

Practitioner Feedback and Interior Design Students' Creativity in a Lighting design course

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ABSTRACT

Despite being used extensively in design pedagogies, the practice of feedback in studio classrooms has not received sufficient attention. There are limited theoretical and operational guidelines to help instructors improve students' learning outcomes using this educational method. Taking into account the complexity and diversity of feedback, the authors conducted a mixed-method study on this account within the scope of interior design education. As institutional programs connect more with professional environments, instructors are no longer the sole source of feedback in design studios. Invited practitioners offer students the insightful understanding of current trends, manufacture capacities, and market challenges. This type of feedback, together with the ones of instructors, are likely to influence students' creative performance. Three consecutive lighting design classes from 2015 to 2017 at a Midwest land-grant University became the context for the authors to explore the impact of practitioner feedback on their students' creativity. This paper is a presentation and discussion of their initial findings.

Keywords: practitioner, feedback, creativity, interior design, lighting design

INTRODUCTION

Studio-based education is a creative problem-solving process that evolves through the act of giving and receiving feedback from the design professionals to students. With that practice, design students expand and deepen their *repertoire* – an assemblage of visuals, ideas, exemplars, and doings regarding their professions (1). During the constant presentation and revision of proposed solutions, collisions between the novice (students) and professional (instructors/ mentors) repertoires spark critical reflections and new realizations (2). At one end, students recruit available knowledge to build up responses to the design challenge. In another, instructors/ mentors use personal experiences and intuitions to compare, evaluate, describe implicit errors and anticipate possible directions for students' solutions. Either receiving feedback on an individual or a group basis, students still benefit from exposing to instructors/ mentors' insightful perspectives to bridge the gaps between their learning and practicing design. Nevertheless, several factors, such as *individual differences*, *student response types*, etc., can affect the magnitude and efficacy of feedback in design classrooms (2, 3).

Individual differences relate to the discrepancies in students' *repertoire* or their current resources about the field. Likewise, *student response types* show how different students react to feedback due to their tendencies in perceiving external viewpoints (4). *Thinkers*, *listeners*, *skeptics*, *followers*, *misinterprets* and *affirmed* are the six types of respondents. *Thinkers* ruminate on given feedback and incorporate new insights into their proposed designs. *Listeners* perceive information delivered yet are unable to apply. *Skeptics* are persistent with their opinions and thus defer instructors/ mentors' comments. *Followers* simply follow suggested directions without any reflection or enhancement. *Misinterprets* turn their misconceptions about feedback into favorable self-interpretations. *Affirmed* assumes that instructors/ mentors share their points of view. In general, as future designers, students need an open mindset towards critique as a means of obtaining feedback about their designs (5, 6). Nevertheless, the manifold landscape of students' learning perceptions, as shown above, requires a more dynamic feedback resource. The instructors are (still) accountable mainly but not solely for the role of providers. In fact, a combination of instructors and

practitioners would benefit design students the most (7). Diversify feedback providers will expose recipients (students) to prosperous *repertoires* and increases the chance of given information to meet students' references. As a result, leverage their creative outcomes.

On the other hand, there are many variables involve in the verification of feedback benefits on design students' creativity. Recipient references depend on students' intrinsic factors, such as personalities and problem-solving styles that take place in the design decision-making process (8, 9). Surprisingly, only a few studies focus on the effectiveness of feedback on design students' learning, left alone the role of practitioner. Hence, the authors analyzed how practitioner feedback influenced students' creative performance in three consecutive lighting design classes at a Midwest US University from 2015 to 2017. Instead of using typical space-planning projects as research contexts, the authors focused on the lighting component of interior design. Without sufficient considerations of lighting, the spatial appearance and content are less likely to render appropriately (10). Unlike other tangible interior design elements, lighting is intangible and hard to assess by sensory modalities other than visual. Knowledge about lighting characteristics and correspondent fixtures become vital for a successful design. For instance, physical features such as partitions height and glazing properties can affect indoor lighting demands and results (11). This scenario sets the table for feedback, especially from practitioners who excel in this particular *repertoire*, comes to play. The inferences derived from the findings would offer preliminary premises for further research on the same topic.

