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Information-seeking and personal capital in novice learners' creative design approach

Hanan Abdulhalim Bukhari, King Abdulaziz University, Kingdom of Saudi Arabia Kelly Weathers, Barbara Frazier, Western Michigan University, USA Keywords: design education, design process, inspiration, information seeking

A goal of textile and apparel design education is for learners to comprehend and apply knowledge about the creative design process (International Textile and Apparel Association, 2008). The design process involves "a sophisticated mental process capable of manipulating many kinds of information, blending them all into a coherent set of ideas and, finally, generating some realization of those ideas" (Lawson, 1997, p. 10). Information-seeking is a key element in the design process where designers access a variety of sources for inspiration. Designers draw from a wide-ranging stock of elements which may include previous designs, of objects, images and phenomena (Eckert & Stacey 2000). Designers also incorporate personal capital, (individual assets, beliefs, life experiences) as part of the 'design milieu' that shapes the context for creative ideas (Strickfadden, Stafiniak & Terzen 2015). The purpose of this study was twofold: first, to better understand novice learners' approach to information-seeking and integration of personal capital in the creation of a design outcome; and second, test a learning approach designed to increase learners' awareness of how they undertake the design process.

This paper describes a project in an introductory design principles course at a Midwestern university designed to give learners the opportunity to apply knowledge about the design process and to better understand the role of information-seeking in the inspiration process. To build competence, it is critical to not only expose learners to information about the design process, but to offer opportunities to self-reflect on personal information-seeking strategies. The study used a critical reflection approach, enabling learners to consciously frame and interpret their approach to problem solving, and to offer potential for change. Learner reflections also enabled educators to better comprehend learners' information seeking strategies in order to more effectively guide students' inspiration process.

Methods. Students (n=20) were assigned a project that required them to create a design outcome inspired by elements from cultural research. Prior to the assignment, learners were introduced to design process concepts, including the role of inspiration and personal influence through readings, lecture and discussion. As part of the assignment, students completed a questionnaire designed to record execution of their personal design approach while completing the project. Learners were asked to document and reflect on their choice of information sources, and how these elements facilitated inspiration. They were also asked to describe methods used to transform inspirational/personal capital sources to project outcomes. A phenomenological approach was used to analyze written responses. Three researchers independently analyzed student reflective statements. Observations were then compared in order to identify shared themes and create a structural description of learners' approach to information-seeking and integration of personal capital in the creation of a design outcome.

Results and Implications. Strickfaden, Stafiniak & Terzen's (2015) design milieu framework was used to sort learners' information-seeking behaviors. The framework classifies sources

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according to inside-outside (taught vs. general design principles) and local-universal (references found in personal vs. socio-cultural contexts). References were categorized as inside/local (school, teachers) inside/universal (design culture), outside/local (personal capital) or outside/universal (shared socio-cultural capital).

Analysis of reflective comments revealed that learners drew extensively from outside/local references (personal capital) as sources of inspiration for the assignment, including relatives, friends, experiences, personal taste, family artifacts, and the natural environment. Outside/universal sources (movies, books, recent holidays, popular media) were cited as the next most often referenced for inspiration. Not surprisingly, 19 of 20 students used internet search exclusively to access outside/universal inspiration. Few learners reported using inside/local or inside/universal sources for their inspiration, which draw from design culture, both in the studio and in the broader environment. Two students sought inspiration from a museum or exhibit, two from books and one from a retail store. Only two students noted inside/local sources (one drew inspiration from a design class and one from the instructor).

For this sample, it appears that novice learners rely heavily on generalized information sources found in personal and socio-cultural contexts for design inspiration, and less on information from design courses, or general design information. This contrasts with professional designers' information-seeking, which draws extensively from educational ideology, shared design culture, and socio-cultural contexts in the completion of design tasks. (Strickfaden, Stafiniak & Terzen 2015). Findings highlight the need for educators to assess learners' information-seeking strategies so that they can be guided and encouraged to explore new sources of inspiration and expand references beyond internet searches. Learners in this study appeared to benefit from the critical reflection component by becoming more self-aware of their information-search strategies. One student noted, "I learned that the people I am close to have a greater impact on my way of thinking than I thought." This study suggests that novice designers may benefit from teaching strategies that strengthen information search strategies in their design problem solving processes.

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