EDUCATIONAL TECHNOLOGY FOR PROMOTION OF THE SEXUAL HEALTH IN THE ADOLESCENCE: WHAT THE EDUCATORS SAY?

ABSTRACT

Objective: to identify how public school teachers perceive the use of educational technology in the school environment

Method: qualitative study, supported in the pedagogical model of Paulo Freire’s culture Cycle along the teachers of a public school in Fortaleza-CE. The collection of information occurred between the months of May and June 2010 from five educational workshops with weekly. The conduct of workshops took place through the analysis of the demand - Survey; Pre-analysis of the problems of context and Group-planning; Survey of themes-generators and definition of focus - Implementation and evaluation. The data were analyzed and interpreted in a qualitative context, exposing speeches and messages of teachers who were considered descriptively. To preserve the anonymity of the subjects, teachers were named by the disciplines that teach. The research project has been approved by the Committee of ethics in research of Federal University of Ceará-COMPE, with the Protocol 08/07. Results: the educators acknowledged the importance of educational technology in the teaching-learning process with a focus on sexual orientation, such as effective method for promoting adolescent health. Conclusion: is necessary a multidisciplinary approach in School Health to contribute to the process of sexual education in adolescence, in addition, to promote the training of educators for the use of appropriate methodologies as a resource to promote healthy experience of sexuality. Descritores: educational technology; adolescents; school health.

RESUMO

Objetivo: identificar como os professores de escola pública percebem o uso da tecnologia educacional no ambiente escolar Método: estudo qualitativo, apoiado no Modelo Pedagógico de Paulo Freire - Ciclo de Cultura junto a professores de uma escola pública em Fortaleza-CE. A coleta de informações ocorreu entre os meses de maio e junho de 2010 a partir de cinco oficinas educativas com periodicidade semanal. A realização das oficinas deu-se por meio da Análise da Demanda - Levantamento; Pré-análise da Problemática do Contexto e do Grupo - Planejamento; Levantamento dos Temas-Geradores e Definição do Foco – Execução e Avaliação. Os dados foram analisados e interpretados em um contexto qualitativo, expondo discursos e falas dos professores que foram analisados descritivamente. Para preservar o anonimato dos sujeitos, os professores foram denominados pelas disciplinas que lecionam. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa da Universidade Federal do Ceará - COMPE, com o protocolo 08/07. Resultados: os educadores reconheceram a importância da tecnologia educacional no processo ensino-aprendizagem com enfoque na orientação sexual, como método eficaz para a promoção da saúde do adolescente. Conclusão: faz-se necessário um enfoque multidisciplinar na Saúde Escolar para contribuir com o processo de educação sexual na adolescência, além, de promover a capacitação de educadores para o uso de metodologias adequadas como recurso para promover a vivência saudável da sexualidade. Descritores: tecnologia educativa; adolescentes; saúde escolar.

RESUMEN

Objetivo: identificar cómo los profesores de las escuelas públicas perciben el uso de la tecnología educativa en el entorno escolar Método: Estudio cualitativo, apoyado en el modelo pedagógico de Paulo Freire ciclo de cultivo a lo largo de los profesores de una escuela pública en Fortaleza-CE. La coleta de información ocurrió en mayo y junio de 2010 a partir de cinco oficinas educativas. Los datos fueron analizados e interpretados en un contexto cualitativo, la exposición de discursos y discursos de los maestros que fueron considerados de manera descriptiva. Para preservar el anonimato de los sujetos, los maestros fueron nombrados por las disciplinas que enseñan. El proyecto de investigación ha sido aprobado por el Comité de ética en la investigación de la Universidad Federal de Ceará-COMPE, con el Protocolo 08/7. Resultados: los educadores reconocieron la importancia de la tecnología educativa en el proceso de enseñanza-aprendizaje con un enfoque en la orientación sexual, como método eficaz para la promoción de la salud del adolescente. Conclusión: es necesario un enfoque multidisciplinar en Salud Escolar para contribuir al proceso de educación sexual en la adolescencia, además, para promover la formación de educadores para el uso de metodologías apropiadas como recurso para promover la experiencia saludable de la sexualidad. Descritores: educación tecnología, los adolescentes, la salud escolar; tecnologías educativas, adolescentes, salud escolar.
INTRODUCTION

The use of the expression “educational technology” in many instances generates some controversies, in part by the imprecise use of the term, intermingling with devices, tools, in general, and its propagation in the educational environment. It can still be defined as the systematic application of scientific and technological knowledge to the solution of educational problems. One must understand technology as the application of theories, methods and scientific processes to the techniques.

As for the sex education of children and youngsters, this has always existed, but was made more by omission and repression, rather than through a dialogical, humanist and libertarian education. At school, the teachers consciously or unconsciously repass notions about sexuality and sex education through verbalizations and/or postures, notions those receive reinforce from the media, what can be positive and instructive or repressive and castrating.

