Training ESP College Students in Electronic Searching

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International Conference titled "A New Paradigm for Innovative Multimedia Language Education in the 21 Century". Korea Association of Multimedia-Assisted Language Learning (KAMALL), Seoul, Korea. October 3-5., 2002

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Abstract

150 female graduate students at King Saud University, Riyadh, Saudi Arabia were interviewed. Since most students are not proficient in English, they are required to take an English for Specific Purposes (ESP) course when admitted to the M.A. and Ph. D. programs, as locating information in specialized journals is required for their assignments, term papers and theses. Results indicated that 13% of the students use search engines like Google and AltaVista to locate information and fewer than 1% can search the ERIC database. Although the main library at King Saud University has 28 full-text databases and 30 databases on CD-ROM, no training programs or short courses are offered by the library, Computer or Language Center. Female graduate students have expressed a desire and a need to acquire electronic searching skills. Therefore, this study recommends that a program be especially designed to train ESP students in electronic searching. Components of the training program such as electronic searching course content, training requirements, scheduling, training methods, funding, trainers, and assessment are described.

Keywords: *electronic searching, searching skills, search terms, graduate students, training students, ESP skills.*

1. Introduction

Latest developments in information technology (IT) have resulted in a dramatic change in the complexity and volume of online resources that modern libraries contain. At many colleges and universities there is a bewildering array of online databases and CD-ROMs from which students and faculty have to choose, in addition to the different search engines that go along with them. OPAC's, electronic databases and CD-ROM local area networks, and the myriad of databases available worldwide are now available to anyone on a computer terminal. Students and faculty can enjoy a 24-hour unlimited access to electronic resources anywhere in the world.

As libraries make a greater use of automated systems, library search has become more complex. Not only do library users need to know how to search, but they also need to acquire critical thinking skills for database and search term selection. Given the profusion of electronic databases available on and off campus to graduate and undergraduate students, library instruction has become essential for students' success in navigating and utilizing electronic resources especially those who are non-native speakers of English as many electronic resources are in English. In countries like the US, UK, Australia, Brazil, South Africa, Hungary, Japan, Sweden, the Netherlands, higher education institutions provide some kind of library instruction in online searching and CD-ROM to students (Ellis and Wood, 1992; Bruce, 1992; Churkovich

and Oughtred, 2002; Cuenca,1999; Fourie, 2001; Borbely, 1998; Kuijlen, Jongepier, and Niessen,1987; and Hovde, 1995). Many universities provide instruction in online searching as part of a credit course (Davidson, 2001, Caron, 2000). Graduate and undergraduate students receive formal and informal training in using specialized databases like Medline, Chemical Abstracts, ERIC, PsycInfo, MLA and many others (Cuenca, 1999; Silver, 1987; Ross 1988; Hovde, 1995; Vonville and Wilson 1993; Dixon, Garrett, Smith, and Wallace,1995; Urquhart, Massiter, Thomas, Sharp and Smith,1999),

By contrast, a search of the ERIC, LISA and LLBA databases by the author revealed lack of studies that focus on teaching information literacy skills to students who are non-native speakers of English. Learning to search electronic databases is one of the major challenges facing ESL students due to the language barriers and complexity of the searching.

Like many academic libraries around the world, the Main Library at King Saud University (KSU), Riyadh, Saudi Arabia connected to the internet and built an electronic library information system consisting of 15 full-text electronic databases in the year 2000, in addition to 28 databases on CD-ROM already available for KSU faculty and students. This was followed by 32 computer workshops offered to students every semester since 2000. However, no study has investigated the amount of utilization of those electronic databases by KSU students, whether any instruction is offered by the Main Library in electronic searching and the kinds of library instruction provided to graduate students in particular in searching specific databases related to their area of specialization. Therefore, this study aims to investigate the information literacy skills of female graduate students in the colleges of Liberal Arts, Education and Administrative Sciences at KSU, and find out whether any instruction in electronic searching is provided by the library or in the English Language Course that graduate students in the above colleges take after being admitted to the M.A. or Ph.D. program. Electronic searching has become a basic skill that graduate students need to acquire as facilitates access to a wide range of information that graduate students cannot obtain by traditional means.

