

SUPPORT TECHNOLOGIES TO PRODUCTION AND COMMUNICATION OF OPEN AND DISTANCE EDUCATION CONTENT

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Research Area Classification

**Macro: Theories and Models - Meso: Innovation and Change - Micro:
Instructional Design**

Nature: Planning Model

Class: Innovative Experience

ABSTRACT

The present experiment aims to show the positive results of innovation in the methodology for transposition of self-instructional courses, of distance education through the Internet. The contents are divided into small pills that complement each other giving the student a complete education. The bold design and challenge proposed to problems solving, attract and hold the attention in the proposed activities favouring the practice of the concepts. The texts have opened space for illustrations, photos, videos, characters, audio, scenery, games and other communication technological resources that facilitate the process of student learning at distance. The entire range of teaching materials and multimedia complement each other in sharpening the senses, stimulating the perception, memory and interaction among the students and the content.

Keywords: ODL education, distance learning, education technology, educational methodology, content transposition, multimedia, communication.

1 - From Text to Multimedia

The educational professionals are increasingly involved in the creation and development of courses via the Internet. Previously dominated by people related to technology, nowadays the teams who develop or implement courses via the Internet counts with several professionals as educators, experts in open and distance learning (ODL) and educational methods. Educators are making use of educational technologies to, through them, facilitate the process of learning.

In [1], the ODL is an educational strategy based on the application of technology to learning, and therefore does not comply with the limits of place, time, occupation or age. Elements which require new roles for students and teachers as well as new attitudes and new methodological approaches [2].

In the early 1960s, the distance courses had the same textual format of the material used in class. Besides the fact that students were only provided with the text resource, without any treatment, they still suffered by studying alone. The boring text and loneliness occasionally led to the withdrawal of the course, if the student was not self-disciplined by nature.

From the 90s with the advent of the Internet courses, to minimize the feeling of loneliness and increase interaction, the figure of the teacher, tutor or monitor was adopted, mainly to stimulate exchange between students in a class and the use of tools such as interactive chat, forums, communities and blogs. The professionals started to act as facilitators of the courses, strongly supported by technologies that enable communication between students, giving, indeed, more dynamism to the course, approaching the model of the classroom, while preserving information exchange and enrichment resulting from this interactive process [3].

On the other hand, self-instructional contents developed thinking in students at distance, without the support of mentoring, provide flexible hours of study and divided into pills on subjects that complement each other, contribute to increasing access to training.

In an evolutionary process of development of teaching materials, texts made room for illustration, photos, games, animation and video - resources

which translate itself into new forms of communication through the senses, which facilitate learning and hold the attention of the student.

This set of resources and alternatives make up the offerings for self-instructional courses. Which well-selected and coordinated with the theme and between them, make possible the success of these courses.

The experience recounted below shows this innovative methodology for self-instructional courses with the support of technologies that facilitate the process of communication and learning.

2 - Educational Methodology

We can say that society and academy are increasingly accepting that distance education represents an own way of educating that presents innovative techniques with communication processes that stimulate students' critical autonomy [4]. The use of different media can enrich the educational process, allowing, among other things, greater flexibility and creativity.

The self-instructional courses changed the traditional model of communication that has a sender, the message and the receiver of the message.

Traditional: Sender — Message — Receiver
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Table 1. Traditional communication model

In the self-instructional models courses in which students learn in a completely independent and autonomous form, the sender presents itself as a hidden and is represented by the media used. The use of mediation (media) breaks with the traditional model of communication in which the embodied subject disappears in [5].

ODL Courses: Sender (hidden) — Media — Message — Receiver

Table 2. Model of communication in ODL courses

- The sender hidden, embodied, is represented by the use of character. The character dialogues with the student throughout the course, in language easy to understand and direct, it also experiences the problem situations presented and suggests reasonable solutions to the problem in question. This strategy allows students to follow step by step implementation of all the concepts in practice.

- The character is animated and illustrated with very similar characteristics to the profile of the target audience, so there is student identification and sympathy with the character. The student in identifying with the character will be seen in its figure, favouring the acceptance of the concepts and tips in a natural way without any resistance.

- The character can have different roles, including the presenter of the course - which operates the opening and invites the student to watch a video, do an activity and at the end of the course indicates other complementary themes. This character is repeated in a set of courses, setting out in continuous communication with students.

The communication model with three or more types of media will have several other interference which will be determined by the characteristics of media used, i.e., encompass visual, auditory or textual resources.

— Media —
Sender (hidden) — Media — Message — Receiver
— Media —

Table 3. Communication Model with three media

- Presentation of videos with practical examples that show how real people solve their problems. The videos can bring the most varied

examples, rich in innovative situations and creativity in the solutions of problems of everyday life. Videos with themes that address values that enable reflection and influence, driving the action of the student.

