THE EFFECTS OF QR MOBILE GUIDING AND INFORMATION RICHNESS – A FIELD EXPERIMENT ON NATIONAL PARK TOURISTS

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ABSTRACT

This study implemented a touring information system using smart phones with QR code decoders and QR code posters on tour sites in a national park in central Taiwan. A 2*2 factorial design field experiment was then conducted to examine the effects upon tourists. Results indicate that: (1) Participants with QR mobile guiding comprehensively outperform those with conventional brochure guiding in terms of tour experience, knowledge acquired, and tour satisfaction; (2) Participants with low information richness can only outperform those with high information richness in partial experiencing dimensions and tour satisfaction; (3) the overall interaction effect seems negligible; (4) tour experience is positively related to knowledge acquired and tour satisfaction.

INTRODUCTION

A QR Code is a matrix barcode technology and being widely promoted for smart phone platforms with optical decoding capabilities [5]. As the popularity of using mobile devices in our daily lives keeps growing, applications employing mobile technology for tourist guiding and interpretations are creatively proposed as well [2]. However, the behavioral assessment on actual tourists is still rarely investigated in the literature. This study aims to examine the effects of the use of QR mobile guiding and information richness upon national park tourists in terms of tour experience, knowledge acquired, and tour satisfaction.

LITERATURE REIVEW

Using a smart mobile device to have a snapshot toward the printed QR code, the encoded string information which could be a WEB URL is highly applicable for offering more responsive and interactive services to contemporary customers [5]. Many innovative QR applications have been proposed, such as: mobile learning [7], user authentications [6], impaired people assistance [1], and park museum WEB promotions [2]. Despite these creative explorations have been implemented, behavioral assessment on actual users has still been rarely seen in the literature. On the other hand, the information

richness theory [3], that provides great insights for how organizations meet the need for certain types of communication purposes inspires many successive studies in the literature; however surprisingly, little effort has been made regarding the empirical investigations for the mobile device usage context. Hence, the research opportunity to bridge the gap between QR applications and information loading schemes for mobile devices emerges and is worth of clarifications.

METHODOLOGY AND CONCLUSION

A 2*2 factorial design field experiment was conducted in a national park in central Taiwan. Totally 218 volunteered park tourists randomly assigned to 4 treatments participated in this study. The manipulated variables were: guiding mode (QR mobile guiding/brochure guiding) and information richness (high/low). The dependent variables included: tour experience, knowledge acquired, and tour satisfaction. Two-way ANOVA and PLS path analysis were used to test the relationship among variables. Results indicated that: (1) guiding mode has significant effects on tour experience ($p<0.001$), knowledge acquired ($p<0.001$), and tour satisfaction ($p<0.001$). Participants with QR mobile guiding (N=113) comprehensively outperform those with conventional brochure guiding (N=105); (2) information richness has significant effects on partial tour experiencing dimensions and tour satisfaction. Participants with low information richness (N=109) can outperform those with high information richness (N=109) only in the Relating Dimension within Schmitt Experience Marketing Theory [8] ($p<0.05$) and total tour satisfaction ($p<0.05$); (3) the overall interaction effect seems negligible, however, QR mobile guiding with low information richness is especially helpful for raising guiding content satisfaction ($p<0.1$); (4) tour experience is positively related to knowledge acquired ($p<0.05$) and tour satisfaction ($p<0.01$). With the empirical findings above, the use of QR mobile guiding technology in a natural ecology setting is preliminary supported. We expect to provide implications for tourism management, location-based mobile learning, and smart phone media strategy.

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