

Web Based Learning in Sexuality

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Abstract

Sexuality education is an integral part of health professional education. However it is often omitted due to lack of time and resources. A program has been developed to provide students with an understanding of the biological and psycho-social aspects of sexuality and to promote a positive attitude to sexuality. This interactive Web-based program has been designed to utilise trigger videos, planned exercises and computer-mediate communication to provide a focus for learning using the wide range of resources already available on the World Wide Web. It allows users to work independently at their own pace and level of professional interest, in a non-judgmental and comfortable environment. It also encourages collaborative learning with the use of synchronous and asynchronous groups discussions. This paper discusses the rationale for and the development of the Web-based program designed for use by tertiary health professional students.

Introduction

This paper describes the development of an interactive Web-based computer-assisted learning (CAL) program on Sexuality for tertiary students, especially health professional students. The aim of the program is to provide these students with an understanding of the biological and psycho-social aspects of sexuality and to promote a positive attitude to sexuality so as to equip them to better manage personal and professional sexual concerns in their workplace environment.

Rationale for Developing the Program

There are many constraints to the introduction of a sexuality education course in a professional curriculum. Sexuality education does not neatly fit into a subject-based or system-based curriculum. Further, there is a continuing hesitancy by both faculty and administration to accept sexuality as a legitimate and integral part of a tertiary curriculum. Most professional training programs struggle with finding a place for it in the crowded curriculum (Ross, 1984), and in the lack of trained staff and funding (Lief and Ebert, 1976; Webster, 1993). Our personal experience indicates that sexuality education is often the first topic to be removed from the curriculum in any planning process.

The development of instructional methodology in sexuality provides a unique challenge. The learner should be given the opportunity to work through the important and often sensitive affective issues of sexual attitudes and values in a non-threatening environment. To completely alleviate anxiety in the process of sexuality education is difficult and is not entirely desirable.

The purpose of a training program would be to allow users to confront their anxieties in a context that provides the knowledge base in sexual functions and dysfunctions and to encourage the development of the skills needed to provide sexual health care.

A recognition of these learning needs has led sexuality educators to adopt a multi-modal model in the selection of instructional methodology. A review of sexuality education programs indicates that combinations of lectures, group discussion, audio-visual presentations, role playing and panel discussions with experts and guest speakers are used in most of the more recent programs (Weerakoon and Stiernborg, 1996). The problem, however, is that all this has to be done within a limited time and budget. It is unlikely that this situation will change.

The availability of authoring software, the accessibility to the world-wide Web (WWW) and the acceptability of CAL have created new opportunities for sexuality educators. CAL provides students with a focus to construct knowledge through active participation, articulating their own ideas and concepts with new material (Laurillard, 1993). Computer-mediated communication (via both synchronous and asynchronous discussions) can provide a forum for collaborative learning by interaction between groups of students separated over time and space. CAL is increasingly accepted as part of health education (Pouliquen et al., 1995; Sandroni, 1997). Some of the more effective programs have used a case-based, interactive, multi-media Web-based approach to learning (D'Alessandro et al., 1996; Heyes & Lehmann, 1996; Woolridge, 1995). Based on their experience with a CAL program, PlanAlyzer, Lyon et al. (1992) have noted that "... *the process of developing teaching software can dramatically transform the content that is being taught as well as the teacher's approach to teaching it. The dynamic process of developing interactive materials fosters effective diagnosis and new understanding of what is and is not being taught – a process that leads to important opportunities to correct deficiencies and improve the teaching.*"

After a review of 8 CD-ROMs on sexuality related issues, (ADAM, Ann Hoopers Ultimate Sex Guide, Dr Ruth's Encyclopedia of Sex, The Joy of Sex, The Love and Relationships Test, The Magic School Bus, Nine-month Miracle and The Ultimate Human Body). Ruocco & Dyson, (1996) noted that none of them cover sexual function in health, disability and illness in a way useful for health professional education. Gotlib and Fagan (1997) also commented on the paucity of material that specifically provide a learning experience for health professionals on the WWW. A 1998 search of the catalogue of the on-line book store "Amazon.Com" (www.amazon.com/exec/obidos/subst/home/home.html) revealed a list of 1919 CD-ROM listings. Review of the items listed revealed a good cover of medical, anatomical and physiological information. Sexuality education, however, was covered only indirectly in terms of:

