Users' information needs in the process of learning word-processing: A user-based approach

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Conceptualization

The transition from an industrial to an information society makes imperative "learning while working" (Brown, 1989, p. 16) due in part to the constant introduction of new computer-based information systems, which affect every-day life. Learning can be seen as a series of information seeking and using behaviors. Understanding the process of learning from the user perspective is thus becoming a critical issue.

Numerous training approaches have been developed during the last years to show people how to use different computer-based information systems. Among these methods, one can cite seminars, online tutorials, CD-I, etc. They are very time-consuming and expensive, but still necessary with the current design of the systems. However, it would be desirable to eliminate or at least reduce to a minimum the necessary training, and thus, reduce the cost (in both time and money) associated with the introduction of new information technologies. This would possible if the systems were based on users' needs. (Nilan et. al, 1989).

In this study, we looked at the whole process of learning, as facilitating access to information and functionality of a computerized information system. This was done within the context of learning word-processing, from the point an individual decides to learn word processing through the most recent document produced. Word-processing was chosen as a context of learning because it is a widely used computer application, which requires some amount of training.

A user-based approach was used to conduct the study. User-based approaches have been presented as an alternative to traditional ones, which are technology-driven, content-driven, and expert-driven (Dervin & Nilan, 1986). A user-based approach essentially employs user perceptions of processes and information needs to model a process, in this case, learning word processing.

The presentation will focus on the information that users need in order to gain access to the functionality of the system. In particular, we will look at the nature of the information they need to make sense of the process, and which channels were most useful to them (in contrast with which channels they preferred).

Methodology

We used Dervin's Sense-Making approach, a user-driven methodology which taps into user perceptions in an unobtrusive manner. The sample was composed of approximately 100 randomly selected students, staff, or faculty of Syracuse University who either followed a formal training class (at Syracuse University Academic Computer Services Mini-Courses or Syracuse University's Writing Program), used a tutorial guide, or learned by themselves (without tutorial), during the last six months.

The study was conducted using an adaptation of Dervin's time-line interview, where structural definitions of the events were given to the respondents by the researchers. The four events were 1. when you first realized you would be learning to use word-processing software; 2. during the training; 3. the first time you used word- processing software after you learned the word-processor; and 4. the last time you used word processing software. Respondents were asked to recall questions they had at each of these points and then each question was analyzed in more depth to determine whether questions were answered, which sources respondents preferred and the success they had in getting answers from each source.

Our instrument was pretested from October 18-24, 1989, and some modifications were made. The survey was administrated from November 8-21, 1989. The length of each interview varied from one hour to two hours and a half. Standard content-analytic techniques were used to analyze the data.

Discussion

As stated in the literature (Belkin, et al., 1982; Brown, 1989; Dervin, 1989; MacMullin and Taylor, 1984), our results seems to indicate that the computer-based information systems, and the intermediary (link between the users and the systems), are still expert-driven rather than user-driven. The information needs of individuals learning word processing are much broader than expert-driven approaches would suggest. The data from this study is useful for specifying what kind of information needs are perceived at specific points in the learning process. Further, the data on sources shows us which sources are more likely to be useful to learners and which sources need to be modified to more closely match the users' needs.

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