- Interviews with expert consultants and excerpts from TV programs are options of resources used to clarify and provide examples of actual application of concepts.

Regarding videos and animations, the function would be to synthesize the concepts in a visual way, contributing to entice the student [6]. The essential advantage of the educational video is that the content transmitted through it may be retransmitted according to the student reinforce need at different moments in time [7].

What also contribute to the patterns of communication media are metaphors, scenarios, games, illustrations and photos among others, because they express a non-verbal communication when allowing the contents to contextualize the reality of the student through the images and the playful.

- The metaphor encompasses all the elements needed to create an environment that welcomes students in the context of the course. The metaphors in everyday situations arouse the curiosity to know the issues and challenges the students to explore the course.

- The scenarios bring elements that cause and allow the occurring of interactivity between students and content. Examples of interaction elements - notepads, billboards, TV, telephone, radio, calculators, calendars, among others.

- The written communication in clear and simple way describes contents, considering the illustration of the abstract, and icons that highlight the important points that need to be noted, suggesting interaction with the student in a playful and didactic way.

- The supplementary material available on the media library deepens the concepts studied in the course aiming to expand the student vision.

- The games challenge the creativity and encourage the understanding of complex content in lightly and without exhaustion way.

- Communication tools (forums, e-mails) and monitoring support contribute to the process of interaction and experiences exchange between students, which enrich the learning.

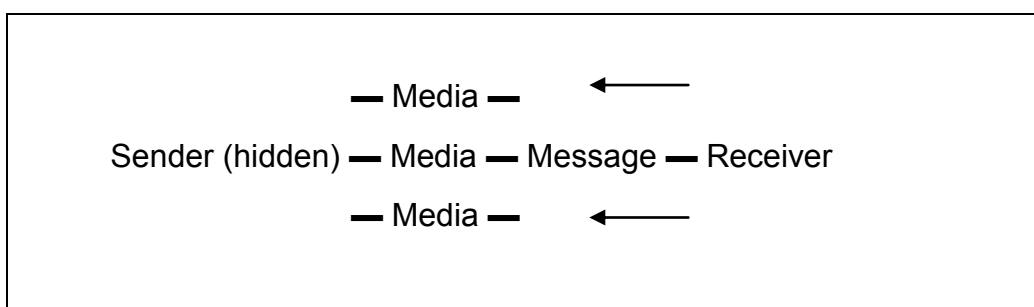


Table 4. Communication Complex Model

In a complex pedagogical method, the communication tools generate a bi-directional communication in which the receiver is also a sender of messages as illustrated in the table above. Tools such as chat, forums, and social networks used in the course contribute to a dynamic way of communication among students, so that the exchange allows constructing and reconstructing knowledge [5].

During the course a synthesis of relevant content are proposed in sentences so the students can display it on social networks, taking in this way, the content within the course to out of the course on the web, for reflection of groups on the social networks that share messages.

The one to many communication occurs, for example, with the use of forums and discussion lists on the web, and that everyone who has access can see the interventions and make their own. [8] The communication of many to many people occurs is the creation of a virtual group, as is the case of collaborative communities in which all participate in the creation and development of the community.

Of course, the diversity of communication tools has its own characteristics that must be thoughtfully considered when designing a model of communication/ education. Experience shows that the design of instructional content with the use of media such as animated characters, backgrounds, videos, audio, metaphors communicate with the student at all times confirming and reconfirming the understanding of content through

different ways. And that communication between people with active participation of learning subjects, contribute to the construction of knowledge.

The student is the starting point of the learning process. Thus, new information, concepts and experiences placed at your fingertips promote changes in their acquired knowledge, contributing to each step in the construction of new knowledge.

Also the contents related to each other and separated into small pills motivate students to do the whole course, since the distance education courses are targeted to public who do not have time to train.

3 - General Considerations

In order to minimize the feeling of loneliness and propose the interaction between students, this article shows how the technological tools of communication fulfil their role in giving greater dynamism to self-instructional courses, bringing them closer to the class model, preserving the trade between students and the enrichment resulting from this interactive process.

The basic assumptions of a distance education methodology is that people have different paces of learning. Thus, all teaching resources together with technological ones provide content full of strategies that foster self-study and personal involvement in the learning process.

The supply of new forms of nonverbal communication as presented, facilitate the learning of students studying at distance. The educational strategy should be carefully studied for the course to achieve its goals and set for the student to understand in a simple, easy, fun and enjoyable way all the content proposed.

Technological developments in the provision of new forms of communication would certainly contribute to the interaction and exchanges among students and thus facilitates the learning of those who study at distance. The entire range of multimedia learning materials complements itself in order to sharpen the senses, thus stimulating the perception, memory and interaction of students with the content, enabling them to learn.

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