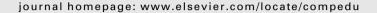


Contents lists available at SciVerse ScienceDirect

## **Computers & Education**





# Evolution of online discussion forum richness according to channel expansion theory: A longitudinal panel data analysis

Vicenc Fernandez\*, Pep Simo, Jose M. Sallan, Mihaela Enache

Department of Management, Universitat Politècnica de Catalunya, 11 Colom Street, 08222 Terrassa, Spain

#### ARTICLE INFO

Article history:
Received 3 February 2012
Received in revised form
13 October 2012
Accepted 26 October 2012

Keywords: Channel expansion theory Panel data Online discussion forum Media richness

#### ABSTRACT

The selection and use of communication media has been the center of attention for a great number of researchers in the area of organizational communication. The channel expansion theory combines elements of the main theories in this area; however, these investigations have a static cross-sectional design rather than a longitudinal analysis. With the objective of filling this gap, we research how the perception of media richness varies over time with a longitudinal study. The results suggest that the perception of richness of a channel by different individuals is different but that those variations due to a change in acquired experiences, are influenced in a similar and significant way by all individuals over time.

© 2012 Elsevier Ltd. All rights reserved.

#### 1. Introduction

Existing literature examines the importance of organizational communication in the operational efficiency of an organization and consequently in the attainment of its objectives (Dahle, 1954). For this reason, the selection and use of communication media has, for decades, been the center of attention for a great number of scholars in the area of organizational communication. Nevertheless, an agreed theory does not exist on the selection and the use of such media, but rather the opposite: a great number of interrelated theories have been developed on the causes that determine these decisions.

The main theories on the selection and use of communication media are, media richness theory (Daft & Lengel, 1984, 1986), social influence theory (Schmitz & Fulk, 1991), media symbolism theory (Trevino, Lengel, & Daft, 1987), situational factors theory (Rice, 1992; Trevino et al., 1987), critical mass theory (Markus, 1987), communication genre theory (Yates & Orlikowski, 1992), channel expansion theory (Carlson & Zmud, 1999), social presence theory (Short, Williams, & Christie, 1976), and media synchrony theory (Dennis & Valacich, 1999). These theories can be represented as a continuum (Vishwanath, 2006), placing those theories based on rational decision making at one extreme and other theories emphasizing social aspects at the other. Those theories based on rational decision making concentrate on the characteristics of the communication media (for example, its bandwidth) in order to determine its capacity to transmit meaning and intention to those receiving the messages; on the other hand, theories that emphasize social aspects concentrate on how the surroundings (for example, work partners and organizational culture) affect the choice and use of the communication media. Despite the great number of existing theories, media richness theory and social influence theory have been the most predominant theories in the literature when examining how and why members of an organization select a particular media to communicate with other people or institutions (Te'eni, Sagie, Schwartz, Zaidman, & Amichai-Hamburger, 2001). These theories have been the main departure point for the rest of existing theories in the literature.

The channel expansion theory combines elements of media richness theory with certain characteristics of influence and social presence theories. Initially, Carlson and Zmud (1999) tested this theory in only one communication media: traditional electronic mail. The results agreed with the majority of proposals made by channel expansion theory. An analysis of the existing literature shows that there have been no further verifications of this theory for several years. Recently, several investigations have been published (for example, D'Urso & Rains, 2008 and Timmerman & Madhavapeddi, 2008) in which channel expansion theory has been studied directly in several communication

<sup>\*</sup> Corresponding author. Tel.: +34 93 739 8690; fax: +34 93 739 8101.

E-mail addresses: vicenc.fernandez@upc.edu (V. Fernandez), pep.simo@upc.edu (P. Simo), jose.maria.sallan@upc.edu (J.M. Sallan), mihaela.enache@upc.edu (M. Enache).

media. However, these investigations have a static cross-sectional design (individuals in just a specific one moment in time), a snapshot of channel expansion theory rather than a longitudinal analysis which allows for the evolution of media richness to be observed over time.

Using investigations undertaken on the channel expansion theory as a departure point and with the aim of taking a further step toward its understanding, we studied how the perception of media richness varies over time. With this objective, we developed a longitudinal investigation on a distance research business course where the students used several on-line discussion forums as their main communication tool with their lecturers and classmates. We have found evidence that the individual's acquired experiences (the experience with the channel and with the communication partner) are a significant antecedent of changes over time of the perception of the richness of a channel. Also, the results obtained suggest the existence of other factors in individuals' perceived richness related to the time factor. Finally, this investigation suggests several theoretical and practical implications to improve management efficiency in organizations, as well as some limitations and proposals for future research.

