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Dissertation proposal

Is the library staff of the Polytechnic trained enough to train user, and what are their needs and expectations?

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DISSERTATION PROPOSAL

Is the library staff of the Polytechnic trained enough to train user, and what are their needs and expectations?

INTRODUCTION

The Polytechnic of Milan in the 2002 has supported a project of the European Social Fund for the propagation of the information technologies and communication. The aim of the project will be to provide the methodologies for a correct reference of electronic information devices to the students of engineering and architecture faculties.
Librarians will have a teacher role, but are they get ready for this new role? How to prepare them? The purpose of this study is to examine the skills of the library staff and their competencies to train users. Is there a gap between the changing needs of users and librarians skills? Is the library staff trained enough to provide instruction to students who seek information?
The research project will examine the librarian skills of engineering and architecture faculty of the Polytechnic and the needs of the final students of the two faculties.

AIMS AND OBJECTIVES

Aims

The main aim of the study is to obtain staff's perception of their training and changing role and to determine the information needs of librarians and students of the two faculties. In particular the research project wants to establish the librarians skills of the biggest and the most important libraries of the Polytechnic.

Objectives

1. To identify the librarians skills;
2. to examine the training needs of librarians;
3. to establish the information needs of students;
4. to determine how the staff have been trained at the time of study;
5. to define learning methods and changing skills of librarians.

BACKGROUND

Libraries have centrally positioned themselves in defining and implementing information literacy programs. Generally, the library is a university's primary access point to information.

The information literacy model necessitates positive change in the instructional mission of the library. Rather than just providing traditional library orientations and tours, often taught out-of-context of an assignment, the library's expanded instructional role emphasizes information-seeking behaviour within the context of an information need. The emphasis is on enabling students to become independent researchers and thereby encouraging lifelong learning.

Yet as Breivik and Gee state:

"The problem with such library initiatives is their impermanence. Individual librarians working with individual classroom faculty or with a particular program may successfully integrate the library into particular courses only to have a change in personnel undo years of effort. Only when academic leaders institutionalise these efforts and provide the necessary leadership and faculty development opportunities will these advances become permanent."

Major changes in education have taken place in recent years: an emphasis on lifelong learning; the expansion and widening of the student base; the changes in teaching and learning; the increased emphasis on information technology both as a delivery mechanism and a supporting tool. In the 1990s there has been a rapid increase in learning and learner development and the idea of developing learning skills has become widespread. Many universities now run programmes to develop learning skills. The explicit aim of many universities is to create independent or lifelong learners. Ward (1999) identified a number of drivers which will affect us, our organizations and the information profession in the immediate future. These include:

- intensifying competition
- accelerating change
- continuing information explosion
- communication and information technologies
- information for all
- information and knowledge-based differentiation
- knowledge management.

Accelerated change is a response to increased competitiveness and also to other drivers such as communication and information technologies. One response to accelerated change is to development of a learning organization (Allan, 1997). The continuing information explosion makes it imperative that ILS professionals continue to use and develop their information handling skills. How do staff develop and maintain their IT skills? Who provides basic and advanced information and communication skills within the profession? How are these skills delivered?
Rosemary Raddon (1995) who provides an educational perspective on the desirable backgrounds of the new librarian/information professional, lists the following categories of skills as essentials: basic management skills, including financial management and supported by appropriate technologies; excellent communication and interpersonal skills; familiarity with the concepts of marketing. Further, the educational role of the librarian will be vital, i.e. offering user education and designing multi-media user education programmes and packages.
To do so, extensive content analysis skills are necessary. In addition to filtering, analysing and synthesizing information, the librarian will still be consulted for more “traditional” tasks: to develop and run SDI services targeted to specific library users, to perform more intricate searching tasks, to help users design a precise search profile for efficient analyses, or to do retrieval from databases to which users do not have access (Kajberg, 1997).
The Fielden Report (1993) highlights the importance of training policies being included in the library’s strategic plan. Staff must be fully developed to enable long term benefits to be offered to the service and the users. The Report identifies a category of “upskilled” librarian who will communicate with teaching staff regularly as part of their normal duties. These staff will use their skills to find technical solutions to the users’ information requirements.
This suggested that two types of training will assume a higher priority: technical skills, such as database handling and computing, and personal skills such as communication and team working.

INFORMATION TECHNOLOGY

Information literacy is related to information technology skills, but has broader implications for the individual, the educational system, and for society.
"Information technology skills enable an individual to use computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals. Information literate individuals necessarily develop some technology skills." (ALA, 2000).
Research interest related to technological issues in library and information studies (LIS) has been high, for there is still much to be learned that will help designers create more user-friendly retrieval systems for the "new society". Basic to research in the area of technology and information skills instruction is the assumption that a contemporary definition of information literacy must include the ability to locate, retrieve, and use *electronic* as well as print-based resources. Because, as McDonald (1988) has noted, the inaccessibility of information is compounded in electronic environments, the role of the library in providing access, instruction, and guidance in information use is crucial. Indeed, **"there is no longer any question that knowing how to seek information electronically will be an essential skill for all individuals"** (Aversa and Mancall, 1989, quoted in Chen, 1993). **"Many of the search and retrieval skills are equally applicable to electronic, printed, and audiovisual resources"** (Irving, 1990).