MATERIALS AND METHOD

Project description

As a junior design studio, the research context – lighting design course – was a collaboration between the University and a Texas-based furniture and fixture manufacturer. Undergraduates in the interior design program created light fixtures from reclaimed materials and received feedback from both their instructor and the chief executive officer (CEO) of the company throughout the design process (7). The success criteria for this design challenge included sustainability, creativity, ease of manufacture, and market potency. While instructor's comments were traditional desk critiques – the one-on-one interaction between provider and recipients in each class day, the CEO's comments were innovative in form. That meant students experienced multi-perspective feedback in multiple settings. On a private Facebook group, students posted 15 sketches to the folders with their names. Hence, once the CEO provided informative comments on the creativity of each proposal, students could instantly access to this resource to revise/enhance their ideas. In the development stage of the design process, the CEO, as an experienced practitioner himself, stressed more on manufacture challenges and market opportunities. When students finalized their design with concept boards and scale models, their works came to display at High Point Market in North Carolina, a high-profile trade show in the United States (Fig.1, Fig.2). Attendees, who were designers, manufacturers, and retailers among others, appointed the most creative and profitable solutions.



Figure1. A student work from the 2016 class that ranked 1st place in the tradeshow

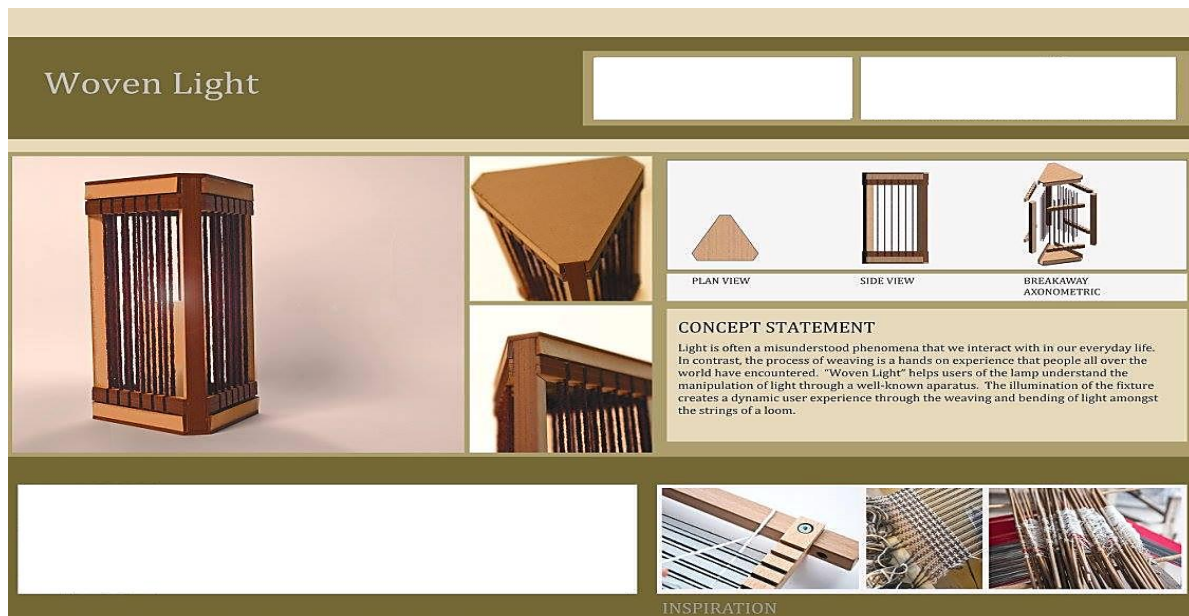


Figure2. A sample of student works from the 2016 class

Data collection and measurement

Although the authors collected data from three consecutive fall semesters that the class took place (from 2015 to 2017), the project structure, grading system, and feedback format remained the same. One main difference was the fluctuation of the class size, yet the total count was up to 75 students (N = 75). The grading system comprised with a 5-point scale rubric (0= poor, 1= average, 2= good, 3= very good, 4= excellent) for each criterion. The instructor graded the final works based on the quality of *conceptual drawings* (15 sketches), *concept statement*, *dimension drawings*, *material selection*, *axonometric*, *model craftsmanship*, and *poster layout*. All these criteria reflected the essence of creativity to different extents. Overall, *conceptual drawings* and *statement*, *material selection* showed most evidence for one's creative performance. With a middle cut-off limit, the authors divided students' results into two groups: high (above 2) versus low (below 2) creative performance (1).

