"The availability of ICT in Higher Education and University Institutions in Lubumbashi"

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1. Introduction

Our era is marked by rapid changes in technologies to which the academic cannot remain insensitive. Several countries have undertaken or continued to implement higher education reforms with a view to eliminating identified shortcomings, improving the relevance and quality of teaching and research, and strengthening the capacity of institutions in to benefit from the opportunities offered by the rapid evolution of new information and communication technologies (ICT or ICT) and regional and international cooperation (UNESCO, 2003). Today, perceived as a privileged means to improve the quality of teaching-learning and to increase the supply of education in developing countries, ICT is today the subject of national, regional and international policies. Favor of developing countries, such as those in Africa south of the Sahara Boukary (2011, p.21). Indeed, NICTs are a great way for African people to catch up with the backlog of decades (Agbobli, 2002). According to Karsenti (2006), ICT integration is equally inevitable, particularly in the field of education, in order to promote access to information as well as the success of university students. , enhance the professionalism of teaching staff, encourage leadership by managers, foster collaboration between the university and the community, and even South - South and North - South collaborations. Likewise, he adds, ICTs are powerful tools with cognitive potential that offer multiple solutions to counter current problems in education in Africa. The opportunities thus offered by ICT for improving the quality of teaching-learning and the increase in the educational offer are now accepted by many researchers and international institutions, so that the integration of these technologies into Education has become almost an absolute necessity, especially for the countries of sub-Saharan Africa (Boukary 2011, p.21).

In this article, we discuss the availability of ICTs in the world of higher and university education in Lubumbashi. Depover, Karsenti and Komis (2008) argue that ICTs will transform the didactic approach. For them, it will no longer be a question of teaching a fact to students, but rather to help them develop research skills and sharpen their critical thinking about the accuracy of the information found on the Internet. In Lubumbashi, the population growth of the population favored the increase of the number of students and the multiplication of educational structures. The majority of institutions in higher education and university institutions do not have teaching materials in terms of minimum ICT for quality education. No computer rooms, no internet

connection, lack of permanent electrical energy, no video projectors. Libraries and laboratories are rare, unsuitable or poorly equipped. Yet, according to UNESCO's report (2004, p.9), ICTs not only make it possible to participate actively in building the knowledge society, but they can also enable teachers and students to acquire knowledge and skills.

The author adds that "these technologies also make it possible to strengthen learning processes as well as the organization and management of educational institutions".

Thus, the fundamental concern of this article revolves around the following question: Are ICTs available and accessible in institutions of higher education and university in Lubumbashi? This question will allow us to better understand, in the Congolese context, the correspondences that can be established between ICT and university training, in particular in Lubumbashi, and to demonstrate if ICT really is an integral part of the process of training students in higher education. and university. The results could enlighten the actors of the Congolese education system on the need or not to put the ICTs in the training of the learners

2. Review of the ICT Literature

For Attenoukon (2011, p.73), the term ICT refers to Information and Communication Technologies. Beyond this laconic explanation, we must see "the advent of a new way of communicating. It includes digital television, fiber optic telephone, satellites, etc. The most spectacular illustration of this revolution is undoubtedly the Internet "(Mbangwana and Ondoua, 2006, p.82). In other words, ICTs refer to "a set of technologies that usually include the computer and that, when connected or interconnected, are characterized by their ability to memorize, process, make accessible (on a screen or another medium) and to transmit, in principle wherever it may be, an almost unlimited and very diversified quantity of data (Grégoire, Bracewell and Laferrière, 1996, p.2). Several terms are used to refer to ICT. Raby (2004) did a remarkable job on the different definitions of ICT used by authors and practitioners, examples: new technologies (NT), new information and communication technologies (NICT), information technology and communication for education (CTBT), etc.). The author continues that "the use of the word" computer ", taken in a broad sense, that is to say, as a substitute for the term ICT, is still common in schools" (Raby, 2005 p.18). She points out that several American authors in the 1980s and 1990s seem to use the terms "technology" and "computer" as equivalents (Raby, 2004). It is obvious that ICTs include computers, but they can not be reduced to this simple instrument. These authors are unaware of the many changes that have occurred since in technology