The school, for adolescents is a scenario of transformation and knowledge; given that in this space happen different situations that provide behaviors till then unknown. Thence the importance to use this scenario for the sexual orientation of the youngsters.

The teacher as a mediator of the construction of knowledge facilitates the process of sexual orientation by means of technologies, contributing to new teaching practices, based on expanded conceptions of education, transforming a series of elements that make up the teaching-learning process.

The use of technology is many times seen as one more teaching resource. The teacher appropriates himself of the resource of an instrumental and technical form, without discovering his didactical potential, using, therefore, the traditional teaching paradigm only with a new garb.

The inclusion of health professionals, overall the nurses, has been gaining coverage due to its contribution to the School Health, becoming indispensable for delineate care and educational roles. The professionals, for acting in preventive actions, using strategies of health education, can work in partnership with educators to join together, becoming multipliers of knowledge and aspects of vulnerability, proper of the adolescence.

It is necessary, therefore, to strengthen together to the teachers the discussion about the use of educational technology, with the inclusion of the technological light resources, as a facilitating method to guide sexually the youngsters. Thus, this article aims to identify how teachers perceive the use of educational technology as a resource for sexual orientation in adolescents.

METHODOLOGY

A qualitative study, based on the Paulo Freire’s Educational Model - Cycle of Culture, applied with the intuit of contributing to the promotion of knowledge, reflection and decision of the teachers in the act of promoting educational strategies with adolescents, through the educational technology. The Paulo Freire’s method comes as a technological educational and formative resource, allowing the participants and researchers to elaborate processes of knowledge and action from their real necessities, and together, articulate alternatives to solve them, making easy the process of care.

The definition of the field of study arose from the insertion of the authors in the Project of University Extension entitled: “AIDS: Education and Prevention,” sponsored by the Department of Nursing of the Federal University of Ceará / UFC, and of the research project and Educational Technology and the models of education in health in the actions of nursing and health promotion, registered in the National Council for Scientific and Technological Development-CNPQ, process 409365/2006-8.

The study was conducted in a public school in Fortaleza-CE. It consisted in the presentation of the project of study to the direction of the institution, followed by invitation to the ten high school teachers. In total, only four teachers agreed to participate on the study. The data collection occurred between the months of May and June 2010, from five educative workshops, weekly.

To achieve the proposed objectives, we registered the informations in a diary, with data pertaining to the researchers’ observations during the lessons taught by the participating teachers. The first phase of the study was characterized by the observation and listening to the teachers from a circle of conversations, obtaining a view of the interest of the group.

The implementation of the workshops took place through the Demand Analysis - Survey, Pre-analysis of the Problematic of the Context and of the Group - Planning, Survey of the Theme-Generators and Definition of the Focus...
- Execution and Evaluation. Thus, the group activities had the following steps:

Survey: necessities of the teachers about strategies to guide sexually the adolescents. It was detected by means of a questionnaire, with questions about the knowledge of the teachers in relation to educational technology. Planning: it was covenanted the realization of four meetings for discussions about the topic: concepts, applicability, perceptions, including a workshop with 30 adolescents, in order to apply these concepts.

Execution: the implementation of the meetings, divided into central themes: sexual orientation, educational technology, light technology resources. This step was based on a collective debate between researchers and educators.

Rating: application of a light technology resource by the teachers via the realization of an educative technique with the adolescents, known as “traffic light”.  

The data were analyzed and interpreted in a qualitative context, exposing speeches and statements of the teachers who were descriptively analyzed. We perform the following steps: a) extensive reading of the obtained report, in order to understand and apprehend the meaning of the informations, b) condensing the informations from each question; c) identification of the common points in each item and grouping of the similarities, allowing the construction of categories of analysis, d) discussion of the categories, in order to achieve their aims, e) reflective analysis of significant responses for the study, in order to deepen the object.  

In the speeches of the teachers were observed the following categories: 1 - conceptions of educational technology; 2 - technology as a mediating strategy for sexual orientation, which will be presented and commented according to the literature.

The research project was approved by the Ethics Committee in Research of the Federal University from Ceará - COMEPE, with the protocol 08/07. Thus, we obeyed ethical norms in the research, based on the resolution 196/96 of the National Health Council, which regulates research with human beings.  

Regarding the importance of educational technology, the teachers emphasize the technological resources like hard and confuse the types of technologies: first-degree contact with media and technology resources used for information. I make use of an overhead projector and videos (Prof. Mathematics). The use of Data Show and videos are light technological resources (Prof. Computing).

Only one teacher, among the others, described correctly a light technological resource, exemplifying its concept and purpose: That which can be used in any environment, at every opportunity, without onus or limitation. Taking advantage of the spaces in the proposed contents, looking to improve the efficiency and applications in everyday life (Prof. Biology).

