

Training for the information economy: a study of the information culture of a graduate business school

Scott Johnston

School of Communication, Information, and Library Studies, Rutgers University, USA

scottjo@scils.rutgers.edu

INTRODUCTION

As the corporate world becomes increasingly entwined with technological change and information systems, it is vital to examine the role of the information intermediary within such a context. The role of the trained information professional intermediary, whether a reference librarian, special librarian, on-line searcher or researcher, come under continual scrutiny as the corporate world undergoes radical transformation. This paper reports on a study which examines the role of the information professional within the library of a major academic business library.

It has been observed that Wall Street functions almost entirely on information (Baldwin & Rice, 1997). Technology and the increasing need for a global perspective have challenged traditional corporate assumptions as the task of the contemporary business employee increasingly demands obtaining and working with information. In business environments, where the overriding goal is the economic progress of the company, information seeking must take place in rapidly changing, complex situations. The new business professional is not just someone familiar with the latest in management techniques. It is someone able to obtain, absorb and synthesize relevant information.

The corporation

The contemporary corporation is frequently no more or less than the culmination of its knowledge and expertise: available information is to the organization what memory is to a human being. The role that information plays within an

organization is multi-faceted and constantly changing. 'Information is used to make decisions, answer questions, interpret situations or solve problems' (Choo, 1995: 33). For this reason, the relationship between organization and information systems is problematic. The traditional method for deciding the value of a particular system call for it to be evaluated on terms connected to company profit, user satisfaction, and how well an information system can be applied to problems (Ahituv & Neuman, 1986: 6-7). Many corporate analysts have a tendency to speaking about information and information flow and valuation in concrete terms, as if information were a clearly defined and unchanging entity. In his study of high powered executives in North America, Choo concludes that there is nothing universal about information: its value is based on a sometimes unfathomable combination of external events, individual needs and timing.

Davenport places this assumption into useful perspective which emphasizes the dangers of placing too much emphasis on the kinds of changes that technology can deliver: 'Technology, after all, is neither the savior nor archdemon of the information age. At its worst, it distracts and misleads us. But at its best, new systems can support the kind of information use that results in real business change' (Davenport, 1994:120). Too often information is presented in strictly positive terms: the more information the better. The reality lies somewhere in-between.

Such an argument is supported by the recent studies of Baldwin and Rice (1997) which concludes that institutional resources have a significant influence on information sources used by securities analysts, and Owen, *et al.* (1996), which investigates the link between information systems and business performance.

Business education

While there are numerous studies of the information-seeking behaviour of business professionals, very little attention has been paid to the educational process that shapes them. One of the formative rituals for business professionals is the Masters in Business Administration (MBA). Besides providing a kind of academic structure to the theories and practical knowledge that shape business practices, the MBA programmes provide a place and time when students are exposed to people, systems, and research methods that will affect their future attitudes and means of gathering information. Long regarded as a necessary credential for entry into a corporate career, the MBA has recently come under scrutiny as corporate expectations of graduates are re-examined. Firms have begun to ask whether MBA programmes are providing the necessary educational skills for the new information-based economy (Lord, 1998).

How does MBA experience contribute to such a vision of the corporate world? One result has been a radical rethinking of the MBA programme. The incentive for such change has largely resulted from the demands of employers who look to the newest graduates to be more in harmony with today's global, wired economy. MBA programmes are now introducing new majors, expanding team projects, and adding courses that incorporate new technological developments.

According to the Dean of the Sloan School of Management, 'What has really changed is the speed at which things are changing.' It has been estimated that up to a quarter of the content of most MBA programmes is in flux. A marketing professor from Emory University has said that 'the framework and paradigms we use in management education probably have a half-life of 24 months' (Lord, 1998).

What is the role of the information professional in such an environment? It has been pointed out that the real innovation and developments are being driven by other people within the organization—once the IT department, the IS department, and now managers of business process. What skills are needed in this changing environment? Core information skills are crucial to the successful design and implementation of systems, but here is no guarantee that the information profession will be the source for these. A recent study of corporate information patterns asks, 'what new skills are needed for information units to become key players in the new information based organizations?' (Owens, *et al.*:160). What is the place of the business librarians in the overall scheme? As one way of further exploring these issues, a qualitative study was devised as a means of examining the role that information professionals play in helping the MBA student develop such a perception of the information process.

