國立臺灣藝術大學102學年度研究所博士班招生考試試題

系所別：創意產業設計研究所博士班　　科目：設計原理與研究方法

說明：

一、本試題紙上請勿作答。

二、答案請依序寫在試卷上並標明題號。

三、本試題紙應與試卷一併繳回。

一、誠如布朗 (Tim Brown)所言，設計思考(Design Thinking)基本上就是一種**發想(**Inspiration)、**構思(**Ideation)與**執行(**Implementation)等三大探索的過程。而設計思考是否成功，必需經由**可行性(**Feasibility)、**存續性(**Viability)與**可欲性(**Desirability)三大準則的考驗，以達到和諧平衡的狀態。除此之外，**洞見(**Insight)、**觀察(**Observation)與**同理心(**Empathy)是設計思考成功的三個要素，在設計思考的過程中，扮演極重要的角色。因此，上述三大探索的過程、三大準則的考驗以及三大成功的要素，是未來設計師必需具備的設計能力。請比較設計思考與研究方法的異同，並請以你個人的專業領域或研究的實際體驗，來支持你的論點。（50%）

二、美國設計學者諾曼(Don Norman)在其 Why Design Education Must Change（2010 年）一文中提出：我們需要新一代的設計師，設計教育必須從藝術與建築學院走入科學與工程學院。但在同一篇文章中又指出：設計師當然要多懂一點科學和工程，但不需要成為科學家和工程師。請參考下文諾曼的論述，提出你個人對這個議題的看法，並請以你個人學習或工作的實際體驗，來支持你的論點。（50%）

Why Design Education Must Change?

My experience with some of the world's best design schools in Europe, the United States, and Asia indicate that the students are not well prepared in the behavioral sciences that are so essential for fields such as interaction and experience design. They do not understand experimental rigor or the potential biases that show up when the designer evaluates their own products or even their own experimental results. Their professors also lack this understanding.

(背面仍有試題)

Designers often test their own designs, but with little understanding of statistics and behavioral variability. They do not know about unconscious biases that can cause them to see what they wish to see rather than what actually has occurred. Many are completely unaware of the necessity of control groups. The social and behavioral sciences (and medicine) long ago learned the importance of blind scoring where the person scoring the results does not know what condition is being observed, nor what is being tested.

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In today's world of ubiquitous sensors, controllers, motors, and displays, where the emphasis is on interaction, experience, and service, where designers work on organizational structure and services as much as on physical products, we need a new breed of designers. This new breed must know about science and technology, about people and society, about appropriate methods of validation of concepts and proposals. They must incorporate knowledge of political issues and business methods, operations, and marketing. Design education has to move away from schools of art and architecture and move into the schools of science and engineering. We need new kinds of designers, people who can work across disciplines, who understand human beings, business, and technology and the appropriate means of validating claims.

Today's designers are poorly trained to meet the today's demands: We need a new form of design education, one with more rigor, more science, and more attention to the social and behavioral sciences, to modern technology, and to business. But we cannot copy the existing courses from those disciplines: we need to establish new ones that are appropriate to the unique requirements of the applied requirements of design.

But beware: We must not lose the wonderful, delightful components of design. The artistic side of design is critical: to provide objects, interactions and services that delight as well as inform, that are joyful. Designers do need to know more about science and engineering, but without becoming scientists or engineers. We must not lose the special talents of designers to make our lives more pleasurable.

It is time for a change. We, the design community, must lead this change.