THE STUDY OF EVALUATION FOR THE DESIGN FACTORS OF THREE SMALL DYNAMIC DISPLAY MEDIA - LEADING, R.S.V.P., AND FLASH DISPL

甘雲峰、王安祥

E-mail: 9126780@mail.dyu.edu.tw

ABSTRACT

Dynamic information display is one of the technologies used in website design; consequently, the effects of dynamic display deign on users ’ reading performance and subjective preference deserved to be discussed further. Two experiments were planned the principles of dynamic display design in this study. In the first experiment, an interface of dynamic information display was designed to investigate the effects of dynamic display method (leading, R.S.V.P., and Flash displays), paragraph segment (general and semantic segments), message length (10, 20, and 30 characters), and speed (140, 195, and 250 wpm) on subjects ’ comprehension and subjective preference. Analysis of results showed that both of the R.S.V.P. and flash displays led better subjects ’ comprehension and subjective preference than leading display. Paragraph segment of leading display had no significant effect on subjects ’ comprehension; however, semantic paragraph segment of R.S.V.P. and flash displays led better comprehension than general paragraph segment. Regarding the adequate speeds of these three dynamic information displays, the speed settings which subjects performed the best comprehension and subjective preference were 195 wpm for leading display and 140 wpm for R.S.V.P. and flash displays. The interaction between message length and speed also had a significant effect on subjects ’ comprehension. When the message length was set at 10 or 20 characters, speeds of 140 and 195 wpm led better subjects ’ comprehension than that of 250 wpm. When the message length was set at 30 characters, the effect speed on subjects ’ comprehension was not significant. The interaction between message length and dynamic display method had no significant effect on subjects ’ comprehension; however, it had a significant effect on subjects ’ subjective preference. When the message length was set at 10 or 20 characters, subjects ’ showed the best preference for flash display, than R.S.V.P. display, and then leading display. When the message length was set at 30 characters; nevertheless, subjects ’ showed the better preference for flash and R.S.V.P. displays than leading display. In the second experiment, static and dynamic information were designed to display simultaneously to investigate the effect of dynamic display-design factors on users ’ comprehension and subjective preference. The design factors included dynamic display method (leading, R.S.V.P., and Flash displays), speed (140, 195, 250, and 305 wpm), and text/background color combination of dynamic and static information display. Sixteen text/background color combinations of static and dynamic information were consisted of black, white, blue, and yellow colors. Results showed that subjects ’ comprehension for static information was significant better than on dynamic information, and all design factors had no significant effect on subjects ’ comprehension for static information. Regarding the effects of design factor on comprehension for dynamic information, speed had a significant effect on subjects ’ comprehension for dynamic information and subjective preference. While the leading display was set at 195 wpm; R.S.V.P and flashing display was at 140 wpm, subjects performed the highest comprehension and subjective preference. Color combination also had a significant effect on subjects ’ comprehension for dynamic information. Subjects performed the best comprehension and subjective preference when the text/background color combinations of dynamic display were the same as the background color combinations of the static information; then when the text/background colors of dynamic display were the same as the background color combinations of the static information but with different polarities, and when different text/background color combinations of dynamic display and the background color combinations of the static information were set, subjects performed the worst comprehension and subjective preference.

Keywords : dynamic information ; reading performance ; subjective preference

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