#### 2. Background

#### 2.1. Media richness and social influence

Media richness theory has become one of the most studied and referenced theories in the area of investigation on selection and use of communication media in organizations. Media richness theory describes the rational process that managers and workers follow when communicating. According to this theory, the choice of communication media is defined by the relation between the objective capacity of the communication media and the communication tasks' requirements. The capacity or richness of a medium is defined as the capacity of the medium to develop a common and shared meaning between the broadcaster and the receiver of the message, on which the notion of the richness of information is based (Daft & Lengel, 1984). This media richness is determined by four intrinsic characteristics of the communication media; the ability to offer fast feedback (which can be either concurrent or sequential), send multiple cues through multiple communication channels (for example, an emotional tone, attitude or formality), allow for different types of language (for example, text, graphics and tables), offer the possibility of personalizing messages based on the receiver and the context in which the communication takes place.

The evaluation of media richness is a subject which has been dealt with on several occasions, where work by Ferry, Kydd, and Sawyer (2001) particularly stands out. According to the original theory of media richness, channels can be distributed along a continuum based on their level of richness (Rice, 1992). According to this continuum, the communication medium with the greatest richness is face-to-face communication, followed by telephone communication. Memos and numerical documents lie at the other end of the continuum, as the media with a lower level of richness According to this sort, oral communication usually has a greater degree of richness than written communication. Also, synchronous communication media usually have greater richness than asynchronous ones. Initially, media richness theory has been examined in traditional communication media (for example, face-to-face, telephone, e-mail and letters) with results that supported the theory's proposals; however, few investigations have studied or supported the theory with more modern communication media (for example, videoconferencing, instant messaging, and voicemail).

Recently, Kishi (2008) analyzed a great number of traditional and modern communication media together (face-to-face, meetings, teleconferences, videophone, free discussions, cordless phone, telephone, e-conferences, letter, memo, email, fax, and pager) according to media richness theory. The results suggest the use of communication media by managers is positively related to the probability of using traditional communication media with a high degree of richness, if it is considered that the organization's external environment is not analyzable. Furthermore, the results suggest that the use of communication media (traditional and modern) by managers is not related to their degree of richness if there is a culture to reveal and show personal and professional. messages to other people of the organization.

From a completely different perspective, several investigations suggest that the selection and use of communication media depends on non-objective characteristics, more specifically, of the subjective perceptions of the users or work groups that participate in the communication (Fulk & Boyd, 1991). These perceptions are defined by two determinants: the differences that exist between individuals (inherent aspects of the user and their experience with the media) and social information (Fulk, 1993). According to Timmerman (2002), the comments and the use of communication media by relatives, friends, and partners are key elements in the selection and use of these media. For example, the use of a social net (such as Facebook or Twitter) depends primary on the use of relatives and friends, more than the features of the social net.

Whereas media richness theory focuses on the objective characteristics of communication media and the type of activity, social influence theory makes reference to the society and people features that influence the selection and use of communication media.

#### 2.2. Channel expansion theory

From a combination of the main concepts of media richness and social influence theories, Carlson and Zmud (1999) introduce the channel expansion theory. This theory also draws partially on other theories such as situational factor theory (Trevino et al., 1987) and social presence theory (Short et al., 1976). Channel expansion theory maintains that media richness is a crucial element in the selection and use of media; however, the conception that media richness is constant in all situations and for all individuals in an organization disappears.

Channel expansion theory states that knowledge-building experiences of the members of an organization influence the perception of media richness. The experience with a communication channel has been evaluated in terms of time length (Fulk, 1993) or the number of times that a channel has been used (Rice & Love, 1987); however, channel expansion theory suggests that knowledge-building experiences have a greater effect on selection and use of communication media than these variables. In short, this theory considers that the selection and use of communication media depends on the perception of each medium by the members of an organization, based on their existing knowledge base. As D'Urso and Rains (2008) states, the idea that the experience of the members of an organization is associated to the interpretations of a communication medium is consistent with existing literature on the relational development of communication via computers (for example, Walther, 1992, 1995).

Channel expansion theory identifies certain knowledge-building experiences that modify the way in which an individual in an organization develops their perception of media richness. Carlson and Zmud (1999) identified four knowledge-building experiences: experience with the channel, experience with the subject, experience with the communication partner and experience with the organizational context.

### Download English Version:

# https://daneshyari.com/en/article/6835574

Download Persian Version:

https://daneshyari.com/article/6835574

<u>Daneshyari.com</u>