- AIDS education (eg: A Bronx Family Album: The Impact of AIDS: An Interactive CD-ROM. Steve Hart / Software /1997);
- Women's health (eg: 1998 Greater Philadelphia Comprehensive Obstetrics and Gynecology Review Course on Disk - A self-guided electronic review course for physicians and others with an interest in women's healthcare. Alan H. DeCherney, et al / CD-ROM /1998); and
- a few non specific titles on sexuality (eg: Herbs for Sex, An Aphrodisiac Herbal CD-ROM. Ross F. Ghanim / CD-ROM / 1997; Men Are From Mars, Women Are From Venus - CD-ROM Multimedia 2000, Multicom Publishing / CD-ROM).

Searching the WWW for information on sexuality related issues can be a very hazardous pursuit. The bulk of the material is of a frankly pornographic nature. There are however, a few good sites of sexuality information do exist on the WWW. These include:

- Sex Education Resources on the World-Wide Web: Recommended Sites (David A. Gotlib & Peter Fagan <http://users.jaguNET.com/~dgotlib/meanstreets.htm>)
- The Kinsey Institute for Research in Sex, Gender and Reproduction. (Director Prof. John Bancroft) <http://www.indiana.edu/~kinsey/index.html>
- The Archive for Sexuality (Prof. Erwin Heaberle) <http://www.rki.de/GESUND/ARCHIV/HOME.HTM>
- The Institute for Advanced Study of Human Sexuality <http://home.netinc.ca/~sexorg/index.htm>

These sites serve as a resource gateway to a large collection of sites on all aspects of sexuality, including biology, psychosocial issues, gender and reproduction. What is lacking is an educational program that uses the material available on the WWW in a coordinated manner for tertiary students. The aim of the project is therefore to provide such a program and to take advantage of the facilities made possible by recent technological advances. However, in the rush to develop and use these new technologies, it is important to take a critical and reflective approach and explore how information technology can assist in the further development of sexuality education. As Mergendoller (1996, p 45) points out:

"While technological tools can spur pedagogical changes, the utility of such changes must be measured ultimately by their impact on student learning...We need to understand better the relationship between technology, pedagogy, project-oriented curricula, and student learning."

Development of the Program

The present program is based on a CD-ROM prototype on "*Male Sexual Dysfunction*" (Weerakoon, Stiernborg and Wong, 1999) which uses a case simulation of an interaction between a health professional and client as a focus for learning. This CD-ROM was developed on HyperCard for use on Macintosh Computers, based on tools developed as part of an earlier *project "A Virtual Teaching Hospital"** (Wong et. al.,1996).

The decision to develop a Web-based program is based on both pedagogic and practical reasons. Pedagogically a Web-based learning unit, which provides flexibility in terms of time and learning styles, as well as the choice of working individually or in a group would enhance student participation and learning. The use of the PLISSIT management model (Annon, 1975) in the learning process would maximise the applicability of the program to many groups of tertiary students both health professionals and others. A Web-based format would allow cross-platform delivery and frequent updating of information. The latter is particularly important in an area where changes in management and conceptualisation proceed rapidly

The Web-based program is being developed by the authors from School of Biomedical Sciences in collaboration with staff at the ARTS-IT at the University of Sydney. Sexologists from the Australian Centre for Sexual Health and the Academic unit of the Sydney Sexual Health Centre, Sydney Hospital will provide advice and feedback.

The program is divided into four stages of learning in keeping with the levels of the PLISSIT model (Annon, 1975). These levels are

- Level 1 - **Permission granting**
- Level 2 - **Limited Information**
- Level 3 - **Specific Suggestions**
- Level 4 - **Intensive Therapy.**

At level 1 of PLISSIT (Permission Granting) the professional should be able to recognise a sexual concern or problem in the patient or client and allow the patient to express this need. The professional should be able to discuss this concern in such a manner as to allow the person to develop a degree of comfort in his/her sexuality.

At level 2 (Limited Information), the professional should be able to take a basic sexual history such as to provide basic information on the patients/clients needs and be able to refer him/her to an appropriate source for further management.

