University of Victoria | Graduate Studies

Notice of the Final Oral Examination
for the Degree of Doctor of Philosophy

of

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MA (Carleton University, 2010)
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"Consumer Medication Information: Memory, Preferences, Perceptions, and Information Needs"

School of Health Information Science

Wednesday, December 12, 2018
9:00 A.M.
Human and Social Development Building
Room A202

Supervisory Committee:
Dr. Andre Kushniruk, School of Health Information Science, University of Victoria (Supervisor)
Dr. Elizabeth Borycki, School of Health Information Science, UVic (Member)
Prof. Jeff Barnett, School of Health Information Science, UVic (Member)
Dr. Debra Sheets, School of Nursing, UVic (Outside Member)

External Examiner:
Dr. Vivian Vimarlund, Department of Computer and Information Science, Linköping University

Chair of Oral Examination:
Dr. Brian Starzomski, School of Environmental Studies, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies

Abstract

INTRODUCTION: Electronic health resources are becoming prevalent. However, consumer health information is still predominantly text based. Relying on text alone to deliver health information may not be the most effective way to promote learning or sufficient to meet consumer needs.

OBJECTIVES: This study assessed a) whether adding images to text and/or replacing text with narration influenced memory for Consumer Medication Information (CMI), b) if participants perceived CMI formats differently in terms of comprehensibility, utility, or design quality, and if they preferred one format overall c) what participants' information needs were with respect to CMI.

METHODS: Participants' (N = 36) remembered CMI presented in three formats: 1) Text, 2) Text + Images, and 3) Narration + Images. Additionally, participants rated the three CMI formats in terms of comprehensibility, utility, design quality and overall preference. Semi-structured interviews were used to investigate participants' opinions and preferences regarding the CMI formats, as well as their experiences with CMI and information needs.

RESULTS: No significant differences in memory were observed, $F(2, 70) = 0.1$, $p = 0.901$. Thus, this study did not find evidence that Mayer's (2001) multimedia or modality principles apply to CMI. Despite the absence of effects on memory, CMI format impacted perceptions of the material. Participants rated the Text + Images format highest in terms of comprehensibility, $x^2(2) = 26.5$, $p < .001$ and design quality, $x^2(2) = 35.69$, $p < .001$. However, after correcting for multiple comparisons, no significant differences in utility ratings between the three formats were observed, $x^2(2) = 8.21$, $p < .016$. Further, overall preferences revealed that the most participants' chose the Text + Images format as their favourite (n = 27, 75%) and Text as their least favourite (n = 23, 63.8%). Directed and conventional content analysis were used to explore participants' CMI preferences and information needs. Various aspects related to provision, comprehensibility, utility, and design quality all appeared to affect perceptions of CMI and whether or not participants used or would use it. Results of this analysis, paired with evidence from other studies, were used to develop a model proposing factors that influence CMI use.

CONCLUSION: This study investigated the potential impact of design and distribution changes on perceptions of CMI. Despite the lack of differences in memory, participants' perceptions of the formats differed. Findings from this study could be used to inform future research on how CMI could be designed to better suit the needs of consumers and potentially increase the likelihood it is used.