The Enabling and Disabling Effects of a Hypermedia Information Environment on Information Seeking and Use in an Undergraduate Course

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Abstract:

Hypermedia proponents suggest that hypermedia systems allow users to access vast amounts of information in ways which are not possible using traditional information environments, such as books. This research examined how students used the Perseus hypermedia database to meet their information needs in a 15 week undergraduate course on Greek and Roman religions. The Perseus database is stored on a CD-ROM disk and a videodisk (which was not used in this study); accessed via a Macintosh computer, and comprised of a vast amount of information including Greek texts and their English translations and descriptions, photographs, plans, and drawings of various archaeological objects.

This explorative research used a range of qualitative and quantitative data collection methods (questionnaires, interviews, interaction or transaction logging, and observation) to collect information on how 28 students used Perseus to support information seeking and information use throughout the course. Data collection was designed around a number of foreshadowing questions focusing on the tasks for which students used Perseus, the tools provided by Perseus, the mappings between the task and tool domains, and finally how and why Perseus affected task performance. Models of reading and understanding information, synthesis writing, and information seeking were examined with the last being most useful when interpreting the study's findings.

Generally, students successfully used Perseus to complete assigned tasks, and some of the stages of information seeking were better supported by Perseus tools than others. Success was contingent on a number of factors including characteristics of the user, the tasks, the tools, and the information contained in Perseus. Although Perseus provided students with finger-tip access to multiple interconnected representations of primary materials, its usefulness was undermined by a mismatch between the information needs and expectations of the students and the information it contained. This situation was symptomatic of the fact that Perseus embodies a new approach to information provision with goals and philosophies different from those of many existing information environments.

This research concludes by highlighting implications of this study for researchers, developers, and educators using hypermedia and hypertext systems.