt formulaic routines that do not help them accomplish the goals they believe are important, or develop instruction of a quality envisioned by the field's innovative theorists. Fortunately, designers can avoid these unfavorable results in part by understanding and exemplifying the creative spirit of design. In this article the author examines the creative spirit of design, exploring its imaginative, creation-oriented, and inter-disciplinary character. The author also describes how the creative spirit can help instructional designers remain flexible and perceptive in their practice, and by so doing be better able to create effective and innovative instruction of a quality consistent with their ultimate ideals.

Keywords: creativity, innovation, instructional design, design

Instructional design processes, methodologies, and techniques are intellectual tools, and should not solely define the field, nor limit designers' sense of possibility about their opportunities. More profitable is the view of instructional design described by Davies (1978), who described instructional design like:

A chess game, in which players engage in an intellectual activity for which there is no one set of appropriate moves. . . . The order, and manner, [in which design skills are used] depends upon the character of the problem, and the aim in mind. There is no one best way, and no one way of proceeding. Neither is there one optimal solution. Everything depends upon the situation, and the skills available. (pp. 22-23)

Designers with this perspective can better develop instruction that is aligned with the goals and ideals they claim, as well as instruction of a quality envisioned by the field's many innovative theorists (McDonald & Gibbons, 2009). But when designers hold more limited perspectives, they sometimes translate innovative instructional approaches into formulaic routines that do not help them accomplish either. As Osguthorpe and Osguthorpe (2007) asserted:

Those who implement a given model [of instructional design] might observe some benefits of their instruction [but] unintentionally ignore more important negative side effects—all because the model itself, to simplify the design task, has obscured the view of learning in all its richness and variety. (p. 16)

This pull away from one's ideals into undesirable routine is both common and powerful. It is like a form of gravity that draws designers toward an overly simplified view of their practice, blinding them to opportunities that might help them better reach the levels of instructional quality they aim to achieve (McDonald & Gibbons, 2009).

Elsewhere I have discussed how instructional designers can avoid these constraining perspectives by developing guiding principles for their practice (McDonald, 2010). Guiding principles are the philosophical orientation designers' bring to their work, the statements of what they value and why those values are worth pursuing. When circumstances may otherwise encourage them to solidify or over-simplify their practice, guiding principles help designers “make decisions, view constraints in creative ways, and solve problems without abandoning [their] . . . goals” (McDonald & Gibbons, 2009, p. 387). Powerful guiding principles le-
The creative spirit of design expresses the possibility that with disciplined effort, designers can re-make any situation into something that more closely resembles a desired state.

What is the Creative Spirit of Design?

The phrase creative spirit of design is meant to evoke three characteristics instructional designers may exemplify, that can help them resist the pull towards unproductive procedure or formula. These characteristics are imagination, being creation-oriented, and inter-disciplinary action. Discussion of these characteristics is in part inspired by a rich design tradition outside of instructional design, to which I refer readers for a more extended treatment of the topic (e.g. Brooks Jr., 2010; Brown, 2009; Cross, 2007; Krippendorff, 2006; Lawson & Dorst, 2009; Nelson & Stolterman, 2003). Additionally, current instructional design and other educational discourse is likewise beginning to recognize design’s importance, not only in the creation of instructional environments (Hokanson & Miller, 2009; Smith & Boling, 2009) but also when conducting educational research in general (van den Akker, Gravemeijer, Mckenney, & Nieveen, 2006). My advocacy for the creative spirit of design also builds on this growing body of work. However, in addition to any specific technique recommended by scholars, the phrase creative spirit of design is further meant to suggest the curious, playful, experimental, and sometimes rebellious attitudes that designers can exhibit (for examples see Gabler, 2006; Hertzfeld, 2005; Price, 2008). The creative spirit leads designers to be active agents, not just reacting to problems but vigorously searching out opportunities for change (Brown, 2009). Readers are encouraged to keep these more affective traits in mind throughout the discussion that follows.