Since the library is not self-explanatory, library instruction will help develop graduate students' ability to access and search electronic catalogues, journals and databases like ERIC, MLA, PsychInfo, Medline, Agricola, Chemical and Dissertation Abstracts. Library instruction was found by several prior studies to be effective in developing students' (who are native speakers of English) ability to search electronic databases. Hindes (2000) used the Advanced Reference Online Searching Techniques, a Web based distance learning course developed with WebCT, to assist students in developing information literacy skills. Results of the training indicated that participants' attitudes were positive, and the Web based instruction provided a learning environment in which participants could develop electronic literacy skills and share their ideas and projects. In another study, Ren (2000) reports results of a user survey administered to 85 undergraduates participating in a library training program as part of their English composition course at Rutgers University, New Jersey. Instruction involved an 80-minute in-class lecture, online searching demonstration and hands-on practice. The study concludes that the students' self-efficacy in electronic information searching

increased after the training and that increase was related to attitudes, emotional experiences and search performance. In Brazil, similar results were reported by health science professionals and postgraduate students who were trained to use Medline and Lilacs databases as a component of a course offered by the Library (Cuenca, 1999). In addition, Churkovich and Oughtred (2002) found that students attending face-to-face library sessions as part of the library's information skills program felt more confident about their library skills than those in the online tutorial only session. Test scores and confidence levels of students using a small group, active learning method increased after library instruction (Prorak, Gottschalk and Pollastro, 1994).

2. Subjects

Subjects of the present study consisted of a random sample of 150 female graduate students in the colleges of Liberal Arts, Education and Administrative Sciences. Their fields of study were Islamic studies, Arabic, history, sociology, curriculum and instruction, educational administration, educational technology, psychology, special education, adult education, accounting, economics, hospital administration, and business administration. They were all Saudi and were all M.A. students. Since most graduate students are not proficient enough in English, they are required to take an ESP course for one semester (6-20 hours per week depending on the student's major) before starting their graduate courses. Subjects of the present study had all completed their English language course and were taking courses in their major area of specialization.

3. Data Collection and Analysis

A needs assessment interview-questionnaire was developed and used to collect data about the subjects' information literacy skills. The interview-questionnaire consisted of the following questions: (1) Do you need English for your studies (2) What do you use English resources for (3) Do you use the internet at all (4) Do you use the internet to locate information (5) Which search engines do you use (6) Have you ever used the electronic databases at the Main Library, KSU (7) Does the main library provide any user education programs such as printed guides, tutorials, self-instructional materials, workshops, lectures and seminars, audio-visual presentations, or personal assistance (8) Do your instructors provide any guidance or instruction in electronic searching (9) Did you receive any training in electronic searching in the English Language course (10) What factors affect your ability/inability to search electronic databases. The subjects were individually interviewed by the researcher and students' responses were recorded and then tallied. Percentage of students given the same response was computed regardless of the students' major.

4. Results and Discussion

Although Arabic is the medium of instruction in the colleges of Arts, Education, and Administrative Sciences at KSU, Riyadh, Saudi Arabia, results of an interview with 150 female graduate students in the above colleges indicated that students majoring in curriculum and instruction, educational administration, educational technology, psychology, special education, adult education, accounting, economics, hospital administration, and business administration (80% of the participants) need English to be

able to read specialized reference materials in their major area of study. They added that they are required to locate information in English resources such as journal articles, reports, dissertations and reference books for their courses, assignments, term papers and theses. Students majoring in Islamic studies, Arabic and history do not need English references for their studies.

Although 50% of the subjects have access to the internet from their homes and can search it, only 13% use search engines like Google, Yahoo, AltaVista and Ayna to locate information and as few as 4% can search specialized databases like ERIC they tried to search the electronic databases at the Main Library. Those who use the search engines indicated that they are only beginners and they conduct their search mainly in Arabic as their English is poor. Those who can search ERIC indicated that they are also beginners and could do so because their English is good. They reported that they used ERIC just few times.

Subjects also indicated that no training programs or short courses in electronic searching are offered by the Main Library and the 32 computer workshops do not have any instruction in electronic searching. Furthermore, Instructors of those specialized courses do not provide any training or guidance in electronic searching either. All the subjects indicated that electronic searching was not part of the ESP course that they took before starting their courses in their major field of study.

As to the factors that affect their inability to search electronic databases, 90% indicated that they did not know that such databases existed at the library, 87% indicated that they do not know how to search them, and that their English is poor. All the subjects have expressed a strong a desire and a need to acquire electronic searching skills from home as they have no access to electronic databases from the women's campus due to wiring difficulties and time pressure as well.

The ERIC, LLBA and LISA databases were searched by the author, but found that studies that focus on assessing ESL college students' information literacy skills in general and library instruction provided to ESP and EAP students in particular are lacking. In addition, findings of the present study are consistent with findings of other studies in the library science literature. Di Majo, Sandra; Majo, S Di (1981) reported an almost total lack of instruction on how to make full use of library facilities in Italy, in contrast to the English-speaking countries, where great emphasis is placed on such activities as guided visits. Ide (1989) indicated that education of library users is still limited in Japan and university library users there need education relating to awareness of information sources and how to use them. In a third study that focused on library instruction for biology classes in Ohio academic institutions, Sinn (1999) found that biology faculty did not usually present information to help students navigate in the library.

