Standards Essays

What is Creativity?

Creativity is an underlying concept throughout the Standards used for evaluating interior design programs. Learning experiences that incorporate creativity are addressed specifically in Standard 8; however, one might also consider the concepts related to creativity as a measure of success throughout the review of student work.

Creativity can be subject to interpretation. For that reason, creativity needs to be defined in greater detail and with more practical purpose in order to be used as a measure of success. What is involved in creativity and how can its aspects be applied in evaluating student work?

Creativity is made up of a number of different dimensions. Based upon a framework of Paul E. Torrance: fluency, flexibility, originality, and elaboration are frequently used as dimensions of creativity.

- **Fluency** relates to the number of ideas,
- **Flexibility** refers to different approaches or perspectives of an idea,
- **Originality** is often related to uniqueness, and
- **Elaboration** is the enrichment of detail or a layering of ideas within a form or project.

The following concepts, which are more explicit, may help provide greater perspective, as well as additional vocabulary, in evaluating creativity of student work.

- **Innovation.** If design solutions are innovative, they offer imaginative characteristics. If within a program, or within particular courses, the students' solutions are unique and vary greatly from one another, it might be said that the program encourages innovative solutions to design problems. On the other hand, if all, or most, of the students' design solutions are similar and the solutions show little imagination, they are not innovative. Within a particular course or for a particular assignment, this may be explained if the project is more limiting; throughout an entire program it may indicate a lack of one aspect of creativity.

- **Elaboration.** Another function of creativity involves the elaboration of ideas. In looking at student projects, team members may find that the students' ideas are good but that they are not developed enough. They may be lacking in detail or enrichment. In this case, the weakness in the creativity of the projects, or design solutions, is due to insufficient elaboration, or broadening, of ideas or concepts. On the other hand, well-developed solutions, rich in detail, are one indication of creative strength.

- **Flexibility.** If all of a students', or a group of students', design solutions respond to differing problems the same, or are presented in the same or a similar way, the students are showing a lack of flexibility, or resourcefulness. It is interesting to note that students sometimes attribute sameness of response to differing problems as the consistent application of a personal style.

One concern with the comment that the student work lacks creativity is that the team may actually be referring to aesthetic quality or stylistic quality rather than creativity per se. If what is really meant is that the work lacks aesthetic sensitivity or stylistic quality, then the following might be helpful in describing these qualities:

- **Aesthetic quality.** The combination of textures, line, shapes, spaces, and the depth and complexity of colors in a design project determines the degree to which it is aesthetic. If student projects show well-developed and sensitive use of these elements, this is indicative of aesthetic quality, which is sometimes misinterpreted as creativity. While one might include aesthetic sensibility when speaking of elaboration or enrichment of original compositions, these elements should not be confused with each other.

- **Stylistic quality.** When one speaks of the style seen in a project or series of projects, one is talking about some recognizable coherence or integrity in presentation, or commonality in approach. Such style may belong to an individual, a group (i.e. everyone in a particular program), or it may belong to a particular historical period, or some trend in the current market. A student may show individual style, or may make imaginative use of established styles. Either suggests creativity of style and might be mentioned in conjunction with a comment related to innovation or originality. As an individual's style develops over a long period of time, it may be unfair to expect a student to have established an individual style while in school. But a team should consider whether or not a program encourages this individual development.

Because of the complex nature of a concept like creativity, it is not always easy to understand or even to quantify. Yet, creativity is an integral part of interior design. Therefore, as evaluators of interior design education, it is important that we try to clearly communicate the ways in which a program succeeds or fails to instill this quality in its students. Approaching creativity as being made up of a series of more concrete aspects will help us to do this and perhaps help to educate programs at the same time.

— This discussion of creativity was written by
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What impact does the global market have on design practices?

The practice of design is impacted by a wide array of external influences, including the global market. Standard 6 requires students to have an awareness of the impact of a global market on design practices. **This essay explores various facets of the global context of business that may be addressed within a program and lead to student awareness.**

Design practice is often deliberately structured to maximize local business opportunities. This means mitigating risks, being responsive to the legal environment, and practicing within the context of local customs and sensibilities as they impact the delivery of design. The following essay outlines some examples of factors that may influence design practice within a global market and that vary based on context and location, even within the same country.

Regulatory Environment: The credentialing of design professionals and the laws, codes, and regulations governing interior design practice vary by country as well as local jurisdiction. Professional qualifications may include discipline-specific education, examination, certification, and memberships. These qualifications and regulations can determine who is allowed to practice and the scope of services these individuals are allowed to perform.

The ownership and structure of companies can also be recognized differently depending on location. There are varying requirements related to the percentage of local ownership, who can and cannot be considered owners, the percentage of profits to remain in the country, and hiring expectations. Various types of ownership and organization may also have tax implications depending on location.

Zoning and codes are not uniform around the globe or even within a single country. These include traditional building codes as well as codes governing health, safety, and welfare. It is not uncommon for multiple codes to be adopted in areas that choose more stringent or comprehensive regulations.

