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# The Consumption of Concepts: The Hedonic and Utilitarian Effects of Perceived Interactivity on the Consumption of Digital Information

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# Thinkfinity Grant

## Final Project Status Report

### Project Title:

The Consumption of Concepts: The Hedonic and Utilitarian Effects of Perceived Interactivity on the Consumption of Digital Information

### Cornerstone #: 3

### Principal Investigators:

Jennifer Thomas, Professor of Information Systems, Seidenberg  
Larry Chiagouris, Professor of Marketing, Lubin  
Colleen P. Kirk, Doctoral Candidate in Marketing, Lubin

**Date:** December 8, 2011

## PROJECT STATUS

### Original Goals:

1. Project Description: The purpose of this study is to use the theoretical frameworks of the Technology Acceptance Model (Davis, 1989) and environmental psychology (Mehrabian & Russell, 1974) to test the theory that perceived interactivity affects human response to the consumption of digital information. This study is important for industry but also for education, which is one of the largest consumers of information, and research defining the drivers of this consumption in digital form is limited.
2. Methodology – Procedures:
  - a. This study is a 3x2 factor experimental design. Researchers understand that considering the involvement of human subjects, the study is subject to approval by the Pace IRB.
  - b. A random sample of 180 participants from a population of adults over the age of 18 will be solicited, ensuring a broad range of demographic profiles.
  - c. Participants will be randomly assigned to three interactivity levels: high interactive digital medium, low interactive digital medium, and print medium, with two different task orientations.

- d. The treatment will consist of media such as a magazine that has been specially manipulated to serve as a high-interactive, low-interactive, or print treatment, and participants will be assigned learning goals or task-oriented goals.
  - e. Participants will receive a pre-test, a treatment (exposure to the medium), and a post-test. The treatment will be accessed via a web link, in the case of digital media, or via the distribution of print materials.
  - f. Variables will be measured using published scales from the appropriate literature.
3. Methodology - Analysis: Data analysis will be conducted using structural equation modeling, considered an optimal technique for evaluating the impact of explanatory mediating variables in an experimental design study (Shadish, Cook, & Campbell, 2002).
4. Original Timetable:
    - a. January 2010 – Finalize study implementation details, plan detailed study schedule.
    - b. Spring 2011 – Assemble scales, testing instruments. Finalize interactive media treatments.
    - c. Summer 2011 – Test participants.
    - d. Fall 2011 – Analyze results. Write article and submit for conference presentation/publication.

**Progress to Date:**

Theoretical background for this project was presented at the Academy of Marketing Science conference in Miami, Florida in May, 2011, and reviewer and audience comments have been incorporated into the project.

This project is based on the doctoral dissertation of Colleen P. Kirk, and as such implementation was somewhat delayed to ensure full participation and approval by all of Colleen's committee members. The dissertation proposal was approved on July 1, 2011, with modifications approved in September, 2011. The key modifications to the methodology resulting from the dissertation defense are as follows:

1. It was determined that print media cannot be considered to have a low level of interactivity; there is actually no interactivity. Further, the logistical considerations of implementing a print manipulation precluded pooling results with an online

experimental design. Therefore, the print treatment was eliminated in favor of a two-level manipulation (low and high interactivity e-book).

2. The implementation of structural equation modeling requires large numbers of participants. A detailed analysis and literature review was conducted to ensure the optimal number of participants given the number of model parameters. Based on the analysis and on additional reviewer suggestions, 500 participants were determined to be required.
3. The situational/task manipulation was determined to make the model too complex to be tested given the economics of the study, and therefore was removed.

The project was approved by the Pace IRB in August, 2011. The first pre-test was conducted in September 2011, with the objective of selecting the topic of the book to be tested, and results were reported to the committee. Based on the results of the pretest, a book was selected to serve as the e-book stimulus. Two web sites were created, one for each version of the digital book. A second pretest was conducted as a manipulation check, which was successful. This second pretest also served as a pilot test of the main study survey.

The main study was launched at the end of November 2011, and data has been collected. Data analysis is under way.

**Schedule (From mid-term project report) and Status:**

<b>Action</b>	<b>Target Completion Date</b>	<b>Current Status</b>
<b>Dissertation Proposal Defense</b>	July 1, 2011	Complete
<b>Pre-test design and implementation</b>	September 1	Complete
<b>Finalize Survey Instrument</b>	September 1	Complete
<b>Interactivity Manipulation Programming</b>	October 1	Complete
<b>Finalize panel participants</b>	October 1	Complete
<b>Survey Implementation and Data Collection</b>	November 1	Complete
<b>Thinkfinity Project Update</b>	December 1	Complete
<b>Data Analysis</b>	May 1, 2012	Ongoing
<b>Write Paper/Submit to AMA 2013 Winter Educators' Conference</b>	July 31, 2012	Ongoing

**Future Plans:**

Data analysis is currently being conducted, and the results will be incorporated into Colleen's dissertation. Once her dissertation defense is complete (anticipated for early spring 2012), a

paper will be drafted for submission to the American Marketing Association 2013 Winter Educators' Conference.