

Strategically using information

Abstract: Information use is an understudied area within information science thus strategies pertinent to using information remains understudied. However, research implicates strategically using information as a performance booster, especially within academic contexts. This paper reports on an ongoing research on information use strategies of graduate students as they attend to an identified academic task.

Résumé : L'utilisation et les stratégies pertinentes à l'utilisation de l'information demeurent un domaine sous-étudié en science de l'information. Cependant, la recherche implique l'utilisation stratégique de l'information comme stimulant du rendement, particulièrement en contexte scolaire. Cette communication porte sur une recherche en cours sur les stratégies d'utilisation de l'information des étudiants universitaires de 2^e et 3^e cycle lors d'une tâche scolaire prédéfinie.

1. Introduction

Information behaviour (IB) is the totality of human behaviour with respect to sources and channels of information, where information seeking and using are key constituents (Wilson, 1999). Research on IB predominantly focuses on information seeking, thereby implicating obtaining information as an adequate outcome of IB (Dervin, 1983, 1992). Nonetheless, to fulfil an information-need both seeking and use should be reasonably satisfied (Wilson, 1999; Eisenberg & Small, 1993; Tuominen & Savolainen, 1997). From an outset, information use is the process of incorporating information onto an individual's knowledge structure (sensemaking) and applying (transfer) the incorporated information to fulfil a perceived information need (Giannini, 1998). As individuals make use of information, they employ strategies (Dervin, 1983, 2003, 2003a; Savolainen, 2009), which influence the information use process (Weinstein & Mayer, 1986). The purpose of this study is to uncover this strategic aspect of the information use process.

2. Literature review summary

Strategies are actions people perform on information that influence the information use process as they construct information internally/cognitively and/or externally/physically (e.g. highlighting, formatting, grouping, indexing, and abstracting) (Weinstein & Mayer, 1986). Therefore, these strategies are mediating tools through which individuals influence and exercise control over their thinking and physical interactions with information.

Interdisciplinary literature enumerates many purposes for adopting these strategies. Some examples are selecting and drawing attention, physical retention of personal reflections on information, identifying main ideas and themes, making associations among different information sections, regulating task performance and avoiding information overload, and creating new ideas (Weinstein et al., 1986; Kuhlthau, 1991;

Eisenberg et al., 1993). Many models have been proposed to this effect; for example, Pressley et al., (1987), Brown et al., (1981), Kintch & Van Dijk (1978) to name a few. Generally, these strategies are indicated as performance boosters (Pressley et al., 1987; Paris et al., 1984), which could be taught and learnt (Borkowski, Johnston, & Reid, 1986), and promoted by expert mediation (Kuhlthau 1991). Therefore, empirical finding on strategic information use has significant returns with respect to the information use process.

Education, education psychology, and cognitive sciences have made significant contributions towards this strategic perspective. However, little discussion is found on information use strategies within information science (Savolainen, 2009) and how strategies relate to it (Kiewra, 1985; Castelló et al., 2005). Thus, most instructional programs on these strategies are based on the mechanics of executing them, and overlook the subjectivity of the information use process. In the absence of guidance on adapting strategies according to this subjectivity, implementing strategic approaches are left to the user's discretion. This research gap could be alleviated by finding strategic use of information use research on the plethora of information science discourses, which is rich with knowledge on information behaviour.

3. The research objectives

The central inquiry of this proposal is *investigating how an individual influences an information use process by engaging in strategies* to achieve the user's perceived objectives. Therefore, the research is positioned among the "user-centered" research (Dervin, 1983). This study analyzes strategies transpiring from using information to uncover how strategies influence the user to navigate across information chunks (internally and externally), and how a given strategy contribute towards the overall strategic plan of achieve the user perceived objectives. These research objectives are framed into three broad research questions.

- 1) What information use strategies are employed by students?
- 2) How does a student influence the information use process by engaging in strategies?
- 3) How strategy relate to the user-perceived objectives of the task?

4. Methodology

This study analyzes the information transactions that take place between the users and the selected information chunks. Investigating human phenomenon of this nature involves both behavioural and cognitive facets of the user (Duncan, 1966). The constructionist school is a tradition concerned with the above interchange (Denzin & Lincoln, 2002, 305) therefore this study adopts constructionist paradigm. Since investigating human behavioural processes relies on rich, in-depth data to obtain a holistic picture of the process, the study adopts a qualitative methodology (Denzin & Lincoln, 2002).

Sampling method: Considering the research objectives, the sampling strategy should permit selecting an information-rich sample in order to analyze the phenomenon in reasonable details (Patton, 1990, 169). Therefore, a purposeful sampling is proposed, which enables information rich cases for in-depth studies. Inline with the principles of

purposeful sampling, participants will be recruited from a single class performing an identified ill-structured term paper assigned to them by a course instructor.

Data collection and analysis: The natural process of producing a term paper cannot be examined under laboratory setting because the imposed structure may significantly influence the task, and the time taken to produce a term paper under natural course may vary depending on each participant. Further, participants may engage in the task at different times in different contexts (e.g. library, home, in a group, etc). To facilitate these criteria, data collection will be done in two main stages and inline with the data collection methods, two phases of data analysis will be employed.

- A) Debriefing phase: First phase of data collection will be done by informal interviews that will be supported by self-recorded diaries (Breakwell et al., 2006) and intermediary artefacts (e.g. rough notes, sketches, original articles with their notes and scribbles, etc). This stage will answer the first research question. The data collected through the debriefing phase will be validated against each other and will use Pressley's strategy oriented perspective as the conceptual frame. This conceptual framework was the methodological approach used by Wade et al., for their study for clustering students according to their strategic behaviour (Wade, Trathen, & Schraw, 1990). Employing this conceptual framework will assist in data reduction by allowing the analysis to focus on the significant components by pulling-out the insignificant data from further analysis (Miles & Huberman, 1994).
- B) In-depth interview phase: The second phase will be done by in-depth qualitative interviews (Patton, 1990), which will utilize the categories generated by the debriefing interviews. This phase will analyze how each category influenced the information situation of the student, how they directed the information use process in achieving the perceived goals, and how each category contributed towards the overall information goals will be established by this phase. According to Pressley's (1987) model, this stage will generate a hierarchical-structure for the strategic perspective, which will answer the two remaining research questions.

5. Findings

This is an ongoing PhD research therefore the author expects to present the preliminary findings in the final paper.

6. Significance

The literature on instructional programs emphasizes the significance of matching strategies with the individual's cognitive development (Brown & Smiley, 1978). However, most learning support provided for students on strategies are built on an opposite thrust thereby leaving the individual to bridge the gap between the goals and their strategic approaches. Analyzing strategic information behaviour from the user's perspective accommodates the user subjectivity. Thereby this approach allows the researcher to analyze how a user directs and controls the information use process to achieve the perceived goals by engaging in strategies adaptive to his/her information situation. Thereby, findings of this research are expected to provide evidence on how instructional programs on information use could include the user-subjectivity in designing instructions. Thereby, enabling the user to make an informed decision on

adapting appropriate strategies to generate an optimal strategic plan for the information situation that best suits his/her individual characteristics.

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