Central to design and design education is the critique (Dannels, 2005; Gray, 2013). The methodology and practice of critique is how designs are improved and how design skills are developed in workplaces and within studio education around the world. It is where work is presented by a designer, criticized by others, its virtues and limitations debated, and the work improved.

By itself, designing is a challenge to any individual's abilities. Information must be gathered and analyzed and a guiding principle or idea must be developed and communicated to others. Designers must expose their work to the criticism of others and answer critiques with the quality of their arguments and improvement in the design. Critique looks at an idea—created through analysis and an inventive process, which is shared by the learner/designer—and advances its quality.

The design critique can provide instructional design with a means for intensifying the learning process as well as improving the design project itself. As a process, critique benefits the learner, other members of a class, and the critic.

Defining Critique

Used throughout the design and creative fields, "critique" is a formative, conversational method of interaction and assessment. It is the systematic and objective examination of an idea, phenomenon, or artifact. Critique is a semi-structured method of sharing work for evaluation and commentary by others; it is a discussion with a project focus. While there are a number of different forms and terms for the process, critique is used here to refer to formal and informal discussions involving design disclosure and criticism.

This writing focuses on the formative aspects of critique, and does not address final critiques or formal reviews, processes meant to conclude and evaluate a design project (see Figure 4). For less formal and individual scaled interactions, the terms “crit" and “desk crit” are commonly used. Here the focus is on critiques which happen during the design process.

Design critique can be compared with user testing. Both allow the evaluation of design projects and provide important feedback to the designer. Here the focus is on critiques which happen during the design process. In contrast, in user testing, most of the understanding of the quality of design work comes from observation of appropriate test users. Comments from the test users can be helpful, but often are limited by their experience with design or the project at hand. On the other hand, critique generally deals with peers or mentors with experience in designs of this project type.
In the first major studies of these interactions in the design studio, Donald Schön (1983, 1985, 1987) directly observed architectural education. His writing described the individual consultations between studio instructors and individual students. The intensity and focus of this type of learning event is the essence of an effective studio education, it is not didactic. At its most positive, a critique is meant to “coach” or “guide” the learner to a more effective answer, develop judgment, and model tacit design/problem setting and solving skills. Per Schön, “The student cannot be taught what he needs to know, but he can be coached” (1987, p. 17).

**Forms of Critique**

There are a number of different structures for critique. Blythman et al. (2007) describe a variety of critique forms which range from final reviews to industry presentations to individual critiques. In this writing three of these forms are described as central to design and education: desk critiques, peer crits, and group critiques. Each of these types is formative, designed to encourage and direct design progress, and are qualitatively the most effective.

Within a studio learning experience, the development of design skills is commonly sought through a form of informal critique or desk crit (see Figure 1). A desk crit is “… an extended and loosely structured interaction between designer and critic (expert or peer) involving discussion and collaborative work on a design in progress” (Shaffer, 2003, p. 5). In general, most of the activity during scheduled class time in a design studio will be individual students receiving criticism of their work from instructors or visitors.

**Figure 1**

*Desk Critique (illustration by the author, photo courtesy of University of Minnesota College of Design)*
Desk Crit

Instructor
Project Space
Design Discourse
Participation separation
Student
Incidental Learners
“During a crit, a student describes his or her work to the professor...As students present possible solutions, the professor explores the implications of various design choices, suggesting alternative possibilities, or offering ways for the student to proceed in his or her exploration of the problem” (Shaffer, 2000, pp. 251–252).

The desk crit is a personal conversation between a designer and a critic (who may be a visiting professional, expert, or professor). The length varies with the discussion. “This model of social interaction between student and instructor involves a critical conversation about the student’s design, and usually involves both people working towards solving a problem” (Conanan et al., 1997, p. 2). It is inherently formative, guiding the work toward a more successful conclusion. It is also subjective, and when successful, provides not only objective answers but directions focused on developing the designer's ideas and thought process.

An important concept in effective critiques is the focus of the criticism on the work itself and not on the designer. A positive, formative atmosphere is essential to an effective critique; grading and evaluation occur elsewhere. Shaffer described this nature:

“The tone of desk crits was almost always supportive and nonjudgmental. On the other hand, pinups and reviews, although constructive, were quite blunt and sometimes extremely critical—particularly in the case of formal reviews. Judgment was, in effect, off-loaded from the more private desk crits to the more public presentations” (Shaffer, 2003, p. 2).

Non-participants also can benefit from the individual desk critique both through direct observation and through incidental listening to the process. While not as formalized as a lecture, within a studio space, frequently there are informal observers who gain from hearing another's desk critique.
Talking to two student designers at a time may be more effective as it allows designs to be compared and more designers to be critiqued in a given time period. It does, however, lack the focus and attention found through the individual critique.

While access to instructors is limited, other members of a class or team are available at any time to provide opinions, clarifications, and evaluations through a peer critique, inside or outside of formal meeting hours. This is the simplest form of critique in design, the “peer crit”, where design work and ideas are discussed between colleagues (see Figure 2).