To assess the interactions between the CEO and students, a 4-point scale (0= none, 1= a little, 2= some, 3= a lot) came into play (12). Based on the quantity (count) and quality (relevancy in contexts) of comments the private Facebook group, the authors detected the magnitude of students' responsiveness toward the CEO's feedback. Those who engaged less than sufficient in conversations went under the low responsiveness toward feedback category. Whereas, those actively interacted with the CEO went under the high category (2). Besides the groups and categories presented above, the

authors applied a randomization test for differences in mean to the grades (numerical points) of students in two responsiveness categories. Using Qualitative text analysis, the authors also classified the online comments (textual data) between the CEO and students into themes and categories to obtain the emerging trends of the observed phenomenon.

RESULTS AND DISCUSSION

Percentages of students' responses to feedback showed three tendencies as follow. There was 34.6% of the sample size (N = 75, n = 26) integrated the given feedback to the original ideas/ sketches. The authors denoted this tendency as *CEO/SD* (Ceo/ student). Likewise, there was 45.3% (N = 75, n = 35) applied the external comments to the sketches to some certain extends based on personal preferences. This tendency was *SD/SK* (Student/ Sketch). Last, there was 20.1% (N = 75, n = 15) generated new ideas regardless of the received feedback. This trend got the name *SD/NI* (Student/ New Idea). Based on students' grades, the authors found four levels of interaction range from good (rank 2) to excellent (rank 4). Those who deferred the CEO's feedback (no reply to Facebook comments) was 20.1% (n = 15) of the sample. They were similar to the skeptics. For discussion about the types of respondents, refer to the introduction section above. The other 17.3% (n = 13) used a small portion of given comments and thus represented the mixture between *listeners* and *misinterpreters*. There was 28% (n = 21) effectively combined their ideas and the CEO's feedback to enhance design results. Students in this group were an

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example of *thinkers*. The rest 34.6% (n = 26) took the comments seriously and resulted in profound applications. This group were more

likely to be the *followers* with reflections. For a systematic organization of the results above, refer to Table 1.

Table1. The variations of students' feedback interaction and their creative performance

Interaction	Creative performance				
	0	1	2	3	4
0 (SD/ NI)				5 (6.7%)	10 (13.4%)
1 (SD/SK)			1 (1.3%)	3 (4%)	9 (12%)
2 (SD/SK)					21 (28%)
3 (CEO/ SD)				1 (1.3%)	25 (33.3%)
Total	N = 75 (100%)				

In general, the authors revealed that students' attitude toward the CEO' feedback (or, the practitioner) scattered along the interaction 4-point scale, from 0 (none) to 3 (a lot). However, their creativity grades clustered on the higher part of the 5-point scale, from 2 (good) to 4 (excellent). These controversial tendencies led to 37.4% student that were low in feedback responsiveness and high in creative performance. Whereas, the rest of 62.6% scored high on both criteria, responsiveness, and

creativity. Table 2 presented these results in tabulated form. Also, Figure 3 visualized the discussed findings in a line chart with two variables, feedback responsiveness (interaction) and creativity (performance). Given a confidence level of 5% ($\alpha = 0.05$), the randomization test for the difference in mean of creative performance between the low and high feedback responsiveness groups provided a significant p-value of 0.0037 (< 0.05).

