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AND TRADITIONAL TEXT SOURCES

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# A LONGITUDINAL STUDY OF PERCEPTIONS OF THE INFORMATION QUALITY OF INFORMATION FROM THE INTERNET AND TRADITIONAL TEXT SOURCES

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## ABSTRACT

*Because the Internet has evolved over time and because the experiences of college-aged users have changed over time, the current study seeks to take a longitudinal look at users' perceptions of the quality of information from the Internet and from traditional text sources. Data on users' perceptions of the information quality of information from Internet sources and the information quality of information from traditional text sources such as books, magazines, and newspapers will be collected in 2006–2007 and compared to data collected for earlier studies published in 2001 and 2002. The overall goal of the study is to determine whether users' perceptions have remained stable over time or have shifted over time.*

## KEYWORDS

Information Quality, Data Quality, Internet

## BACKGROUND

It is generally recognized that problems may occur with information published on the Internet. For example, Pack (1999) notes that "much information on the Internet isn't reliable" (p. 24) because editorial and peer review processes are often missing when information is disseminated through the Internet. Hawkins (1999) notes that information can be posted more quickly on the Internet because review processes are absent but that this may lead to information with errors being published on the Internet. Rieh and Belkin (1998) found that, compared to other kinds of information systems, users believe the Web to be less authoritative and credible. Fuld (1998) notes that poor information quality on the Internet can damage business performance and warns executives of the dangers of old data and irrelevant information. Keltner (1998) notes that problems with data quality must be properly managed in order for the Internet to be used as a medium for publishing consumer-oriented health information.

Klein (2001; 2002) conducted studies of user perceptions of internet information quality and the information quality of traditional text sources of information such as books, magazines, and newspapers. User perceptions along fifteen dimensions of information quality were collected for Internet sources of

information and traditional text sources of information. Users rated the timeliness and amount of information of internet sources higher than traditional text sources and rated the accuracy, objectivity, reputation, and representational consistency of traditional text sources higher than internet sources. The results suggest that at least some users are aware of the relative strengths and weaknesses of information published on the Internet and information published in traditional text sources.

Klein's (2001; 2002) studies used a survey based on work done by Wang and Strong (1996). Wang and Strong (1996) created a framework of dimensions of data quality from the perspective of data consumers. Two surveys of data consumers were conducted to generate a comprehensive list of data attributes. In the first survey, data consumers were asked to list attributes of data quality. One hundred eighteen attributes were generated. In the second survey, data consumers rated the importance of these 118 data attributes and an exploratory factor analysis of their responses was performed. Twenty dimensions of data quality were extracted. A second study was then performed in which subjects were asked to sort these 20 dimensions into four conceptually derived categories (accuracy, relevancy, representation, and accessibility). Fifteen dimensions (encompassing 50 data attributes) emerged from the sorting study. The dimensions are believability, accuracy, objectivity, reputation, value-added, relevancy, timeliness, completeness, appropriate amount of data, interpretability, ease of understanding, representational consistency, concise representation, accessibility, and access security. Wang and Strong (1996) argue that their framework is a tool for measuring data quality. Strong, Lee., and Wang (1997) discuss data quality problems in three organizations using this framework.

## **RESEARCH OBJECTIVE AND HYPOTHESES**

User perceptions of the information quality of information from internet sources and information quality of traditional text sources will be collected during 2006 and 2007 and compared to data collected for prior studies published in 2001 and 2002. The same fifteen dimensions of information quality that were used in the earlier studies will be used in this study. The following hypotheses will test whether there have been changes in user perceptions over time:

H1a: User perceptions of the believability of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H1b: User perceptions of the believability of information available through traditional text sources have not changed over time (early 2000s versus 2006/2007).

H2a: User perceptions of the accuracy of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H2b: User perceptions of the accuracy of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H3a: User perceptions of the objectivity of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H3b: User perceptions of the objectivity of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H4a: User perceptions of the completeness of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H4b: User perceptions of the completeness of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H5a: User perceptions of the reputation of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H5b: User perceptions of the reputation of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H6a: User perceptions of the value added by information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H6b: User perceptions of the value added by information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H7a: User perceptions of the relevancy of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H7b: User perceptions of the relevancy of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H8a: User perceptions of the timeliness of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H8b: User perceptions of the timeliness of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H9a: User perceptions of the appropriateness of the amount of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H9b: User perceptions of the appropriateness of the amount of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H10a: User perceptions of the interpretability of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H10b: User perceptions of the interpretability of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H11a: User perceptions of the ease of understanding of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H11b: User perceptions of the ease of understanding of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H12a: User perceptions of the representational consistency of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H12b: User perceptions of the representational consistency of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H13a: User perceptions of the conciseness of representation of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H13b: User perceptions of the conciseness of representation of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H14a: User perceptions of the accessibility of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H14b: User perceptions of the accessibility of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

H15a: User perceptions of the access security of information available from the Internet have not changed over time (early 2000s versus 2006/2007).

H15b: User perceptions of the access security of information available from traditional text sources have not changed over time (early 2000s versus 2006/2007).

## METHODOLOGY AND DATA ANALYSIS

A survey will be administered to students enrolled in MIS courses in a school of management. Data will be analyzed using factor analysis and analysis of variance. It is expected that preliminary results will be presented at the conference.

## CONCLUSION

The research will improve our understanding of changes in user perceptions of the information quality of internet-based sources of information and traditional text sources of information.

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