The benefits of technology and electronic resources for student learning

Although Bialo and Sivin-Kachala (1996) found that the **"use of on-line telecommunications for collaboration across classrooms in different geographic locations has also been shown to improve academic skills"** in general, Morton (1996) has argued that **"the value of a computer environment is not so much the improvement of students' achievement through computer use as it the improvement of students' ability to achieve"**. These and many other studies conducted in the 1980s and 1990s have led educators to conclude that the use of technology offers many benefits to students, including the development of language skills, the promotion of critical thinking skills, an increase in student motivation and interests, improved opportunities for individualization of instruction and independent inquiry, and the promotion of inter-student collaboration.
Research studies aimed at showing the relationship between the use of computers and cognitive development point to the possibilities for critical thinking and problem solving that access to technology provides (means and Olson, 1994). Mancall and her colleagues (1992) believe that online resources create authentic contexts for learning because their use replicates real-world complexities and provides access to perspectives and viewpoints that stretch students' minds and encourage them to think critically.

Problems for students in using electronic resources

According to Sullivan and Seiden (1985, cited in Chen, 1993), problems that beset student searchers in online environments appear to involve three important information needs:

- Knowledge of the library and its role as an online information centre;
- Knowledge of information systems, databases, and their organization;
- Background knowledge of their research topics.

However, Irving (1990), Neuman (1995), Solomon (1992, 1993, 1994) and others have also suggested lack of information-seeking skills, lack of basic language and literacy skills, and lack of time for searching as potential stumbling blocks for students in online search environments. Finally, Studies by Oberman (1995), Irving (1990), and Neuman (1995) suggest that there is frequently a mismatch between the cognitive demands of information available online and the developmental levels of many student searchers.

METHODOLOGY

The general approach will be to use qualitative methods, although the utilization of quantitative methods will be apply to gain some background information.
The key assumption made by qualitative researchers is that "the meaning of events, occurrences and interactions can be understood only through the eyes of actual participants in specific situations" (Gorman and Clayton, 1997). Qualitative methods involve the researcher and it is essentially human-centred and inductive, that is theories are not imposed but developed during the study.
I choose this method because the subject of the research is not measurable or it can not have numerical interpretations.

The case study approach

I decided to use the "case study approach" to investigate the subject of my research. Case study allows to understand a complex issue or object and, for the most part, is limited to a single setting. A key strength of this method is using multiple sources and techniques in the data gathering process. The researcher decides in advance what evidence to collect and what analysis technique to use to answer the research questions. Data gathered is normally largely qualitative, but it may also be quantitative. This is another strength point in using the case study approach.
A disadvantage of the case study method is that the study of a small case doesn't offer grounds for establishing reliability or generality of findings, but the researcher thinks that "a single-site case study is not synonymous with superficiality" (Gorman and Clayton, 1997).

For this research the librarians of the engineering and architecture faculties of the Polytechnic were chosen as case study. I choose the Polytechnic because I know very well the organizational culture of the Polytechnic because I work in it and the librarians are cooperative and open.

Triangulation and interactivity

In order to aim the reliability a methodological triangulation will be include:

- Pilot discussion to understand the more important issues
- Questionnaires to the staff to provide a contextual overview
- Focus group with librarians
- Questionnaires to the students to identify their information needs

Resources

Funds:
Necessary founds to carry out a research are specifiable as necessary found to conduct every phase of the research, from the pre-research, pilot research and pre-test, to the design of the instruments (for example, the print of the questionnaires) to the coding and analysis of data collected. The researcher, having financials restraints to conduct the study, has decided:

- to use a restricted sample;

- to utilize the mail questionnaire for librarians and the questionnaire distributed directly to the students;
- the focus group for the librarians.

The focus group will take place in the office of the senior management of the Central engineering library. The librarians that will participate in the focus group, will haven't fares because all of them work in the Polytechnic of Milan.
The engineering library will cover the costs to print the questionnaires.
The questionnaires for the librarians will sent by electronic mail without costs.

Time:
The researcher has decided to use research methods not much time consuming. Designing the research instruments (the questionnaires with open-ended questions) and analysing the collected data, will require much time. The construction of the research instruments is very important to obtain valid data. The researcher will give importance to the pilot discussion to investigate the themes to face in the focus group.

Pilot discussion and key informants

In order to conduct the focus group with any doubts about the approach, I have to make a decision to undertake a pilot discussion with a group not included in the research. This is possible because there is sufficient time and I think that it's essential to build up my own self-confidence. Also the questionnaires will be analyse by a sample of librarians and students and by one faculty teacher to explore their efficacy and validity.