As regards the use of technological resources to guide sexually the teenagers, the teachers worried themselves to make use of methods that facilitate the construction of knowledge.

The use of the educational video and the use of media resources were examples of resources used as a tool for enrichment of the classes. However, the methods were used in a purely expository form, showing little preparation for the use of these facilities. Consider the statements: avail situations where arise questions that relate to sexuality to aboard issues relating to the subject in the classroom, with the use of educational videos (Prof. Biology). I use different methods, the aged between 38 and 55 years old, the areas of formation were: chemistry, biology, veterinary medicine and mathematics, computer science.

- Conception of educational technology

The educators present a superficial knowledge about the concept and purpose of the educational technology, as state: These are inputs used to make easier the life of the individuals in their daily activity (Prof. Mathematics). Resources that awake interest in the student. Ways to facilitate the passage of knowledge. And a tool that needs to be applied in the environment of the education, looking for preparing any student in the proper knowledge (Prof. Biology). Resource that aim to facilitate the process of teaching - learning. The traditional education is important, but it is necessary to alternate in the classes interactive methods of teaching, that attract the attention of the student. All that can be used to facilitate our work (Prof. Chemistry).

Regarding the importance of educational technology, the teachers emphasize the technological resources like hard and confuse the types of technologies: first-degree contact with media and technology resources used for information. I make use of an overhead projector and videos (Prof. Mathematics). The use of Data Show and videos are light technological resources (Prof. Computing).

Only one teacher, among the others, described correctly a light technological resource, exemplifying its concept and purpose: That which can be used in any environment, at every opportunity, without onus or limitation. Taking advantage of the spaces in the proposed contents, looking to improve the efficiency and applications in everyday life (Prof. Biology).

As regards the use of technological resources to guide sexually the teenagers, the teachers worried themselves to make use of methods that facilitate the construction of knowledge.

The use of the educational video and the use of media resources were examples of resources used as a tool for enrichment of the classes. However, the methods were used in a purely expository form, showing little preparation for the use of these facilities. Consider the statements: avail situations where arise questions that relate to sexuality to aboard issues relating to the subject in the classroom, with the use of educational videos (Prof. Biology). I use different methods, the
expositive, to facilitate the sexual orientation of the adolescent. “Demonstration lessons, videos, data show.” (Prof. Chemistry).

Thus, the reformulation of the teaching-learning process with the awakening of the critical-reflective sense of the students was not an aspect to be considered by the contribution of the teachers on the sexual education of the adolescents. Furthermore, it was notorious the importance emphasized to the use of the computer, media resources, in general, as an effective tool for the process of sexual education. As stated by the teachers: The internet is a good resource to guide sexually (Prof. Computing). The use of the media resources (Prof. Mathematics).

Although the concepts, the teachers believe that is possible to direct sexually the adolescents: I always try to use these technological resources, when I exemplify in the classes the events of our routine. To make a link between the technical content and that we live in everyday. I make use of metaphors as a resource. In certain subjects, I take to guide sexually the students. In chemistry, in a particular subject, such as formula of compounds, can cite the pill and talk a little bit about it. (Prof. Biology).

Another emphasized technique was the use of the cycle of conversation linked to illustrative materials. It is important to have a cycle of conversation, with the explanation of materials that illustrate the contraception methods (Prof. Chemistry). This method allowed, according to the teachers, the direct student-teacher and student-student interaction, making the moment of the class enriching and attractive for these adolescents. It was reported that there was a better use in the classroom in relation to traditional teaching.

At the last meeting with the teachers, we proposed to carry out an educational activity about sexuality, subsidized by educational technology with the adolescents. During the activity they recognize the importance of technological resource at the sexual orientation of the teens, according to testimonies: It was evident the response that the adolescents gave us, making evident the absorption of knowledge (Prof. Biology). This feature favored the awakening of the awareness of the students, regarding the aspects of their sexuality (Prof. Mathematics). The dynamics captured the attention of the students, motivating them to an interaction and participation (Prof. Chemistry). I’ll try to insert into my teaching techniques such as these (Prof. Mathematics). In fact, this feature was effective and helps us to participate in the sexual education of my students. (Prof. Computing).

Based on the performed technique, we can evidence that the educational technology contributes in the process of learning-teaching that can lead to sexual orientation and promotion of health.

**DISCUSSION**

- Perception about educational technology

When we question the teachers about the concept of educational technology, the participants demonstrate knowledge about the subject and confirm that it is an attractive way for the dialogue with the adolescent. However, educational technology, reunite its concepts in three axes, tending to a much broader purpose, also covering the social character. The first focuses on the various ways of aid to education, worrying about the effects of the equipments and techniques, rather than the individual differences or the selection of instructional content. The second focuses on the process, when educational technology is seen as a systematic way of planning, implement and evaluate the total process of learning, being prioritized the problem of effectiveness of this process and the use of systemic approach. The third axis is inserted in the line of a strategy of innovation, not only in a perspective of internal efficiency of the system, but also of social effectiveness of the educational technology, considering its social relevance in the change of society.  