The first characteristic of the creative spirit is imagination, or the ability to envision the unexpressed and unrealized. Nelson and Stolterman (2003) asserted imagination to be foundational to any design discipline, stating that, “design is the ability to imagine that-which-does-not-yet-exist, [and] to make it appear in concrete form as a new, purposeful addition to the real world” (p. 10). They additionally advised that while designers should be aware of the influence natural laws have on their work, they should do more than only observe the world as it is. Imagination means to also consider the world as it could be, exploring new and untested possibilities that would never be reified without intervention. When inspired by an imaginative potential, designers do not uncritically accept obvious or commonly-understood assumptions about problems, opportunities, or solution possibilities. They take a second and even a third look, redefining the situation and questioning the legitimacy of apparent constraints (Cross, 2007). Imaginative designers “[believe] that the impossible can be achieved,” and draw energy precisely because such a prospect “scare[s] them, [and is] at the edge of [their] capabilities, where [they] might fail” (Rao, Sutton, & Webb, 2008, pp. 5-6). By deliberately acting at the edges of their imagination, such designers avoid the complacency that can lead them to settle for undesired formula or routine.

The second characteristic of the creative spirit is being creation-oriented, or to drive change through continual cycles of creation. Designers with the creative spirit spend much of their time in creation activities, such as prototyping instructional concepts or scenarios, not only to understand possible solutions but also to meaningfully shape their understanding of problems and opportunities. Brown (2009) argued that this “shift from physical to abstract
and back again is one of the most fundamental processes by which we explore the universe, unlock our imaginations, and open our minds to new possibilities” (p. 87). The creation orientation of design is different from problem solving through analysis. As Cross (2007) pointed out, “designing is a process of pattern synthesis, rather than pattern recognition. The solution is not simply lying there among the data, . . . it has to be actively constructed by the designer’s own efforts” (p. 24). Consequently, designers with the creative spirit are often tinkering with tangible works-in-progress—pushing the boundaries of what they know, making better sense of their ideas, experimenting with constraints in unique ways, and, importantly, testing how well emerging designs accomplish the goals they originally set out to achieve. As Lawson and Dorst (2009) concluded, “in many design situations, the generation of possible solutions and their gradual improvement is the only way forward” (p. 28).

The third characteristic of the creative spirit is inter-disciplinary action, or collaborating with others who have different specialties and perspectives. Verganti (2008) called this the “distributed” nature of design knowledge, recognizing that design “depend[s] on millions of unpredictable interactions among, for example, users, firms, designers, products, communications media, cultural centers, schools, and artists” (pp. 443-444). Inter-disciplinary activities help designers learn about possibilities of which they might not have been aware of before. It can also help designers see constraints from a different perspective. And, as Lockwood (2010) concluded, “in collaboration, constraints can be removed and great ideas can emerge” (p. xii). This is true not only when designers borrow ideas from related specialties, but perhaps more ingeniously when they are able to combine ideas from dissimilar fields into wholly new creations. For example, Hargadon and Sutton (1997) cited the inventive ability of Thomas Edison who “often . . . blend[ed] . . . existing but previously unconnected ideas that his engineers picked up on as they worked in . . . disparate industries” (p. 716). Additionally, inter-disciplinary relationships, especially between seemingly unconnected fields or industries, help designers evolve languages to describe environments and design forms with greater sophistication than they could if they were more intellectually isolated (Verganti, 2009). This sophistication is central to designers’ ability to avoid the formulaic, by increasing their capacity to create “fascinating variety. . . . [and] reify abstract ideas as artifacts that can be experienced” (Gibbons & Brewer, 2005, p. 115).

**How Does the Creative Spirit of Design Help Instructional Designers?**

The creative spirit helps designers maintain the instructional quality they desire, and better achieve their goals, by supporting their construction of flexible and perceptive design expressions. Flexibility means that designers adapt easily. It arises from their abilities to imagine multiple possibilities, quickly create, test, and adjust prototypes of potential options, and collaborate inter-disciplinarily on diverse and multi-faceted opportunities. Perceptiveness means that designers can carefully assess situational nuance. It arises as they imaginatively examine assumptions in unconventional ways, learn from iteratively-created design concepts, and are exposed to inter-disciplinary design languages and perspectives. Flexible and perceptive expressions can begin early in design, seen first when designers take control of a situation to actively shape their understanding of the potential problem or opportunity. As Davies (1978) realized, “the way in which an educational problem is stated, the principles and concepts that are used, all provide a starting point” (p. 15) that influences every other decision made during the course of an engagement. And the benefits of flexibility and perceptiveness continue as design progresses. Designers frequently face choices about how to address sometimes-difficult constraints. But practices that encourage designers to remain flexible and perceptive, such as Kelley (2001) concluded about prototyping, can “open up new possibilities of discovery,” helping practitioners “change [their] mind and accept new ideas” about options that may better help them achieve desired goals (pp. 38-39). In the remainder of this section I describe more advantages of both flexibility and perceptiveness.

