Information and Communication Technology and Psychopedagogy

Pierre Kalala Musangana Bantu

Bachelor in Electronics and Computer Science Second Assistant in the Department of Electronics and Informatics, Higher Institute of Pedagogical and Technical Likasi, ISPT / Likasi

Abstract: *In this article, it is a matter of understanding how a teacher using Information and Communication Technologies can improve his work and thus contribute to the improvement of the quality of education and the development of his country. First of all, we took a look at the defining aspect of Information and Communication Technologies; after having approached this concept, we examined the aspects of digital pedagogy where Psycho Pedagogy integrates these techniques into the teaching function. Finally, we talked about future prospects by explaining the role that the teacher-user of audio-visual means will have to play in his sector of activity and action.*

Keywords: ICT, Teaching, Psycho-Pedagogy

1. Introduction

Today, the world can no longer be conceived without press, radio, cinema, television and computer, internet. ICT has taken a very important place in the life of human to the point that no one can do without it and that is the character of the 21st century.

More works have already been done on ICT and Psycho-Pedagogy; in our case, it is a question of exploiting the two very important concepts and showing that in teaching, the use of ICTs with a good Psycho-Pedagogy will play a huge role in improving the quality of teaching and in sustainable development of the country.

The theme is of paramount importance as it demonstrates the need for teachers to be able to teach by integrating ICTs that have become suitable learning vehicles in today's world.

A multidisciplinary collaboration will have to be put in place, on the one hand, to encourage the emergence of teaching approaches that integrate ICTs into teaching and, on the other hand, to ensure the training of teachers using ICTs.
The training team should accompany teachers in the classroom; conduct participant observation and co-teaching to assess the impact of ICT-based practice and support teachers in their practice.

How to enter to address the concepts of ICT, their use by the teacher for a good sustainable development? What does ICT have to do with teaching? Should we quote them all? How are ICTs used in educational psychology and what are the problems that these technologies bring to teaching?

Here, it is a question of seeing how an ICT teacher can contribute to the development of his particular entity and his country in general.

As a first step, we will agree on what we mean by ICT; then we will take a look at their Psycho-Pedagogical use; and finally, we will try to explain the different problems that ICT brings to our institutions for sustainable development.

General ICT considerations

According to *Josiane JOVET*, ICTs are digital techniques that encompass all objects in the forms of which these techniques are presented1. As for Patrice FLICHY and Florence MILLERAND, they support the definition given by JOVET, adding that the common point is that these technologies were created in order to maximize commercial profitability2.

These technologies are put in objects in three complementary ways namely:
- Such tools as mobile phone, CD-ROM, VCD, USB key, DVD, Blu-ray.
- Such devices as central or network storage and editing information in the form of text, table, image, video, audio.
- As services such as distributed telecommunications, telephone communication, mobile telephony, internet[3].

These capabilities have brought about a revolution in the mentalities of humans; from where they are at the base of the changes in the way of life of the companies and this in various domains among others the management of the databases, military uses, the telemedicine and trade.

These technologies have the advantage of storing on the same medium a large amount of information of different natures and accessibility in real time. Miniaturization is one of the important features of ICTs, and this is evident in both information carriers and devices using electronic devices.

Telegraphy marked the first steps towards an information society after the invention of writing and the advent of the printing press; then the telephone, radio, television, minitel and internet. Telecommunication and the Global Positioning System (GPS) have combined the image with text and wireless speech; the internet and television are accessible on mobile phone also incorporating the radio and camera without forgetting several other applications.

Bringing together information and ICT in the last decade has benefited from the miniaturization of electronic components allowing the production of multifunction devices at affordable prices.

Since it is interactive audiovisual, ICT is the epitome of today's communication techniques. The internet is the most recent of all the media, admitting that its first development in Europe dates back to 1995 according to REMI.

The advents of high-speed internet and decline in price of connections have allowed Europe to catch up with the time of real take-off of the internet. The development of animation combining sound and video has also made this media more and more interactive.

Media advertising investments also took off and surpassed those made in the cinema especially on the youth target; this makes sure that purchases via the net have made very significant advances.

With ICT, the world is like a village point where everything is controlled; an event is known everywhere and at the same time regardless of where it occurs.

After the speech of April 24, 1990 by the late president of Zaire Mobutu, which liberalized political activities, we have since witnessed a proliferation of press houses and little by little houses selling products or communication equipment with the arrival of the late Mzee Laurent Désiré KABILA at the head of the Democratic Republic of Congo.

The day before the elections held in 2006, the aforementioned houses have experienced another resonate sound with the birth of several other media or press houses and winds of computer products (audiovisual media).

In their educational use, ICT poses the following problems:
a) They are rare and expensive;
b) They require a lot of parameters;
c) They have a special ethic;
d) They need a practical Psycho-Pedagogy.

Many people have scientifically associated audiovisual media that have now become psycho-educational ICT according to Professor RADJA BIN SAIDI1. ICTs are used in organizations for scientific, cultural, research, teaching-learning, and psycho-Pedagogical experimental analysis.

Psycho-Pedagogical use of ICT

It gives birth to innovations some of which are:
- Online or virtual pedagogy, digital;
- Educational radio or universal pedagogy;
- Educational slides or educational retro-projection;
- Open telephone pedagogy or educational telephony;
- Educational image or educational film;
- Distance courses or interactive courses;
- Design in pedagogy.

Audio-visual technologies are therefore the culmination of all teaching aids.

In a general, all teaching is undeniably audio-visual because it implies the senses such as the hearing and the sight of the learner; but in a special way, ICTs are modern teaching methods that deliver messages that are addressed, as said in the preceding sentences, to sight and hearing at the same time.

