

## Practices and Attitudes towards Early User Involvement in Information Symbol Design Process: An Implication for Teaching

NG Wai Yi, Annie<sup>1</sup>, SIU Kin Wai, Michael<sup>2</sup>, CHAN Che Hin, Chetwyn<sup>3</sup>

<sup>1</sup> School for Higher and Professional Education (Design) DI Office, Hong Kong Design Institute & Hong Kong Institute of Vocational Education (Lee Wai Lee)

<sup>2</sup> School of Design, The Hong Kong Polytechnic University

<sup>3</sup> Applied Cognitive Neuroscience Laboratory, Department of Rehabilitation Sciences, The Hong Kong Polytechnic University

To better address user needs, desires and preferences, there is an increasing trend of involving them as much as possible at an earlier stage in the design process, i.e. conceptual design stage (Sanoff, 2000). This study investigated the practices and attitudes of design students towards early user involvement in information symbol design process. Differences between male and female design students were examined. The findings to implications for teaching user-involved design were also discussed. Forty-eight Hong Kong Chinese design students (24 male, 24 female; 18 – 26 years old) were asked to design public information symbols with reference to the most common users' pictorial suggestions which were extracted from previous studies (Ng, Siu and Chan, 2011a,b; 2012; Siu, Ng and Chan, 2011) and then to provide feedback with regard to the design process.

It was found that the design students were receptive to the adoption of user suggestions in the conception of the design, but tended to modify the pictorial representations generated by the users to varying extents. The design students, for instance, included self-proposed decorative elements when making reference to user-suggested pictorials, rephrased the given pictorials using different representational view, and affixed additional recognizable objects in the symbol representation. Female design students were also revealed to be more positive towards user suggestions than their male counterparts. The female design students perceived the suggestions from users were valuable to the design process more than male design students did.

The need to delve into the aspirations of users is seen as particularly critical and essential to ensuring successful human factors design. To ensure that more appropriate and usable information symbols are created to deliver accurate and intended messages to end-users in the future, it would be necessary to emphasize the importance of being in line with visual representations in users' mental models at the beginning of the conceptual design stage to design students.

### References:

- Ng, A.W.Y., Siu, K.W.M. & Chan, C.C.H. (2011a). Stereotype production method for public sign design: inspiration for future design practice in public graphical images. *The International Journal of the Image*, 1(1), 21 – 34.
- Ng, A.W.Y., Siu, K.W.M. & Chan, C.C.H. (2011b). Exploring user preferences on public sign design with a new practice: the stereotype production method. *The International Journal of Interdisciplinary Social Sciences*, 6(1), 147 – 154.
- Ng, A.W.Y., Siu, K.W.M. & Chan, C.C.H. (2012). The effects of user factors and symbol referents on public symbol design using the stereotype production method. *Applied Ergonomics*, 43, 230 – 238.
- Sanoff, H. (2000). *Community Participation Methods in Design and Planning*. Wiley, New York.
- Siu, K.W.M., Ng, A.W.Y. & Chan, C.C.H. (2011). Difficulties involving older people in design research: a case study of the stereotype production method for graphical interface design. *Design Principles and Practices: An International Journal*, 5(3), 495 – 506.