**Figure 2**

*Peer Critique (illustration by the author, photo courtesy of University of Minnesota College of Design)*
Any critique develops both the critic and designer. While they can provide an external review of one’s design decisions, peer crits also provide the critic with the opportunity to extend their own skills. Peer critics review the validity and logic of a particular design idea or set of design choices. While peer crits may be the least formal format, they are the basis for an extended professional understanding of the use of critique. This practice occurs in a range of fields from graphic design to architecture to user-experience design.

An individual working session with a single student can change learners’ minds and their thinking process, providing, as Shaffer describes it involves social scaffolding of learning the design process. At its core, critique as part of an educational experience is constructivist. While the focus is on an external project, the overall goal of the critique is to develop the designs skills of the learner.

"He [sic] has to see on his own behalf ... Nobody else can see for him, and he can't see just by being "told," although the right kind of telling may guide his seeing and thus help him see what he needs to see." (Dewey 1974, p. 151)

The importance of the informal critique in the development of learners in the studio classroom is clear. Frequent engagement and discussion of ideas scaffold the experience, while the designer tacitly recognizes the value of engagement and collaboration with other professionals by seeking criticism from others.

Designers who participate in critique may do so as a critic or as one being critiqued. Both roles have cognitive benefits to the individual designer and to their broader understanding of design. Designs are developed conversationally, building from the initial ideas of the designer, but tested and improved through the argumentation like process of a critique. Criticism of the work can help
improve the quality of the end-product. Over time, exposure to critique can also help develop thinking skills of the designer building their capability to analyze, anticipate, and respond. For a beginning designer, a first critique may be challenging and helpful comments may be rejected. Often the criticism of the work is conflated with criticism of the designer themselves, when they should be separated. Discussions must focus on the work, and not on the designer.

Small groups can also observe and participate in formative group critique as well, with selected projects serving to trigger discussion and interaction with all present. In studio format learning, intermediate group critiques can have much of the same coaching or generative functions as individual critiques. Whether as a group crit or pin-up, these can highlight specific milestones in a project development. While similar in form to final reviews or "juries", the distinguishing quality is one of development and advancing the work of the individual designer and benefiting the group from generalizable comments. It is inherently formative and positive.

Figure 3

*Group Critique (illustration by the author, photo courtesy of University of Minnesota College of Design)*
A general, but often tacit goal of design education is to instill a habit of critique, and an ongoing practice of generative evaluation of creative work. Critique supports reflection and engagement among designers of all types.

**Figure 4**

*Final Review (illustration by the author, photo courtesy of University of Minnesota College of Design)*
Final Review / Jury

Diagram showing:
- Outside critics
- Instructor
- Students
- Power differential
Use of Critique in Studio

Studio-based education is learning by designing, a rich and complex process. Designers in all fields examine problems, advance possible exploratory resolutions, and iteratively evaluate their own work as a regular part of the design process. This process occurs through personal reflection and evaluation, but it can also be improved through the interaction with others through as Shaffer calls "...a variety of structured conversations..." (2003, p. 5). An important aspect of learning design is developing the professional practice of seeking and giving critique; the formal and informal evaluation of the work. It is one of the consistent aspects across design programs and schools worldwide, and importantly, in design culture. As a generative format, the critique process focuses on the improvement and development of the design project.

The use of the studio model in instructional design has become increasingly common over the past ten years (Clinton and Rieber, 2010). Studios are based on the ideas of project-based learning and modeled directly from pedagogical methods in the creative fields such as studio art, architecture, and product design. “The originators of the studio curriculum [at the University of Georgia] … envisioned the learning of educational multimedia design to that of an art or architectural studio in which a group of people learn skills and develop expertise while working on authentic projects in a public space comprised of tools and work areas” (Clinton and Rieber, 2010).

Application in Instructional Design

Instructional design education can benefit from the models presented in studio-format classes. Instructional designers also can utilize the general concept of critique in various ways in design
products of their own. However, not everyone is experienced with critique or even studio-based learning in an educational environment. Design schools have the advantage of a well-developed and expected critique model; the scaffolding is explicit and the instructors are well versed in the process.

It is valuable to start using and employing critique as a method as a learner, as an instructor, and as an instructional designer. The suggestions below intersperse these roles, describing critique from these three different orientations.

Designers, even those without experience in studio-based learning, can start by opening themselves to critique as an educational method. Beginning can be as simple as developing a habit of asking peers or friends for informal feedback on a project. The author's own second year architecture critic began the year by saying “You have to expose yourself.,” encouraging our own sharing and interaction regarding design ideas. (Stageberg, 1973).

Peer critiques can be done at any time, whether during scheduled class time or at off-hours, exposing project ideas to others’ opinions and assessments. Critique can also be done between designers, developing their skills of synthesis and evaluation, and expands the learning process...and importantly as a way to improve the design work itself. [An application exercise is included at the conclusion of this writing.]

Designers seeking input on their work can begin by specifically focusing the critique on areas for improvement. A peer critique should start with briefly describing the problem or design and outlining the objectives of the project. Present is an understanding of the immediate goal of the critique being improvement of the design solution (Gibbons, 2016). As with writing, the goal is to seek a larger understanding of the logic and tone as opposed to a copy edit.

