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Title : **Effect of Cognitive Styles on Visual User Interface Design**

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A user interface design becomes more important since museums introduce online museum to exhibit museum collections. Designing the UI based on user differences and ensures that the interface is effective is important to assist users appreciate the displayed museum collections. The purpose of this study is to design and evaluate of user interface for museum website. This thesis applied a multi-method research; an approach of research that uses multiple methods over a series of studies to accumulate evidence for achieving reliable results. It employs four major phases: (1) Background Study, (2) Framework Development, and (3) Empirical Study, and (4) UI Model Development. Background study is conducted to identify issues and current trend on user interface design of museums website. In Framework Development phase, research components are identified and theoretical basis of UI design dimensions are proposed. To verify the framework and UI design dimension, a series of empirical studies is conducted. Three experiments are designed and data are captured with online museum visitors to measure user performance and interaction patterns; and questionnaires were used to measure user satisfaction and preferences. In order to capture more interaction pattern, eye movements are also recorded. Overall ninety respondents participated in three experiment studies; twenty-eight in Experiment One; fifty-three in Experiment Two; and nine in Experiment Three. The results of the questionnaires revealed a high level of satisfaction within proposed UI design and UI dimensions. The questionnaires also revealed that users were preferred with the proposed UI design and UI design dimensions for museum website. The experiments revealed that users performed better with the proposed dimensions and design. Eye movement data revealed that different group of user apply different interaction patterns on proposed UI dimensions. The study recommends that user interface design based on user differences within museum website provide more satisfaction, preferable and better performance during browsing on museum collections. It is recommended that user differences have an effect on UI design and could provide guidelines into HCI and museums literature.