Additionally, approval entities vary widely based on location. These entities include, but are not limited to, different types of review boards and committees designed to protect the interest of cities and communities. These interests may include historic preservation, planning, zoning, transportation, economic development, and public access concerns. In addition, the engagement or consideration of specific stakeholder groups such as residents, business owners, and the general public may be required.

Currency and Taxes: Exchange rates for international currencies can fluctuate daily. Risk can be mitigated by electing to be paid in the most stable currency or by managing the fluctuation contractually. In addition, tax liabilities vary significantly from country to country and can impact remuneration for professional services, currencies leaving the country, sales, and other revenue vehicles. Depending on the legal entity established to conduct business, local versus globally-owned firms may be taxed differently.

Delivery Models: The logistics of executing design projects are influenced by a wide range of local factors. Delivery models vary, including the methods used for payment, structuring teams, and distributing responsibilities. Other considerations include local construction methods as well as the availability of and access to materials, products, and labor. The primary entity leading the project could be a builder, developer, investor, or an owner. Multiple design teams may be engaged, some local and some remote, depending on the level of service and how practical efficiencies are achieved.

Cultural Expectations: The way in which business is conducted varies widely around the globe and reflects varying cultural expectations related to age, gender, religion, status, and behavioral norms. A very specific example of a cultural expectation and business ritual is the formality in which business cards are presented in Japan. Additional examples include culturally appropriate business attire, such as modest dress or head coverings for women in certain locations; appropriate deference to age and/or hierarchy; and appropriate engagement in terms of salutations, eye contact, and physical contact such as handshakes. Ignoring cultural expectations could lead to unintended perceptions of disrespect and insensitivity.

Competition: An expanding global market reflects a constantly changing competitive environment that balances local sourcing and worldwide resources. This on-going shift reflects opportunities created by expanding trade agreements, increased access to talent, and enabling technologies. The rise of remote call centers over the past few decades illustrates the migration of business to locations that provide a combination of lower wages and an educated workforce.

Areas of the world that have experienced recent and rapid modernization influence the rise of local manufacturing and labor infrastructures in response to global competition. Local industries thrive as they become less expensive and more environmentally responsible alternatives in the global market. At the same time, internet services and new means of transportation allow easy access to products and materials that can threaten these same local economies. Although the cost of transportation has decreased, the cost to the environment has increased. Designers, architects and clients have a responsibility to consider the carbon footprint resulting from the long distance transport of products and materials.

Socio-Political Context: Political conflict and social strife around the globe create volatility in terms of business risks. Understanding the level of risk plays a significant role in determining where, when, and how to engage in business. Potential or proven instability in terms of access, regional economy, and governance shape the global market.

Ethics: Social norms and belief systems regarding ethical behavior vary across the globe. Defining and determining how to uphold ethical business standards is a critical component of practicing design in an international context. For example, formal and informal protocol and practices regarding intellectual property may vary from one cultural context to the next in the contemporary global economy. Some firms adapt formal requirements that are considered non-negotiable, such as adhering to FCPA (US) or the Anti-Bribery Act (UK), wherever they conduct business and across international offices and operations despite potential constraints on business opportunities.

In summation, the expanding global market creates greater opportunities for interior design as a business. These opportunities are met with an increasing number of variables that change the context in which designers must operate in order to be successful. The practice of design must be grounded within a relevant business model that considers international operations in terms of legal, financial, operational, social, ethical, and cultural realities of location.

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Systems Thinking

Systems thinking is an application of General Systems Theory (GST) that uses a formal procedure of analysis to review various parts of a real-world problem and, in turn, understand how these parts are integrated in order to facilitate a desired performance or outcome (Skyttner, 2001, p. 40). Two of the most prominent founders of GST and its application to solving complex inter-disciplinary problems were Ludwig von Bertalanfy and Kenneth Boulding. Their work in the 1930s and 1940s launched a field of inquiry and a means to overcome the fragmentation of knowledge and the isolation of the specialist (Skyttner, 2001, p. 35-36; ISSS, nd).

There are multiple areas of systems theory applications including systems approach, systems analysis, systems engineering, and complexity theory. Systems dynamics, developed by Jay Forrester at MIT's Sloan School of Management (circa 1954) (Aronson, 1999), was used to forecast the growth of modern cities. This systems thinking approach focused on using design to propose how to change the world for the better by building a new system for communities and their infrastructures (Skyttner, 2001, p. 40). This systems thinking methodology continues to be relevant to the planning and design of today's complex environments.

Systems thinking explores how the unification of knowledge from different areas (bodies of knowledge) can become the basis for the improvement of the human condition (Skyttner, 2001, p. 434). Systems thinking recognizes that more than one element or condition is necessary for the smooth functioning of the whole, and that each of these elements are interrelated and interdependent. The more complex the entity, the more elements comprise the system. Systems thinking does not break down the constituent pieces and rely upon a distinct, singular expertise or component. Rather, it considers all elements essential.

