A CROSS-CULTURAL STUDY OF STUDIO-BASED DESIGN EDUCATION WITH PARTICULAR REFERENCE TO SPECIFIC AUSTRALIAN AND MALAYSIAN CONTEXTS

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ABSTRACT

This thesis reports on a theoretical and empirical investigation of studio-based education with particular reference to students’ understanding of design problems and the design process in a cross-cultural design studio context. This understanding is found to be related to their design thinking as reflected in their responses to a detailed survey questionnaire, and also overtly by their step-by-step solutions to a common design problem held under similar conditions in the respective design studios of their university design schools. A basic research question has been to study how design students, from two different cultures—specifically the Universiti Teknologi MARA, (UiTM), Malaysia and the University of Canberra (UC), Australia—perceive and/or understand progressively what is involved in the different phases of the design process in project-based learning, to draw related comparisons and to identify differences of value to design educators.

The first part (Literature Review and Task Clarification) of the thesis comprises a critical review of the literature (and clarification of the research task) that has identified important knowledge gaps which required further research in this context. More specifically, this review has discovered that little has been published, in a cross-cultural context, about how students perceive what tasks are involved in the various phases of the design process, how they search for information to understand design problems, and how they regard important design variables and criteria including cultural factors, design discipline backgrounds, creativity, safety, form language, functionality and the influence of materials. These are clearly important issues of concern to design educators especially in a cross-cultural context. The findings of this literature review have been used to frame the aims and research questions of the thesis as well as formulating a research plan graphic for guiding the theoretical development and empirical investigation documented in subsequent chapters. These aims, research questions and research plan follow in Chapter 1, Introduction, which also outlines the background, scope and context of the this investigation.

In the next (Theoretical Development) part of the thesis, a novel composite model of the design process has been formulated which reconciles the respective phases of the design process with a simplified typology of visual design representations (VDR) and set of rational student performance criteria. Relatedly, a set of four of four assessment tools have been
derived that may be used to progressively evaluate student performance in project work and provide important feedback to teachers and students. This composite model of the process, and associated set of assessments tools, will have a significant positive impact on design education as they will form valuable aids for design teachers to better explain to their students the underlying rationale and interdependent relationships in the relevant phases of the design process, including details of task clarification, concept generation, evaluation and refinement of design concepts, detailed design and communication of results. This theoretical development part of the thesis has been utilised to guide the following experimental program including the design of the survey questionnaires employed.

The third (Experimental Results) part of the thesis comprises a detailed quantitative and qualitative empirical investigation of student perceptions in the design process, especially when working on a similar project in their respective Australian and Malaysian design studios. This investigation employs qualitative, one-on-one interviews to achieve a partial triangulation comparison of the quantitative and qualitative components of the mixed-methods research plan adopted in this research. Some informative examples are given to explain how the noted assessment tools may be applied in a studio context, and over a given time period consistent with students completing a common design brief. The important influences of cultural background, found to be different for the two student cohorts, and also how students from different disciplines perceive and progress design problems, have been investigated and documented in detail. Interestingly, students coming from different design disciplines are found to have differing views of the design process—these extensive qualitative and quantitative findings have been summarised and their significance on design education discussed in the last (Findings and Conclusions) chapter of the thesis. It is anticipated that, along with an associated data base of original empirical information, these findings will have an important impact on how design teachers approach project based learning in design, and will complement their current understanding of studio-based design education. Also included is a review of the original aims of the thesis along with recommendations for future. Finally, data bases of the noted quantitative and qualitative empirical information are given in the Appendices along by a comprehensive Bibliography.
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Table 4.49: Mann-Whitney U test results for Likert Scale question 5. Parts a, b and c—UC and UiTM groups (SPSS output format).

Table 4.50: Kruskal-Wallis test results for Likert Scale question 5.1a, b and c: for the Industrial Design, Graphic Design, Ceramic Design, Interior Design and Design Education disciplines (SPSS output format).
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Table 4.53: Mann-Whitney U test results for Likert Scale question 5.3: Knowledge of cultural influences needs to be better improved to generate ideas and concepts?—UC and UiTM groups (SPSS output format).

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Table 4.55: Percentage frequency table. Question 5.3: In your opinion, do you agree or disagree that knowledge of cultural influences needs to be better improved……?—Industrial Design, Graphic Design, Ceramic Design, Interior Design and Design Education (SPSS output format).

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Table 4.57: Description/explanation of sub-themes for theme 1: Characteristics of design concepts.

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Table 4.59: Pearson correlation coefficients (based on word similarity): ‘Different ways to design furniture by different disciplines’ (theme 2) for UC Interior Design student (NVivo output format).

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Table 4.67: Percentage summary table ‘People who select the final design’ (theme 4) for Interior Design, Industrial Design, Graphic Design, Ceramic Design and Design Education.