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Qualitative and Quantitative Analyses of Drivers' Attitudes Towards General Usability of Smart Technology Specific to the Secondary Task of Texting While Driving

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The purpose of this study was to assess the qualitative and quantitative analyses of the drivers' attitudes towards general usability of smart technology specific to the secondary task of texting while driving for University students, age 18-35, at the Florida Institute of Technology main Campus in Melbourne, Florida. At any given point in time, there are numerous advertisements that seek to dissuade drivers from texting while driving; and it seems as if the majority of these campaigns are geared toward the university-aged population, honing in and magnifying the frivolous and callous behavior that seems to be synonymous with this age group. This study is significant as it sought to explore how the primary target group, university-aged individuals, really felt about using these devices in terms of how effective and efficient it was in the moment it was required. By gaining a better understanding of the needs of the target group and the deficiencies of smart technology, this could potentially assist in the future of the development process in making better human centered designs. Conversely, other than curbing the mortality risks involved in engaging in this behavior, gaining a greater understanding of the cognitive and interpersonal dynamics of this topic not only adds to pre-existing literature, but can very well save future lives. More importantly, this topic provides a window in which one can view the relationship between the user's cognitive abilities when applied to smart technology. This is valuable information as it can shed light on almost all fields that

require human users to interact with technology. A mixed methods research design was utilized to gather data with the intention that each design, both qualitative and quantitative, would supplement, strengthen, and uncover important information that the alternate method may have omitted. The data collection instrument utilized was a 5-point Likert scale questionnaire comprising of 26 questions. The survey began with 12 quantitative questions followed by 10 qualitative questions and ended with 4 demographic questions. The qualitative data was measured using content analysis where the comments gathered from the survey were grouped by themes for binary coding. The quantitative data was measured using a series of t tests or two factor between-subjects ANOVAs. A descriptive analysis was performed and the means and SDs were reported for all 12 questions. The general consensus of both the quantitative and qualitative data showed that the majority of participants were satisfied with using smart tech to assist with the task of texting while driving. While there are certain similarities between this current study and previous studies, there are also certain differences as well. This study focused specifically on the effectiveness and efficiency of smart technology and its reception as opposed to the participant, or human user. The general trend of this study is that even though participants agreed that modifications could be made, they still expressed a profound interest in integrating smart technology into their everyday regardless of its flaws.

Keywords: Smart technology, secondary task, general usability