

**The student as software developer:
Engaging interior design students in shaping their educational experiences**

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Abstract

Purpose and Context

The purpose of this paper is to present an application of a constructivist learning strategy for interior design students. In an upper level undergraduate seminar course, *Technology and Design Thinking*, students were asked to develop a digital learning tool that would assist them in the design studio. Entrepreneurial in nature, this class challenged students to think about an instructional technology tool/tutor/tutee application that they would want to use in the studio. What is lacking in the existing studio environment that might be also useful to their fellow classmates? Is there a niche that they might be able to fill that could help many people in their design thinking? This course required design students to integrate readings and discussions from educational psychology, instructional technology, and interior design education. Central to this project was a seminal work by Taylor (1980), which positioned the learner and computer relationship into one of three main categories—computer as tool, tutor, or tutee.

Theoretical Framework

Jonassen, Peck, and Wilson (1999) argue that computers should be seen as cognitive partners for amplifying and reorganizing information, as well as assisting in practice—but the right kind of practice. In addition, technologies should be thought of as tools to help learners transcend the limitations of their minds, such as memory,

thinking, or problem solving limitations. When learners use technologies as partners, they off-load some of the unproductive memorizing tasks, allowing them to think more productively (Jonassen, Carr & Yueh, 1998). The goal in using technologies should be to allocate to the learners the cognitive responsibility for the processing they do best while allocating the processing that technology does best. Learners should be responsible for recognizing and judging patterns of information and then organizing them, while the computer should perform calculations, and store and retrieve information.

Importance of Topic

As we ask our design students to be prepared to practice with the *breadth and depth of knowledge* required to solve complex interdisciplinary problems of human behavior and design (Guerin & Thompson, 2004), the tasks of storing, organizing, categorizing, and retrieving various pieces of the design project become overwhelming. Thus, instructional technology that acts as a partner in this knowledge construction process (Jonassen, Peck, and Wilson, 1999), where the students actually develop their own learning tools is a powerful learning and teaching strategy for interior design education.

Relevance to Interior Design

Matthews (2004) notes that the problem of knowing digital technology and design is not the lack of qualified people to operate such systems and machines; rather, "it is the lack of the same creative and thoughtful energies used to design environments used to imagine and invent new technological ideas that further enhance the quality of design for the designer, client, and user" (vii.). What better way to motivate and involve design

students in their own learning than by inviting students to help create tools that will assist in their own learning and designing experiences.

References

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