5. Recommendations

Findings of the present study revealed that library literacy is given insufficient emphasis at King Saud University and the majority of graduate students lack information literacy skills. Due to the complexity of today's library systems, user training has become

essential. Therefore, this study recommends that electronic searching be integrated in the ESP course offered to graduate students at KSU at the beginning of their M.A. or Ph.D. program to meet their pragmatic needs. The training course will be specifically tailored to fulfill the information literacy needs of graduate students at KSU. The following is a description of the course components:

Course Objectives

At the end of the course, graduate students will be able to: (1) Select their search terms, narrow or broaden them (2) Use their search terms to locate documents in the Silverplatter, ProQuest, Ebsco Host, InfoTrac databases (3) Locate documents in specialized databases related to their area of specialization such as ERIC, Dissertation Abstracts, Medline, WebEc etc (4) Understand and use the basic electronic searching terms and commands and common abbreviations.

Course Content

The training course will focus on the following:

1. **Electronic searching basics**: definitions of basic terms such as *electronic searching, database, virtual library, electronic resources*; database structure; differences between databases and online system; difference between the same database on different systems; selecting a database relevant to the student's subject area; accessing databases from campus and from home by using the required URL, username and password; components of the database homepage; types of search such as Boolean, truncation, wild cards, proximity, nesting, controlled vocabulary and keywords, free and multiple file searching; selecting a search strategy; selecting, broadening and narrowing of the search terms; types of fields such as author, descriptor, keyword …etc; selecting the language of the documents needed; selecting the type of documents and images needed; marking the relevant records; selecting the display options such as number of articles displayed per screen or what to be displayed (citation only, citation and abstract, full text); viewing the search results; evaluating the search results; saving, printing or e-mailing the search results; returning to the list of records (citations) to select a new record to view, save, print, or e-mail; returning to the main page to conduct a new search; using the database thesaurus and online support; locating and filling out document order forms; documenting the records obtained.

2. **Basic electronic searching terms and commands to be mastered**: *Advanced search, basic search, field, author, title, abstract, descriptor, keyword, subject, topic, identifier, journal, language, accession number, search results, records, citation, full text, full record, image, collection, peer reviewed journal, refereed journal, report, book chapter, magazine, newspaper, document, periodical, index, thesaurus, guide, help, assistance, options, format, publication date, display, save, print, view, search, submit, browse, continue, connect to, proceed, login, clear, mark, unmark, select, , request, obtain, order, previous, next, main, return to.*

3. **Common abbreviations** used in the citation, abstract and full-text articles such as: *AU= Author, TI=Title, SO=Source, AB= Abstract, DE= Descriptor, KW=*

Keyword, CP= Country of Publication, LA= Language, PY=Publication Year, PD= Publication Date, PB= Publisher, PT= Publication Type, AF= Author Affiliation, AN= Accession Number, CD= CODEN, CL= Classification, CT= Conference Title, DT= Document Type, ED= Editor, FT= Full text, JN= Journal Name, LG= Long Record, MP= Map, PB = Publisher, PG= Pages, RN=Report Number.

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Training Method

First a tutorial that consists of 5 modules will be prepared. Modules 1-4 will cover the search strategies of Silverplatter, ProQuest, EBSCO Host and InfoTract and Module 5 covers a specialized database such as ERIC or PsychInfo depending on the student's subject area. Each module will consist of screen shots from each database starting with the login page through the save, print or e-mail screen. Arrows will be inserted pointing to those parts of the database that are relevant to the search.

Each module will consist of 4 phases. In phase 1, a 45-60 minute large-group in-class LCD-enhanced lecture will be given to introduce the students to one of the databases mentioned above. In phase 2, a 1–3-hour demonstration and hands-on guided practice is conducted at the main library in small groups depending on the needs and speed of the students. Phase 3 consists of a post-session hands-on independent practice at home or at the main library where students practice electronic searching on their own. In phase 4, training will be assessed in a 3-hour session. Students will be given individual or group research projects for which they select the search terms, define the search strategy, select the relevant database, search the database, and print and save the actual records obtained. The test will require the students to locate different types of resources such as dissertation abstracts, refereed journal articles etc… Screen shots may be printed and handed out to students together with questions that require them to identify, mark, circle, fill in, and explain certain parts of a search screen, search commands or abbreviations.

Conclusion

The present study recommends that electronic searching be introduced as part of the ESP course that graduate students at KSU take. Full integration of library research and reference skills into the ESP curriculum is recommended. The present study recommends that a self-instructional web-base tutorial is developed to help graduate students acquire electronic searching skills as an alternative to formal. It is also recommended that electronic searching be part of the research paper or thesis-related instruction.

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