Questionnaires

"A questionnaire is a written list of questions, the answers to which are recorded by respondents. In a questionnaire respondents read the questions, interpret what is expected and then write down the answers" (Kumar, R. 1999).
Students attend two different faculties in different buildings and for this reason I have decided that the best research method is the questionnaire. The book-loan service of the libraries gave me the opportunity of administering the questionnaire in a "collective administration". This opportunity convinced me to use this instrument. In this way the librarians that will help me in the distribution of the questionnaires to the students will can clarify any questions that respondents may have and select through the student number only the final-years students. In fact the questionnaire will be distributed only to the students that have finished the third year; talking with a faculty teacher we have established that students of final years need deeper bibliographic searches than freshmen students. Students of final years, also for the degree, have more interest for the electronic sources present in the libraries.
A questionnaire has several advantages:

- It is less expensive
- It offers greater anonymity

The disadvantage is that the responses cannot be supplemented with other information.
The questionnaire will have open-ended and closed-ended questions, open to extract more information from the respondent about your information needs and closed to ensure some quantifiable data .

The questionnaire for the librarians that will participate in the focus group will be sent by electronic mail and it will be constructed by closed-ended questions, included classification questions, i.e. job

title, to give the researcher some background knowledge of the respondent and to see if there are any links between these classifications and further responses.

There will be a pilot study also for the questionnaires with a very selected sample of students and librarians to improve them. A pre-test has to be use to know if the time of compilation is correct; if there are ambiguous questions, ; if students understand well the questions; if the order of the questions is confuse or not, etc.

Focus group method

I have chosen particular individuals for my study to produce the most valuable data because I know very well the staff of the libraries of the Polytechnic. The kind of sampling is purposive sampling.
I decided to investigate the information and training needs of the librarians and their role's vision by organising a focus group. This particular focus group consisted of 6 librarian of the biggest libraries of the Polytechnic that could be involved as teachers in the project of the European Social Funds.
The focus group method is one of the various techniques used in qualitative research. A focus group session is a small group discussion (often consisting of six to twelve participants) guided by a facilitator and used to gain an understanding of participants' attitudes and perceptions relevant to a particular topic (Gorman and Clayton, 1997).
Participants for the groups are selected on the basis of having shared a common experience (the librarian of the Polytechnic).
The objective of the method is to encourage participants to talk openly and freely about a topic: in this context the information and training needs. Thus, it is important that the moderator, the guide and the setting encourage free expression of opinions and feelings.
Focus groups are relatively new in being considered a research method for the social sciences. Powell (1996) define a focus group as "a group of individuals selected and assembled by researchers to discuss and comment on from personal experience, the topic that is the subject of the research". The method is different from that of group interviewing as focus groups rely on "interaction within the group based on topics that are supplied by the researcher" (Morgan, 1997).

Advantages and limitations of focus groups

There are various advantages and disadvantages in using focus groups compared with other methods. For Gorman and Clayton (1997) they are:

Advantages

- Speed
- Transparency
- Interaction
- Flexibility
- Open-endedness
- Ability to note non-verbal communication

Limitations

- Getting people together
- Dominating personalities
- Wanting to be agreeable
- Finding a typical group

SUGGESTED ANALYSIS

Answers collected with the chosen instruments (questionnaire/focus group) have to be "recordered" to analyse them to draw conclusions about the object of the research.
Audio-tapes of the focus group will be transcribe to provide a record of the doscussion.
Transcribing is time consuming but it's fundamental to analyse data. The researcher wants to use the "grounded theory" to code incidents in the data and to identify analytical categories as they "emerge from" the data. "This process involves identifying a theme and attempting to verify, confirm and qualify it by searching through the data. Once all data that match that theme have been located, the researcher repeats the process to identify further themes or categories"(Pope and Mays, 1999).
The process of indexing the data creates a large number of "fuzzy categories" or units, then these categories are further refined and reduced in number by grouping them together. The use of spreadsheets will facilitate this process of identifying themes. Word processors can be enormously helpful in searching large amounts of text for specific terms, the simple frequency with which particular words or phrases appear in a piece of text can be illuminating.

To code the quantitative data collected with the questionnaires I will use spreadsheet specifying variable names.
A piece of information obtained from a respondent will enter in a specific column. The coding of open-ended questions is more difficult. Coding of open-ended questions requires the response categories to be developed first through the "content analysis" process.
Answers are transformed in "n" categories for the "n" variables analysed, categories that are identified by numerical values. The researcher for answers' registration will tabulate the values, that is to construct a data matrix where the "n" lines connect the "n" subjects, and the "n" columns to the measures of the "n" variables.

The gap analysis will be use to identify training needs of librarians in order to develop new courses for the students.

BENEFITS

The results could be used by the training staff of the Polytechnic:

- To support and develop training and staff development programmes;

By the librarians:

- to develop new courses for the students' information needs;
- to understand librarian's vision of their role;
- to draw up the project to provide the methodologies for a correct reference of electronic information devices to the students of the engineering and architecture faculties.

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Milestones for the Research

Tasks	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Proposal writing								
Design questionnaires								
Pilot discussion								
Distribute questionnaires								
Focus group								
Start and continue the process of ongoing, analysis and writing up of data								
Data collection								
Data analysis								
Report/first								
Report/final								