Relatively little research has investigated human searching behaviours from the initial stage in a natural setting. Much of the literature on reference services has concentrated on librarians' interview techniques (Katz, 1987), the process of neutral questioning (Dervin & Dewdney, 1986) or verbal behaviour during interview (Belkin & Vickery, 1985). Such studies tend to be restricted to the reference interview or librarian-user interactions as the pre-search interview. Interaction tends to be viewed as a single event, rather than an ongoing and continuous process (Rich, 1997). A qualitative study allows for an examination of the ongoing search behaviour. How do users know which database is proper for their information need? How do they know how to start the database? At which points do they ask questions of librarians? What if they cannot follow a librarian's instructions? And when and why do they give up the search?

MBA programme

Academic programmes are geared to an understanding of business in today's world economy. A global business understanding begins with the core curriculum—aimed at gaining a framework for understanding financial, informational or international exchanges and transactions. The goals of many programmes are tied to mastering change. Harvard Business School offers to prepare students for the unknown. Business 'is continually moving in new directions that we never before imagined. And as the technology revolution makes the world we live in grow closer together, the world of business grows broader still' (HBS, 1998). The typical MBA curriculum attempts to provide students with the tools needed to lead and manage in a dynamic, global economy.

The MBA programme in the institution under examination claims to emphasize four main themes: globalization, total quality management, ethics, and human resource management. Entering classes are divided into 'clusters' of approximately 60 students who take core courses together. Students select one of thirteen areas for concentration from a list of options that includes: Finance, Human Resource Management, International Business, Management of Information, and Marketing

METHODOLOGY

Taylor (1991) has emphasized the importance of studying users within specific information use environments. This study examines the information-seeking behaviour of MBA students within the business and management library of a prestigious private university. The library is located on the main floor of the business school, a four story building consisting of faculty offices, class rooms, lecture halls, administration offices, the library and a computing centre.

A business school provides an ideal setting for a study of how perceptions of information are learned and practised over time. Students' use and understanding of information resources and systems was studied through analysis of data collected in a study of the library and computing centre of the Business School. The library, with its emphasis on the latest technology, including access to a wide variety of electronic resources, is a rich environment for exploring student information gathering behaviour.

Data were collected through a combination of observation and interviews over a series of visits over a four-month period between November 1997 and February 1998. Semi-structured interviews were conducted with twelve students. The results were transcribed and coded. Interviews were also conducted with the reference staff in the library. In addition, field notes were kept to record observations made over six visits. These visits were made during

weekday mornings and late afternoons, at times deemed to be busiest for full-time MBA students.

The research methodology was qualitative, with an approach guided by Glaser and Strauss's (1967) grounded theory. Data collection and analysis were conducted simultaneously so that data collected early in the observation could be used to suggest areas for further exploration. The observation data was also used in developing the interview questions.

The field notes and interview transcripts were segmented into thematic units for analysis and labelled to indicate concepts of phenomena. Three significant categories will be discussed.

- 1) Social/group culture
- 2) Attitude towards information providers
- 3) Attitude toward information technology.

The research findings will be discussed according to these categories.

OBSERVATIONS

Group interaction

Although the MBA programme is strongly based on group projects, it became clear that the library is not designed for teamwork. Information systems that can cope and facilitate the ways that groups function require features that go beyond simply responding to individual expressions of needs. The set up of the library does not facilitate the internal sharing of information between group members.

Such a workspace could play a vital role in encouraging the development of group activities. In his discussion of information environments, Allen (1996) envisages a separate workspace in which the group collectively maintains a statement of its collective interest, which can be compiled and run against a variety of external information resources. It has also been pointed out how electronic support of group work improves decision making, task focus and equality of participation (McLeod, 1992).

There are plans for such a workspace. In the promotional literature for the school, several references are made to future plans: A new building which will provide optimal physical space and learning tools as well as technology designed for the most advanced business environments.

Ironically and unfortunately, it is not the library who has developed or promoted this idea, but the department of Computing Research.

Role of intermediary

The comments of the students demonstrate that however heavily used the library resources may be, the library itself is viewed with trepidation. Reference librarians are approached hesitantly. Despite the wealth of materials and tools that are contained within the library, students are reluctant to seek guidance on the use or value of specific resources.

This corresponds to the problem discussed by Owens, *et al.* (1996) concerning the tendency of the information centre or library to be regarded as a support unit, not as an integral part of the organization. While the students may see the library staff as possessing useful knowledge, they do not perceive them to be useful resources for sophisticated guidance.