Level 3 (Specific Suggestions) requires a more direct intervention from the professional, such as the provision of accurate neurological physical and psychological information, advice and counselling on the specific concern. The professional would then refer the patient/client for further management if necessary.

Level 4 (Intensive Therapy) would be the realm of a specialised sexual therapist. A professional would need to provide specific sexual therapy to a patient/client at this level of management.

At each stage of the Web-based program, the user will be provided with:

- The aims and objectives of the stage
- Learning resources in the form of text, graphics, audio and video and links to other Web based learning resource sites.
- On-line video learning triggers
- Group based and individual assessment tasks.
- Feedback of performance from the course coordinator.
- Occasional open forum discussions with experts in particular fields of sexuality.

Advantages of the Web-based Program on Sexuality

The use of the WWW to deliver sexuality education is of particular significance for a number of reasons:

- The development in investigation methodology and management techniques in sexuality is very rapid. Due to the changing nature of the information there is the need for easy and regular updates of resources including links to other sexology Web-sites
- It is also easier to modify or provide additional content in response to feedback and user evaluation or to deliver cultural and language specific videos for use by non-English speaking users.
- Resources are provided at a number of levels and can be accessed from hyperlinks within the program. According to Aitken and Shedletsky, (1998) who developed an on-line strategy to teach intimate and safer sex communication skills, “*Students can search material privately, for example. They can search what interests them, at whatever level they chosestudents can avoid material they already know or consider inappropriate or too difficult. . .they can study material they want to study including information that may seem too uncomfortable to read in a more public setting (e.g. college library or traditional classroom).*”
- Recent advances in streaming technology has made it easier to deliver video sequences which form an integral part of the program. These include the trigger videos which mimic the class role play situation as well as clips of investigation and management procedures that are not readily accessible by students. Audio and video sequences are important because students are expected to recognise both verbal and non-verbal cues (e.g. changes in voice and body language).
- A Web-based forum will be used for group discussion and assessment. The asynchronous nature of the discussion will allow the students more time to reflect on their contribution before they post it to the Web. It also gives all students equal opportunity to contribute to the discussion. They can opt to do this anonymously or in the case of an assessment exercise using a nickname known only to the co-ordinator/assessor
- Synchronous discussion sessions with experts in the area of human sexuality are particularly important. It would allow users to communicate in real time with experts world-wide on areas such as gender, male sexual arousal and the G-spot!
- Attitude and value-based questionnaires with Likert type scales have been developed. The Web-based format means that a running total of the responses can be provided for students to compare their responses with those of all others to date.

Evaluation

Evaluation of the program will be done as follows:

- A feedback form at the end of each stage of learning will allow users to report on navigational and pedagogic issues
- Users will be asked to maintain a personal journal. They will report on this at the end of the unit of study.
- Program evaluation will also be conducted in an iterative manner by a panel of content and technology experts

Uses of the program

This learning program will initially be used as a part of an elective in sexuality for health professional students. Alternately, this CAL program could be used as:

- A sexuality learning program by individuals and groups (undergraduate and postgraduate).
- A group activity within a sexuality education course.
- An adjunct to learning to demonstrate techniques and investigations not easily accessible to students (e.g. rigidiscan assessment, intra-cavernous injection).
- A self-assessment program in a sexuality education program using the self assessment and reflective questions.
- A resource of specific information on sexual function.

Conclusions

This CAL program has been designed utilising trigger videos, planned exercises and CMC to provide a focus for sexuality education using the wide range of resources already available on the WWW. The structure of the program encourages independent learning by users, at their own pace and level of professional interest, in a non-judgmental and comfortable environment. Group discussions and assessments encourage collaborative learning. The program also facilitates skill development and modeling with clinical scenarios and simulated situations in video, audio and text

This program is likely to meet the sexuality education needs of users with diverse needs, interests and educational backgrounds, and increase the motivation for learning. The availability of self-instructional material provides flexibility of the use of time and resources by both students and instructors. By reducing the need for scheduled class time and other resources, it will increase the ease with which sexuality education could be introduced to the crowded professional training curriculum.

CAL and the WWW sites provide important sources of learning and information for students today. This will only continue to grow in the future. Sexuality educators should prepare for this with well researched and constructed learning programs using available information technology.

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