Development of a Coding Instrument to Measure Interactivity of Websites

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This study aims to develop a new coding instrument to investigate the interactivity of brand websites. The new coding instrument contains 47 interactive functions and is directly linked to three theoretical interactivity dimensions: two-way communication, synchronicity, and active control. Application of the instrument shows that the instrument can be used in different contexts. In addition, the content analysis reveals interesting differences between American and Dutch websites, and between websites of durable goods, non-durable goods, and services. The developed coding instrument can be used in future research, for example to assess which interactive functions contribute to perceived interactivity of a website.

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EXTENDED ABSTRACT

Interactivity is often perceived as the most important difference between traditional and new media (Chung and Zhao 2004) and as a key aspect of effective online marketing (Thorbjornsen, et al. 2002). Two constructs are central in the theoretical discussion about interactivity: actual (i.e. objectively assessed) interactivity and perceived interactivity (Song and Zinkhan 2008; Liu and Shrum 2002). Although there are numerous instruments to measure the perceived interactivity of a website (e.g., Liu 2003; Song and Zinkhan 2008), instruments to map the actual interactivity of a website are scarce.

In the field of marketing, several studies have investigated the actual interactivity of brand websites because such websites have become an important marketing tool. However, most studies used an outdated coding instrument which is not linked to current theoretical knowledge on interactivity. The aim of the current study is to fill the gap in the literature by developing a new coding instrument to map the interactivity of brand websites. To test the applicability of the new coding instrument, a content analysis of the interactivity of top global brand websites is performed. In addition, we tested whether the instrument was applicable to different contexts. Therefore, websites from two countries (the United States and the Netherlands) and several types of products were coded.

Following Liu and Shrum (2002, 54), in this study we used the following definition of interactivity: “The degree to which two or more communicating parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized.” Liu and Shrum (2002) also specified three interactivity dimensions. The first dimension is two-way communication. “Two-way communication refers to the ability for reciprocal communication between companies and users, and users and users” (Liu and Shrum 2002, 55). The second dimension, synchronicity, refers to “the degree to which users’ input into a communication and the response they receive from the communication are simultaneous” or without delay (Liu and Shrum 2002, 55). The third dimension is active control. “Active control is characterized by voluntary and instrumental action that directly influences the controller’s experience” (Liu and Shrum 2002, 54).

The coding instrument included 50 interactive functions that were acquired from the literature about interactivity (e.g., Ghose and Dou 1998). The 50 interactive functions were categorized into the three interactivity dimensions: two-way communication, synchronicity, and active control. To validate whether these 50 interactive functions were correctly categorized into the three dimensions, we conducted an expert test to test the face validity and content validity of our categorization. Based on the results of this expert study, three interactive functions were omitted from the instrument.

To test the applicability of the instrument, a content analysis of 66 American and 66 Dutch brand websites was performed. Two bilingual coders coded two parts of the websites: (1) the home pages of each website and (2) all hyperlinked pages from the home page.

Results showed that coders were able to use the instrument, and that reliability levels were good. Moreover, the instrument was internationally applicable and was able to differentiate between websites from the U.S. and the Netherlands. The instrument was also applicable to websites from different product categories and was able to differentiate between product categories.

The results of our content analysis also gave insight in the interactivity of brand websites. In sum, the results showed that interactive functions representing the active control dimension of interactivity were most common. Frequently used functions within this dimension were the presence of hyperlinks, sitemaps, search functions, software downloading, and an option to subscribe to a newsletter. Functions facilitating two-way communication were somewhat scarcer. Commonly used functions within the two-way communication dimension were the presence of multiple modes of contact, online job placement, and online shopping facilities. Interactive functions representing synchronicity were scarce. Only one function was present on a considerable amount of websites: an animation that displays the time it takes for the website to load. The results also showed interesting differences between American and Dutch websites and between websites for durable goods, non-durable goods, and services.

In conclusion, our study has provided a vital step towards developing a coding instrument to measure interactivity of brand websites. The instrument showed high levels of inter-coder reliability. In addition, an initial effort was made to assess face and content validity of the instrument by conducting a test among experts in the field. Furthermore, the instrument can be used in different contexts and it was sensitive enough to differentiate between brands and countries.

Now that we know which interactive functions are present on top global brand websites, future research might investigate the relationship between objectively assessed interactivity and perceived interactivity. Strikingly, little research has examined which interactive functions contribute to the perceived interactivity of a website. The coding instrument that was developed in this study might be a helpful tool for such an effort.

REFERENCES