There is no question that the on-line and network environment has changed the role of librarians. Librarians, who used to be searchers or intermediaries, have become technical assistants, according to observations and interviews. They receive the same or similar kinds of instructional questions repeatedly. These questions do not require much of their skill or knowledge. Feeling under-utilised, librarians report that they are unable to work within their expertise of the discipline and commented that they are not seen as expert resources. The librarians expressed the pleasure they took in conducting bibliographic instruction sessions. However, such sessions attract limited numbers of students and are often not recognized or supported by the business school faculty.

Information technology

When confronted with the need to interact with on-line or networked databases, many users seem to experience mixed feelings of fear, intimidation, apprehension and hope. These complex attributes can be categorized as 'user anxiety.' Users seldom approach librarians to seek advice on how to develop search queries. The majority of users seem unconcerned with actually learning the search process. Students more commonly perform the simplest possible search which results in imprecise and unmanageable results rather than learn how to effectively obtain relevant and precise information.

On-line systems provide a powerful example of the problematic nature of communication between users and librarians. Based on observations and interviews, it became clear that users' anxieties and librarians' roles conflict in how on-line searching is performed. Clearly, there is a gap between what users are receiving and how librarians are attempting to assist them.

Although the students have access to numerous powerful search systems, they often ignore or misunderstand the operational logic of the systems. A consequence of this is that during a search users often neglect the restriction on specifications and assume that information is simply a matching process. What

is lost is an understanding of information seeking as a dynamic problem-solving process, and matching is only one aspect of it (Marchionini, 1996).

DISCUSSION

Marchionini argues that in order to examine information seeking in electronic environments, it is useful to distinguish between the physical and intellectual consequences:

Physical changes include things such as remote access, format variety and user behavioural actions. Intellectual changes take into account such things as interactivity, new or alternative organizations, new strategies, and most importantly, more focus on the information-seeking process itself (Marchionini, 1996: 163).

In examining the operations at the library, it is clear that the physical consequences have been dealt with well. The library is enviably stocked with a wide variety of electronic resources. Tours, handouts, and instruction focus on training individuals to master these systems. Moreover, the bulk of interaction between student and librarian is dedicated to answering specific questions about system selection and use.

By contrast, the intellectual consequences are essentially ignored. The library operates very much on a model of immediate need fulfilment. The service philosophy ensures that specific nuts and bolts questions are addressed as they arise. However, there is no attempt to institute an ongoing process to teach students how all the pieces of knowledge in the library work together.

There are many reasons why the situation has evolved in this way. Interviews with librarians point to poor communication with the business school faculty and administration. Computing responsibilities are divided between the computing centre and the library with no clear division between writing and creating and research and searching. There are few opportunities for the people in each department to discuss how a more unified approach of information technology could be addressed.

CONCLUSION

As this study shows, there are many implications for the information professional within the academic business environment.

As the information profession is gradually integrated into the corporate world, a new challenge has arisen at academic institutions. Information professionals must create a role for themselves that allows them to be part of the overall process. Such a task is likely to entail not only provision of guidance on how best to explore information systems, but also how to best employ it towards pragmatic ends. Such a challenge can best be met by examination of non-

academic models (such as successful corporate and special libraries) and adjusting such models to the open environment of the university.

As the relative powerlessness of the information professionals in the business library demonstrates, information skills are crucial to the successful design and implementation of systems, but there is no guarantee that the information profession will be the source for these. The business librarian must define and promote an essential role within the information based organizations.

The mutual frustrations evident within the business library indicate a need for a more interactive, collaborative role for the library information professional. A model of this can be found in Kuhlthau's call for the librarian to enter into a partnership with the user to accomplish the information seeking task. In this partnership, the librarian may advise on resources and process whereas the user brings knowledge of content and context. In the study, the aspects of information seeking that the users seemed to need with were in the ongoing thinking processes related to interpreting and connecting the disparate pieces of information. 'There is a need to develop ways to diagnose a zone of intervention to respond to uncertainty, complexity and process within complex work-related tasks' (Kuhlthau, 1996).

The librarian must learn to work with groups. Besides operating as a conduit of information for individuals, the librarian must also act as a facilitator, helping group member. Clearly, the gathering of information in both corporate and business school environment depends on group interaction. Therefore, the librarian must learn to work effectively with groups, assisting in decision-making, encouraging dialogue and facilitating in the synthesis of disparate pieces of information. The information professional must learn that 'information use is a social process of constructing meaning and making collective interpretations, and then acting out plans and intentions.' (Choo, 1995: 216)

Choo's definition of information emphasizes motivation: 'information systems should be developed as sets of activities that add value to the information being processed in order to assist users to make better decisions and better sense of situations, and ultimately to take more effective action' (Choo, 1995: 39). Such an understanding of information-seeking behaviour is particularly relevant to the struggling business student and future executive at a time when gathering intelligence is less a matter of securing hidden treasures and more a matter of separating useful information from the mass of open information that is flooding the marketplace.