As it pertains specifically to the practice of interior design, systems thinking is essential to predicting the desired experiences within a given space over time. Designers must consider all aspects of the user experience as they travel to, through and beyond the environment. Rather than focusing on simply meeting programmatic needs, the designer must consider all elements of the design which influence the desired behavior and optimal experience of the client. When undertaking this process of thought, more variations in user behavior come to light, and the design can respond accordingly. Reaching deeper, systems thinking focuses on the ultimate aim of the design intervention, concentrating on the function and behavior of the whole system (Skyttner, 2001, p. 30).

Using hospitality design as an example, the aim may be to achieve a welcoming experience for guests. This can be partially achieved by meeting specific design guidelines, but more variables are involved than just the physical, functional and aesthetic components of the environment. Some variables include processes and policies (such as the Innkeepers Act), as well as systems outside of the space, such as transportation, surrounding amenities, and available workforce. Using systems thinking, the aim to provide the ultimate welcoming guest experience begins by probing the nature of their desired clientele (i.e. business travelers) and their potential behavior over time. For instance, what are the physical, emotional, social, intellectual, spiritual needs of the customer? What are their fears or limitations in committing to a reservation? How could it be easier for the customer to navigate a new city and arrive at the hotel? How could the check-in process be made easier or eliminated all together? What amenities and services are essential to make the stay more enjoyable? What services and amenities would exceed expectations? Queries such as these involve holistic thinking that predicts cause and effect and can be used to shape processes, policies, personnel functions, and, of course, the physical environment. The result can be a more holistic pattern of service and amenities congruent with the desired customer experience.

Many place types require deep inquiry and predictive behavior assessment. Systems thinking can provide a framework for analyzing the components of the system. For example, effective learning experiences for children are dependent not only on their classroom environment, but also the context of the relationship this setting has within the community and the wider society, a system that can be analyzed by applying Ecological Systems Theory (e.g. Bronfenbrenner, 1979). Evolving a workplace environment to respond to new business demands requires a complete understanding of how the organization learns and grows over time. Applying organizational change theories based in systems thinking (e.g. Senge, 1996) allows for planning that anticipates the dynamic nature of the organization.

In order to understand a system, it is useful to create visual elements of various components and their relationship to one another. Some helpful tools for synthesizing the parts of a system include *Behavior over Time Graphs, Venn or other diagraming strategies, and story-boarding.*

Behavior over Time Graphs mark predictive behavior over a specific time frame. An example of this graph is provided in this video: https://www.youtube.com/watch?v=1lo5XOe2iZ8

Causal Loop Diagrams shows adjacencies and influences of each component of the system. Interestingly, the thought process in the creation of these diagrams is what lead to greater inquiry and understanding of the system. An example of this diagram method can be found here: https://www.youtube.com/watch?v=tTo06jbSZ4M

Story-boarding, a process used in movie-making, is also a helpful tool. This process enables designers to envision scenarios, responses, reactions and behaviors to a given situation over a period of time. It is the quintessential diagram that visually summarizes Causal Loop Diagrams with *Behavior over Time Graphs.* https://www.linkedin.com/learning/elearning-essentials-storyboarding/benefits-of-storyboarding

These systems thinking exercises are helpful in going beyond programmatic requirements of fitting a desired number of spaces into a fixed area. They help to break down assumptions and simple cause/effect relationships. They also help communicate ideas to all stakeholders for input and consensus. Ultimately, systems thinking will achieve results that are congruent with the desired aim of the people being served.

Other Helpful References and Descriptions of Systems Thinking in Application:

The Canadian Medical Protective Association. (nd). Good practice guidelines: w*hat is "systems thinking?"* Retrieved from: https://www.cmpa-acpm.ca/serve/docs ela/goodpracticesguide/pages/patient_safety/Systems/systems_thinkinge.html

The Canadian Medical Protective Association. (May 2015). *How "systems thinking" can lead to safe care.* Retrieved from: https://www.cmpa-acpm.ca/en/advice-publications/browse-articles/2015how-systems-thinking-can-lead-to-safe-care

SearchCIO.com (2020). Definition: Systems thinking. Retrieved from: https://searchcio.techtarget.com/definition/systems-thinking

References and Resources that Contributed to the Essay:

Aronson, D. (1999). Overview of Systems Thinking. Retrieved from *Thinking Page:* http://www.thinking.net/Systems_Thinking/OverviewSTarticle.pdf

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design.* Cambridge, MA: Harvard University Press. (ISBN 0-674-22457-4).

International Society for the Systems Sciences. (ISSS) (nd). Origin and Purpose of the ISSS. Retrieved from: http://isss.org/world/about-the-isss

Senge, P. (1996), Rethinking leadership in the learning organization: *Systems Thinker* 7(1) 1-8.

Skyttner, L. (2001). General Systems Theory: Ideas and Applications. River Edge, NJ: World Scientific Publication Co.