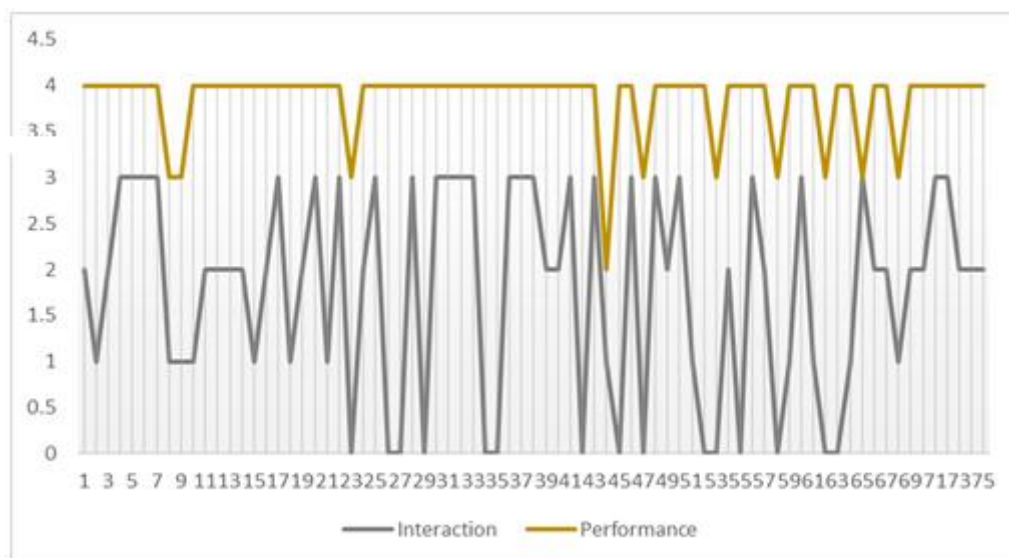


Figure3. Feedback interaction and Creative performance

Table2. The variations of feedback interaction and creative performance

	Low creative performance	High creative performance	Total
Low responsiveness	0%	28 (37.4%)	28 (37.4%)
High responsiveness	0%	47 (62.6%)	47 (62.6%)
Total	0%	75 (100%)	75 (100%)

As shown in Figure 4, the probability of observing the difference appeared in the chosen sample was only 0.37% for random chances alone. The authors also found supporting evidence for this observation in the data. Across three classes, students who won the first (5 students), second (1 student), and third (3 students) place at the High Point marketplace

exhibition all went under the high feedback responsiveness category.

The content of the CEO's online comments offered three main themes material relevancy, novelty, and sale potency. Instead of providing direct evaluations or concrete suggestions, the practitioner (CEO) gave informative advice on the pros and cons of the students' sketches

(initial ideas). This ruled out the possibility that students were reluctant to accept the comments due to the delivery of the feedback. It was more

likely the students' decisions to either continue with their current solutions with/ without enhancements or relinquish and start anew.

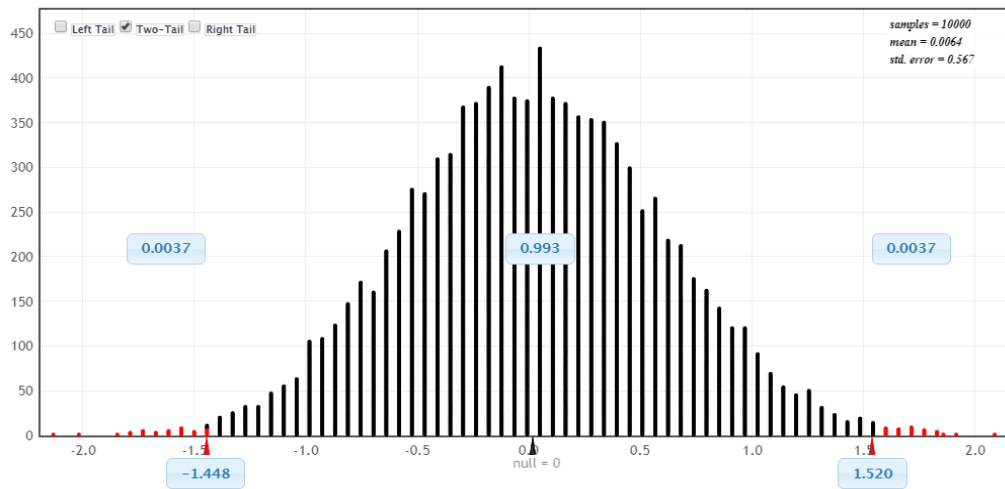


Figure4. Randomization for different in means

CONCLUSION

The percentages of students with high interaction and creativity doubled those with low interaction yet high creativity. Comparing the mean grades in creativity between the groups with high and low feedback interaction, the authors also found a significant difference. With a low chance of 0.37% to devote the mentioned difference to randomness in choosing samples, the statistical evidence lent a sound support to the positive impact of practitioner's feedback on design students' creativity. Although the sample only included interior design undergraduates from one land-grant university, the authors observed similar tendencies in their attitudes toward feedback as in literature in architecture and other design disciplines.

Thinkers, skeptics, followers were resembled in the chosen sample while listeners, misinterpreters, and affirmed were not. All the CEO's comments were transparent since he typed them as Facebook comments. Students could always refer back to the online records for reflections and asked for instant clarifications due to the interactive nature of the social media platform. These characteristics of this feedback format might help reduce misunderstandings and misinterpretations. Thus, students were less likely to fall into the categories of misinterpreters and affirmed. Surprisingly, they either incorporated the comments in their solutions (in different extents) or completely changed their directions. No listener existed (at least) in the chosen sample. Hence, the authors provided initial premises for the positive impact of practitioner' feedback on students' creative

performance. The only concern was the group who had low feedback interaction but high creativity. This called for future explorations on confounding variables that might interfere with the relationship in question.

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