These techniques postulate the use of special devices and most often a special organization of the class to receive valid massages.

In education, ICTs have certain advantages such as:
- The information they give is for the masses;
- In this ways, they arouse curiosity and support the attention of listeners or viewers;
- The change of relationship between them is favored teacher and learner with the intrusion of the image in class and teachers are surprised to find themselves next to the learners in front of the screen;
- Obtaining a better educational effectiveness because the image makes it possible to show in class what was impossible to bring there a few years ago.

ICT in this context, considered as audio-visual means a fact of civilization of a people and currently two trends are emerging as for their use in our educational institutions namely:

Some school officials refuse to use these means on the grounds that they are very expensive and schools are, by the system of fees payment, far from being filled. In addition, these means may replace the teacher and reduce unemployment.

Others, on the other hand, give great importance to these means by integrating them into the schemas of the general pedagogy of certain subjects of teaching such as competence-based learning.

As for us, we think and believe that the second tendency is the best because the audio-visual are indispensable auxiliaries for the concretization of teaching especially in technique.

Although many techniques are considered audio-visual, those speaking of cinema and television deserve this name.

Products purchased on the internet
- According to the Direct Panel source the most purchased products online are CD-DVD (50%), books (31%), airline tickets (26%), video games and software (17%), other toys (14%), telephone (68%).
- Some foresters agree that ICTs should take a growing place and could be at the root of a new civilizational paradigm.

Types of media

On the psycho-pedagogical level, two kinds of media exist, namely hot media and cold media.

The combination of sound and image allow cinema to be used in all lessons and has certain advantages. Audio-visual in teaching are used because they can be used to refine the sound field in the communication of knowledge between teachers and learners.

The most common techniques are overhead projectors,

slides, video, film, discs, photos, the painting and the episcope. These techniques favour the increase of memorization, the connection of the concrete by the illustration, presentation of the object or the non-transportable or transposable situation.

They are used in all fields and in academia, in companies for advertising, information; in leisure circles as well as in the circumstances of socio-cultural animation.

These techniques have a pedagogical use in the sense they are used as way of training, learning, research and organization of teaching contents frequently presented in various forms (texts, diagrams, graphs, still images, images in motion, sound, etc.) 7.

ICT pedagogical considerations

Current times show communication as a real political, economic, social, cultural and educational issue in the development of societies. The teacher occupies an important place in a society that wants to be developed; therefore, he must be aware of the concerns of the learners and the task he has to perform.

Movies, for example, always remain an available document; in this case, we are more bound to extracurricular conditions and we can protect them when we want.

The cinema cannot, under any circumstances, be the supplement of a lesson; but it is rather in the center of it.

School television has made teaching more enthusiastic since the 1960s, when information began to differentiate school television from educational television, to homogeneous groups of learners to provide them with a set of knowledge related to school-based curricula, while the educational one is aimed at a wider audience, often unfamiliar to program organizers.

The teacher, being considered as an essential resource that communicates knowledge, is called upon to master and manipulate the audio-visual means and can render a service to his country if he is able, with ICT, to concretize his teaching.

Problems and prospects for effective teaching with ICTs

It is true that these technologies bring problems of various kinds in their use in our institutions; it is among others the following problems:
- The problems of human relationships: psycho-pedagogy in teaching with audio-visual. Harmonious environments of work in education are needed.
- Teaching is freed from certain routine servitudes to rely on information and communication technologies in audio visual pedagogy;
- Organizational and management problems: The presence of machines in our institutions, their use for educational purposes and maintenance;
- Quality issues: See what can be improved in teachers and teaching; follow-up is required to provide techniques that can help solve issues of storage and dissemination of new

knowledge;
- Planning problems: Defining a policy for improving the education system by specifying the objectives, the resources needed, and determining the sound strategies;
- Statistical issues: See the quantity of qualified machines, users and trainers;
- Teacher training problems: The need to provide teachers with training in educational technology and to organize a full-time vocational rehabilitation program.

From the above, we say that ICTs are very important in teaching because they offer several advantages, from which the questioning of the actors of the teaching to learn and to master the ICT and more the computer science which is the key to access these. The use of ICT is currently being felt to better adapt in the world of tomorrow in order to create a certain demarcation in an objective way.

2. Conclusion

In this article, we talked about the importance of ICT in psycho-pedagogical action where we mentioned the general and pedagogical considerations of ICT, the issues of various orders related to the use of these techniques.

In order to improve psycho-educational action through the use of ICTs, it would be desirable for the teacher to become aware of the cumbersome task he has to perform and to use violence to master them in order to use them at home. In his psycho-pedagogical activities so as to foster and stimulate the abilities of learners.

The teacher, being considered as an essential resource communicating knowledge, is called to master and manipulate the audio-visual means and can render a service to his country if he is able, with ICT, to embody his teaching because the knowledge is communicable.

Science is evolving in leaps and bounds, which is why pedagogy must be up-to-date and grounded in principles that bring competencies closer to institutions and society as a whole.

References

[1] Bougnaux, Content of the information, Brussels, 1995
[2] Florence MILLERAND. Uses of ICT, PUF, Paris, 2001
[3] J.P. MWENZE WA KYUNGU. Specialized psychopedagogical information, University of Lubumbashi, R.D.Congo, 2016, pp 204
[4] JOVET.J. Use and practices of new communication tools, PUF, Paris, 1993
[5] P. FLICHY and MILLERAND. F; Technical innovation, PUF, Paris, 1995
[6] REMI P. Communication Guide for the company, Maxima, Paris
[7] RADJA BIN SAIDI. Specialized psycho-educational information, UNILU, DEA, 2013