The Role of Perceived Self-Efficacy in the Information Seeking Behavior of Library and Information Science Students

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ABSTRACT

This study investigated the self-efficacy perceptions of Israeli library and information science students regarding their information seeking behavior. That is, it examined the judgments that participants make of their searching abilities. The study was based on Bandura's four sources of self-efficacy information: past performance or mastery experiences, vicarious experiences of observing the experiences of others, social feedback and affective states. An online survey presenting the Information Seeking Self-Perception Scale (IRSPS) was distributed and 205 students completed the questionnaire anonymously. Findings show that participants reported a high level of self-efficacy and that three of the four sources of self-efficacy information were significant in constructing their self-efficacy beliefs. Correlations between self-efficacy percepts and several socio-demographic variables revealed no gender-based differences. A significant correlation was found between age and degree and the sources with more influence. Older postgraduate students reported being more impacted by their mastery experiences, their affective states and social feedback. The implementation of the Information Seeking Self-Perception Scale (IRSPS) can be valuable when designing and implementing LIS academic programs for different groups of students.

INTRODUCTION

Information seeking is a primary activity of everyday life. People seek information to broaden their understanding of the world around them and to pursue their professional and personal goals. Earlier studies described the information seeking process mainly as a cognitive process based on knowledge structures held by individuals, which have been described as cognitive maps that shift according to conceptual development (Belkin, 1982; Taylor, 1968). Later studies have searched for the connection between cognitive processes and emotions and perceptions and have focused on the affective component that influences information behavior (Lopatovska, 2009; Lopatovska & Arapakis, 2011; Flavian-Blanco et al., 2011; Kao, Lei & Sun, 2008; Nahl, 1998, 2003; Nahl, 2006; Nahl & Tenopir, 1996; Kuhlthau, 1991; Wilson et al., 2000). Kuhlthau's (1991) holistic view of the information seeking process was one of the first models to add an affective component to the physical and cognitive realms described in earlier cognitive oriented models. Nahl (1998) found that the affective component of information search behavior can regulate cognitive processing through a hierarchical organization of goals, which is prescribed by both individual and cultural elements. Wilson (2000) proposed a new formulation of information searching in formally recognizing that the affective goal state imparts directionality to problem-solving steps. Chatman (1991) showed that affective states such as "alienation," "information avoidance," and "disinterest" have a strong influence on information behavior in everyday contexts.

Flavian-Blanco et al. (2011) posited that searching for information is more than mastering a set of techniques or following certain rules or principles to achieve desired outcomes. They found that affective states or emotions experienced during the search can influence the nature and the performance of the search. The study of the affective element of information seeking behavior has examined different emotions involved in the process such as uncertainty (Nahl, 2004; Wilson et al., 2000), optimism (Nahl, 2004), positive and negative feelings towards the search (Flavian-Blanco et al., 2011; Tenopir et al., 2008), satisfaction (Nahl, 2004) and perceived self-efficacy (Nahl, 2004; Tsai & Tsai, 2003). The present study focuses on this last emotional element and examines the impact that percepts of self-efficacy might have on their information seeking behavior of users.

Self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given statements." (Bandura, 1997, 3). These beliefs determine people's feelings, thoughts, motivations and behaviors (Bandura, 1986). Hence, success in performing a task is not only based on the possession of the necessary skills but it requires the confidence to use these skills effectively. There is a marked difference between possessing a set of skills and being able to use them optimally under diverse circumstances. For this reason, people with similar skills or the same individual on different situations may perform poorly or extraordinarily depending on their self-perceptions. Self-efficacy beliefs also determine the individuals' perseverance and resilience in the face of difficulties and the amount of effort that will be invested in

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accomplishing a task. Pajares (2002) argued that individuals with high self-efficacy perception expect to succeed and will persevere in an activity until it is completed. Contrarily, individuals with low self-efficacy anticipate failure and will be less likely to persist on doing an activity they perceive as challenging. This function of self-beliefs can also create the type of self-fulfilling prophecy in which one accomplishes what one believes one can accomplish.

LITERATURE REVIEW

SELF-EFFICACY

The study of self-efficacy beliefs is important "because they influence people's thought patterns, emotions and actions; in other words they influence the totality of human behavior" (Kurbanoglu, 2003, p. 638). Pajares (2002) stated that self-efficacy is central to human behavior because it touches virtually every aspect of people's lives providing the foundation for human motivation, well-being, and personal accomplishment. This is the reason why self-efficacy has generated research in several areas such as health management (Schwarzer & Fuchs, 1995) computer use (Downey & McMurtrey, 2007), business (Zhao et al., 2005), prison-based learning (Allred et al., 2013), work-related performance (Sonnentag & Kruel, 2006), mathematics (Usher & Pajares, 2009), web-based learning (Cheng & Tsai, 2011), and organ donation (Wu et al., 2013).