REFERENCES

- AHITUV, N. & NEUMAN, S. (1986). *Principles of information systems for management*. 2nd ed. Dubuque, IA: Brown.
- ALLEN, B.L. (1996) *Information tasks: toward a user-centered approach to information systems*. New York: Academic Press.
- BELKIN, N.J. & VICKERY, A. (1985) *Interaction in information systems*. London: British Library. (Library and Information Research Report 35)
- BUCKLAND, M. (1991) *Information and information systems*. New York: Praeger.
- BALDWIN, N.S. & RICE, R.E. (1997) Information-Seeking behaviour of securities analysts: individual and institutional influences, information sources and channels, and outcomes. *Journal of the American Society for Information Science*, 48, 674-693.
- BAWDEN, D. (1990) *User-oriented evaluation of information systems and services*. Brookfield: Gower.
- CHOO, C.W. (1995) *Information management for the intelligent organization*. Medford: Information Today.
- DAVENPORT, T.H. (1994) Saving IT's soul: human-centered information management. *Harvard Business Review*. (March-April), 119-131.
- DERVIN, B. & DEWDNEY, P. (1986) Neutral questioning: a new approach to the reference interview. *RQ*, 26, 506-512.
- ELLIS, D. (1989) A behavioural approach to information retrieval system design. *Journal of Documentation*, 45, 171-212.
- GLASER, B. & STRAUSS, A. (1967). *Discovery of grounded theory: strategies for qualitative research*. Chicago: Aldine.
- HARVARD BUSINESS SCHOOL (1998). *The Harvard Business School Bulletin*, June. Boston: Harvard Business School.
- HJORLAND, B. (1997) *Information seeking and subject representation*. Westport, CN: Greenwood.
- JOHNSON, J.D. (1996) *Information seeking: an organizational dilemma*. London: Quorum.
- KATZ, W.A. (1987). *Introduction to reference work: basic information sources*. New York: McGraw-Hill.
- KUHLTHAU, C.C. Learning in digital libraries: an information search process approach. *Library Trends*, 45, 707-723.
- KUHLTHAU, C.C. (1996) The concept of a zone of intervention for identifying the role of intermediaries in the information search process. In: *Global complexity: information, chaos and control [Proceedings of the] ASIS 1996 Annual Meeting*.
- KUHLTHAU, C.C. (1994) *Seeking meaning: a process approach to library and information services*. Norwood, NJ: Ablex Publishing.

- LORD, M. (1998). Preparing managers for the 21st century: the accelerating pace of change at B-schools. *U.S. News & World Report. 1998 Annual Guide of the Best Graduate Schools*, March 2, 72
- MCLEOD, P.L. (1992). An assessment of the experimental literature on electronic support of group work: results of a meta-analysis. *Human-Computer Interaction*, 7, 257-280.
- MARCHIONINI, G. (1995) *Information seeking in electronic environments*. Cambridge: Cambridge UP.
- OWENS, I., & WILSON, T., & ABELL, A. (1996) *Information and business performance*. London: Bowker.
- RICH, S. (1997) *User-computer-librarian interaction in online searching*. Rutgers University, unpublished study.
- STANAT, R. (1990) *The intelligent corporation: creating a shared network for information and profit*. New York: AMA.
- TAYLOR, R.S. (1991) Information use environments. *Progress in Communication Sciences*, 11, 217-255.
- TAYLOR, R.S. (1986) *Value added processes in information systems*. Norwood, NJ: Ablex.
- TURNER, J.A. (1987) Understanding the elements of system design. In: R.J. Boland, R.J. & R.A. Hirschheim. *Critical issues in information systems research*. NY: Wiley, 97-111.
- WILSON, T.D. (1981) On user studies and information needs. *Journal of Documentation*, 37, 3-15.
- WILSON, T.D. (1994) Information needs and uses: fifty years of progress? In: B.C. Vickery, ed. *Fifty years of information progress: a Journal of Documentation review*. London: Aslib, 15-51.
- WILSON, T.D. (1997) Information behaviour: an interdisciplinary perspective. *Information Processing & Management*, 33, 551-572.