Moreover, the results show that teachers generally perceive educational technology mainly by heavy technological resources. And we know that educational technology does not stop only to this kind of resource. The technology can be exemplified in the grouping of three categories: hard technology: represented by the concrete material such as equipments, permanent furniture or of consumption, soft-hard technology including structured knowledge represented by the disciplines that operate in health, as an example of medical clinic, dental, epidemiological, among others; light technology that is expressed as a production process of communication, of the relations of links that lead to meet the user with need of health actions.  

Educational technology must demand actions whose purpose allows educating...
people able to think, innovate and act responsibly. Managing a job effectively, resulting in attitudes and singular responses, capable of promoting the respect for the others, but also promote the empowerment of the individuals through their autonomy and dignity.

Examples of this are the light technological resources, which the teachers make use, which can be exemplified by the illustrative / educational materials, and the videos that are heavy technological resources. But, contrary to what was said, educators use educational materials in a restricted way, not by encouraging the reflection of the adolescents. In this case, videos and other materials must be explored in a way to promote the dialogue between different areas of knowledge, encouraging a critical spirit - expliciting how certain negative statements and representations and uncritical can only reproduce ideologies, attitudes and discursive hegemonic systems of our society. So, the educational videos need not only to hold the viewer’s attention, but mainly to sensitize him for the debate of these issues.

On this basis, we can see the positive response of the teachers to the technique proposed and used in the last day of the meeting between educators and students. Through the technique of Semaphore, we see an educative attitude more effective and consistent of the teachers in the process of sexual orientation in adolescents. They have proven safe to act in the sexual education of their students. In addition, recognizing the effectiveness of the strategy to aboard issues related to aspects of sexuality of these youngsters.

As we saw in the speeches cited before, the teachers recognized the importance of the use of the light technological resources as a facilitator of the teaching-learning process. So, it can help the student, the awakening for the thematic related to his life, and to a process of reflection of the adolescent, making him sensitive to the autonomy that must have in the care with their health and thus contributing to the promotion of health.

Nursing, therefore, through its inclusion in school, contributing with the school health, results in an important strategy of primary care in the health of the adolescents. This is because the school is an environment that brings together a large number of adolescents, favoring the promotion of public health. The nurse, as a health educator, acts in order to prepare the individual for self care and not dependence, is therefore, a facilitator in making decisions, acting on the improving of the quality of life of the school community and thus promoting health.

### FINAL CONSIDERATIONS

As evidenced in the study, teachers make use of educational technology in teaching practice in order to promote sexual and reproductive health of adolescents. However, the inconsistent use of technological resources in this space may complicate the educational process, considering that adolescence is an important step of important biopsychosocial changes and needs interventions directed to their peculiarities. So it is necessary the use of teaching methods that arouse curiosity and motivate the teen to reflection of their own questions of their vulnerabilities in the various fields of life.

The results lead to a multidisciplinary approach with active participation of the nurse in school health, aiming to contribute in the process of adolescent sexual education. In addition to promote the training of teachers for the use of appropriate methodologies with the use of educational technology as a resource to guide young people sexually.

The use of educational technology was primordial in the development of the educational process proposed, since it tries to overcome the traditional model for the focus of the co-production of knowledge and autonomy, where the adolescents become central in the educational process and the teachers mediate the process. We add still that the workshops allowed the educators, using the methodology of the Circle Culture, the acquisition of new knowledge about issues and even that do not generate an immediate change of behavior, can promote a rethinking of their practices and attitudes for the future.

Regarding the role of the nurse is urgent to reformulate the work process, from the creation of new knowledge that promotes both professional formations as far as the ability to produce and readjust new technological resources of the educative type. Thus, we reinforce the need of the health professionals and educators to produce new educational technologies, beyond the activities of health education based on punctual actions and do not recognize the true needs, desires and aspirations of the adolescents.

### REFERENCES

1. Nietsche EA, Backes VMS, Colomé CLM, Ceratti RN, Ferraz F. Tecnologias educacionais,
Araújo FV de, Gubert FA, Scopacasa LF et al.

Educational technology for promotion of the sexual...


Sources of funding: No
Conflict of interest: No
Date of first submission: 2012/03/07
Last received: 2012/07/31
Accepted: 2012/07/31
Publishing: 2012/08/01

Corresponding Address
Fabiane do Amaral Gubert
Rua Alexandre Baraúna, 1115,
Departamento de Enfermagem da UFC
Rodolfo Teófilo
CEP. 60430-160 — Fortaleza (CE), Brazil

English/Portuguese
1892