THE FOUR SOURCES OF SELF-EFFICACY BELIEFS

According to Bandura (1986, 399), knowledge regarding one's self-efficacy is based on four sources of information: past performance or mastery experiences; vicarious experiences of observing the experiences of others; verbal persuasion or social feedback and affective or physiological states. Mastery experiences are one of the most influential sources of information about efficacy because it is based on the individual's enactive attainments. This is why successful experiences raise self-efficacy appraisals and failures lower them. The interpretation given to new experiences depend on the nature and strength of existing self-efficacy percepts into which these new experiences have to be incorporated. Several studies have found that the interpretation of one's own performance is the most influential source of self-efficacy information (Bates & Khasawneh, 2007; Britner & Pajares, 2006; Calkin, 1994).

Self-efficacy can also be partly influenced watching other people succeed or fail in a task. Vicarious experiences are another means by which self-efficacy beliefs are created and enhanced. That is, by observing others that are perceived to be similarly competent succeed or fail in a task, people can convince themselves that they are equally capable or incapable of performing that task. Studies that investigated the self-efficacy beliefs of students found that the effects of competition through vicarious experiences were one of the most important factors of self-efficacy beliefs (Chan & Lam, 2008; Hodges & Murphy, 2009).

Verbal persuasion or social feedback is widely used to get people to believe that they are capable of achieving a certain task, so it can also have an effect on self-efficacy beliefs. People can be convinced into believing that they have or lack the necessary capabilities to perform a certain task or to achieve a certain goal. Verbal persuasion alone might have limited power to create an enduring increase in self-efficacy but it can contribute to a successful performance (Bandura, 1986). In a series of qualitative studies about self-efficacy in mathematics and technology fields, Zeldin and Pajares (2000) and Usher (2009) found that women received most of their insights about their abilities from what others believed they can accomplish.

Finally, physiological or affective states are also used by individuals as sources of self-efficacy information. Individuals with low self-efficacy can interpret tensions or stress as vulnerability to failure whereas individuals with high self-efficacy can interpret aroused states as energizing and leading to success. For example, Pajares et al. (2007), found that students can estimate their degree of confidence by the way they feel as they contemplate an academic task. This study aims to understand the perceived self-efficacy beliefs of LIS students regarding their information seeking skills and to examine the role that the four information sources of self-efficacy have in creating and maintaining these percepts.

EMOTIONAL ELEMENTS IN INFORMATION SEEKING BEHAVIOR

A number of studies have examined the connection between thinking processes and emotions and perceptions and the role these elements play in the information seeking behavior of users. Kuhlthau's (1991) early work found that affective states such as uncertainty might have both a positive and a negative impact in the decision to start or continue information seeking. Nahl's (1993) study about CD-ROM use examined the users' predictions of their performance and found that the more confident these novice searchers feel, the more successful they are, the more they find the instructions helpful, the more satisfied they are, and the less frustrated they feel. In a later study, Nahl (2006) claimed that high self-efficacy and optimism have been found to significantly influence success in a variety of information tasks. Kracker and Wang (2002) posited that there is a positive association between emotions and thoughts, and that most feelings were associated with more than one thought. Tenopir et al. (2008) investigated the use of ScienceDirect and found that positive feelings were associated with thoughts about results from the search and negative feelings were associated more often with thoughts related to the system, search strategy and task. Savolainen's (2012) examination of the motivational factors in information seeking behavior posited "that the stronger the sense of pleasantness, the more ready is the actor to start seeking for information." He further stated that self-efficacy can be a strong motivational factor in information-seeking behavior that has both cognitive and affective attributes. Several studies have investigated the role that self-efficacy percepts have in different contexts of information-seeking. Ford et al.'s (2001) study about individual differences in internet searching found a connection between retrieval failure and low self-efficacy. That is, students with low self-efficacy perceived themselves as being unable to maintain control and keep on target. Tsai and Tsai (2003) examined information searching strategies on web-based science learning and found that high self-efficacy resulted in more effective internet searching and learning. Monoi et al. (2005) developed an instrument that measures online searching self-efficacy beliefs during an online course and discovered that mastery experiences obtained during the course positively impacted students' perceived self-efficacy. Arnone et al. (2010) designed an instrument for assessing adolescents' perceived competence in information literacy skills. Bronstein and Tzivian (2013) investigated the perceived self-efficacy of LIS professionals and found that men and women are impacted by self-efficacy percepts and that men were more prone to frustration while women were more affected by affective states. Bronstein and Tzivian (2013) also reported that students would be better able to gradually develop higher self-efficacy regarding their use of online library resources through assignments, projects, and reports that require students to use a variety of credible information sources throughout their program of study.

Wilson (2000) defined information seeking behavior as the purposive seeking for information as a consequence of a need to satisfy some goal. The search process encompasses not only the action of seeking and using sources but also the development of thoughts about a topic and the feelings that typically accompany such evolution of thinking (Kuhlthau, 1988). This study wishes to extend the existing literature dealing with the emotional elements of the information seeking process by examining the role that personal perceptions of self-efficacy play in information seeking behavior. Understanding how students perceive their own information skills could help libraries and others who teach information seeking skills to focus on and strengthen areas where students lack confidence and provide enriched inquiry-based learning experiences and support. The study adapted and implemented a survey