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routines are inadequate is because design so often addresses the untried, the unproven, and the unknown. As Nelson and Stolterman (2003) summarized, the environments which designers are often called on to address “are unique, contingent, unpredictable and complex” (p. 16). Consequently, formulas that presume a known input leading to a structured output are simply not powerful enough to anticipate the full-range of situations designers encounter (Hokanson & Miller, 2009). More helpful is a designer’s flexible assessment of a design situation and ability to construct a response from a variety of options (Gibbons & Yanchar, 2010), including the unexpected and potentially-unconventional. This flexibility is very important for designers seeking to maintain high levels of instructional quality. As Brooks (2010) concluded, when circumstances are not what is expected, or even if known circumstances change during the course of a project, “the skillful designer recognizes the new opportunity and, with [a] flexible design, leaps to exploit it” (p. 27), thereby avoiding the potential of being pulled away from their goals by uncontrolled conditions.

Second, the creative spirit helps instructional designers to be perceptive in their design expressions. As noted earlier, designers, especially novices, sometimes overlook situational nuances that are too complex to be handled by rule-based procedures or other types of design formula. As Gibbons (2003) noticed, designers can “struggle as they attempt to apply inadequate thought tools to complex design problems” (p. 22). But when they develop the ability to see situations in perceptive ways, they can discover sophisticated insights that fundamentally reframe their understanding of problems and opportunities, and that entirely alter the character of the solutions they recommend (see Verganti, 2009). Krippendorff (2006) summarized this potential when he stated:

“It is not impossible [for designers] to create and start using new metaphors, new vocabularies, and new ways of language, like poets and science fiction writers do, thus bringing forth new ways of conceptualizing the world and encouraging new practices. (pp. 11-12)

An example may illustrate. Verganti (2009) described how Italian manufacturer Artemide, during the design process for a luxury lamp, perceptively realized their cust omers were less interested in lamps than they were in the light those lamps produced. This insight led Artemide to first question, and then eliminate from their thinking, limiting assumptions about their craft that in large part determined the design options they later pursued. The resulting product, meant to be hidden in a room and not actually seen itself, allowed owners to produce a spectrum of lighting styles that best matched their current or desired moods (such as mimicking a sunset over the course of an evening). Although atypical when compared to then-current lighting design practices, Artemide’s approach still fully met consumers’ criteria for great lighting and ultimately became a new standard for a quality lighting experience. Through intensely perceptive insights, they achieved for lighting designers what McDonald and Gibbons (2009) described as ideal for instructional designers:

Refus[ing] to solidify their position simply because one successful solution has been found. They do not try to make the successful solution fit all problems, but continue to search for new solutions, new principles, and new designs that are principled and reasoned, and that are demonstrably suitable for a given use. In the process, the [designer] learns, and the standard by which [design] solutions are judged continues to evolve. [Designers thereby practice] a form of research that pushes back the limits of what is possible at the same time [they provide] solutions for current problems. (p. 383)

**Conclusion**

The creative spirit of design is a powerful guiding principle to help instructional designers resist the pull towards reductive routines, and to find instructional approaches effective in achieving their desired goals. The imaginative, creation-oriented, and inter-disciplinary character of the creative spirit leads designers to be more flexible and perceptive in their design expressions, regardless of the strategies or tactics they adopt. Designers with the creative spirit are better able to recognize meaningful and effective learning techniques irrespective of origin, including the unconventional and the unique. However, the creative spirit does not require instructional designers to abandon the methodologies with which they are already familiar. As Inoyue, Mer-
rill, and Swan (2005) reminded, designers can “continue to do many of the same things they are doing, using many of the same skills they now possess, but the meaning of what they do [can] be enhanced” whenever they choose to be more reflective and careful in their design practice (p. 15). At the end of this discussion of the creative spirit, I concluded as Brooks (2010) concluded, “great designs come from great designers, not from great design processes” (p. 231). By becoming great designers, as encouraged by the creative spirit of design, all instructional designers are in a better position to develop educational environments that are effective, valuable, inspiring, and powerful. They are in a better position to develop instruction of the highest quality that they can imagine.

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