While a critique is in progress, designers can help steer the direction of discussion to more important issues by focusing on discourse within the design work, and by seeking evidence and the reasoning behind any criticisms.

Critiquing a colleague, peer, or student helps in developing one's own reflective ability to analyze and criticize design work. Critiquing the work of others can help make one a better designer in the long term, and improve design projects in the present.

While giving a critique involves evaluating the work for errors and problems, it can also delve into the more philosophical and theoretical aspects of the project. For example, an instructional design could begin from a behavioral basis or a constructivist basis, which is a place for philosophical advocacy.

For instructors, individual critiques can be described as a regular system of tutoring individual learners, driven by attention and engagement. Critique is contemporary and formative feedback, engaging, and scaffolds the design process. The skills of critique should be consciously developed in learners both as recipients and for their role as critic. The critique model is extendable, as individuals can be paired or grouped as need be, building collaborative learning events. A formative critique is comparable to reviewing a written article draft for a colleague, building on their ideas and their thinking.

Critics or instructors themselves will need to begin by modeling a positive and formative approach to a constructive conversation. Faculty will need to have a consistent pattern of using critique for helping learners develop their ideas as well as their thinking process. Explicit standards for both the interaction and the quality of the work are helpful. Individual “desk” crits can be either private or
public, and faculty can encourage other students to informally listen in. As individual critiques can be face-to-face or online, they can continue to allow others to participate or view. Establishing individual critiques as an educational practice in a course can build to conducting small group critiques as well.

Instructional designers have the opportunity to build into their designs open frameworks for critique. A framework can, for example, support student peer critiques, user testing of interactive designs, verbal critique of visual layouts, or a shared review of a colleague's writing. In most cases it would be important to develop critique skills in learners to help improve responses. The goal of any particular critique is progress toward improvement of the finished design, with the overarching goal of improving learner thinking. It is valuable for a learner or critic to review over all ideas and evaluate their validity and consistency, and to be present, positive, and engaged. Critique is a structure that can be built into instructional designs.

While critique is valuable for both face-to-face and online learning, there are challenges that exist with the increasing use of technology-enhanced learning. The fluidity of conversation, whether online or in-person adds much to a critique, even if done through sharing screens and talking synchronously, which is now possible with some course management systems. Critiques should be done in a manner providing the highest fidelity of communication possible; while face-to-face is valuable, most synchronous critique can be done through video conference software. A current example would be online music lessons connecting, say, a violin player in Japan with an instructor in Finland (Furui et.al., 2015; Nishimura, 2017).

Asynchronous critique may be less effective, but can still provide direction and formative assessment through mark-up and annotation. Unfortunately, there isn’t the same interaction with a “Track Changes“ review or with software such as VoiceThread as with a face-to-face conversation, but with investigation, structuring of the conversation could be improved. Online written texts can be combined with synchronous audio for editing sessions as well.

**Conclusion**

As with any educational practice, there are limits to the use of critique in education. More commonly, the limits on the use of critique are due to time and the one-on-one nature of an instructor critique. Modern economics necessarily constrains the amount of time spent reviewing, analyzing, and being involved with individual critiques. Lecture classes and objective evaluations are simpler and much more financially viable in ‘presenting’ a large class than is a single design instructor working with individuals in a smaller studio class. This is a continuing source of pressure on design departments. Pragmatically, class size and time limit the availability of critique as an educational method.

Critiques do vary in quality as well as scale. Some critiques are helpful and advance the work, others challenge the designer's thoughts, leading to new insight for future work. Other critiques, of course, are less successful, perhaps focusing on the traits of the designer and not on the design itself. Critiques which focus primarily on minor details, facts or factual error are often distracted from larger, more important issues. Critiques which are simplistic and present criticism without evidence are not helpful, nor are those which are overwhelmingly negative or positive. The goal of a good critique is to make the design and designer better, and not to express a power relationship.

The skills of the reviewer, whether educator or peer, are also important—recognizing the social and formative nature of the interaction. However, it is within the systemic role of instructional designers to extend a valued and effective model to the technology-enhanced learning of today.
Critique can be integrated into instructional design models and education. It can be the way instructional designers learn, and an important aspect of how they practice.

**Application Exercises**

As a concluding exercise for this writing, try the following process. At some point in a design project, whether with early sketches or more developed ideas, contact a peer who is working at a comparable scale. It might be the same type of project or one that has similar requirements and standards. Ask if they would be willing to critique your work, and offer the same input on theirs. Review the following process and set a reasonable time scale for the critique, with enough for discussion of both efforts.

For the critique itself, first give your colleague a brief outline of the current progress of your work and focus the critique on areas of concern you may have. Solicit a comparable set of information from your partner. Spend a reasonable amount of time examining the project, depending on the scope of the project and on your agreed upon time commitment. Take notes, and try to synthesize your understanding and experience with their work. With a goal of seeking to improve the work, discuss your findings with them, and in turn, learn of their findings. Restate what you heard in your own words to them for confirmation and clarification.

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