3. Methodology

The type of study that gave rise to this article is exploratory. We are engaged in an inductive approach by privileging the data collected on the field, which we have subsequently interpreted and analyzed. According to Muchielli (1996, p.58), the inductive approach aims at the understanding of

the phenomena starting from the data rather than the collection of data to evaluate a preconceived theoretical model or assumptions a priori »The study is part of a qualitative approach defined as "a type of research that favors non-numerical data collected in the natural environment of people. The researcher tries to interact with the study participants in order to gain a rich and credible understanding of the meaning that the participants give to the phenomenon under study "(Muchielli, 2004, p.183). In this approach, the researcher is interested in "understanding the meanings that individuals or groups of individuals give to their own lives and experiences. Anadon (2006, p.11) asserts that the point of view, the meaning that the actors give to their behaviors or their life is matter of observation and research. We proceeded to the collection of data by opting for two types of main instruments: observation and semi-directive interviews. The methodological instruments are selected depending on "the theoretical references of the research" (Ruquoy, 1995, p.60) and on their capacities, according to theoretical presuppositions, to bring a maximum of information (Deslauriers and Kérisit, 1997, p. 97). Direct observation is when the researcher proceeds directly to the collection of information, without addressing the subjects concerned. It makes direct use of its sense of observation (Quivy and Campenoudt: 2006, p.151)

The interview is a means by which the researcher tries to obtain information, which is not found anywhere else among the people who have been the most often witnesses or actors of events to which the research relates (MACE, G. and PETRY, F, 2000, p.91). For Savoie-Zajc, which is taken up by Schaut (2014, p.90), "the semi-structured interview consists of a verbal interaction moderately animated by the researcher. It will be guided by the rhythm and the unique content of the exchange in order to approach, in a mode that resembles that of the conversation, the general themes that he wishes to explore with the research participant».

Data analysis occupies a prominent place in all qualitative research (Deslauriers and Kérisit, 1997, p.98-99). Thus, "if a researcher conducts interviews, it is not just for the sake of the conversation, it does so to release knowledge of their analysis. To analyze is to grasp the internal coherence of each interview. "(Schaut, 2014, p.108). In this perspective, as indicated by Albarello (2007, p.174), the quality of the analytical work depends on the creative capacity of the researcher, his interpretative force and his writing power. The content analysis does not have these objects, but what they contain. «Thus, we will analyze and interpret the meaning of what the actors want to say through their speeches collected during the interviews and their representations of the latter

4. Results and discussion

4.1 Results

Depover and Strebelle (1996); Salisbury (1996); Sandholtz, Ringstaff and Dwyer (1997) indicate that, for there to be true integration, ICTs must be used "everyday", "usual", "regular" or "frequent". Yet, our observations have shown that ICTs are not an integral part of the student training process at the University. Many people say they feel the absence of ICT. As a result, the majority of learners express an unfavorable view of the availability of ICTs in their training

process. For its part, Raby (2004, 2005) states that "the pedagogical integration of ICT is therefore a regular and regular use of ICT in the classroom by students and teachers, in a context of active, real and meaningful learning, for support and enhance learning and teaching ". In the field, we have noticed that the majority of higher education and university institutions do not have teaching materials in terms of minimum ICT for quality education. No computer rooms, no internet connection, lack of permanent electrical energy, no video projectors. Libraries and laboratories are rare, unsuitable or poorly equipped. Yet ICT not only makes it possible to actively participate in the building of the knowledge society, but it can also enable teachers and students to acquire knowledge and skills. As Ouédraogo (2011) points out, "information and communication technologies (ICTs) bring new tools for teaching with broad fields of application and thus become an important player in the environment. and offer teachers the opportunity to supervise online students, organize collaborative work, interactive exercises or group workspace, introduce discussion forums and face-to-face meetings, to propose self-evaluations (e-portfolio), to organize end-of-cycle and memory work "Kasongo expresses himself in these terms:

"In any case, no, no, ICTs are not at our disposal because we do not have internet connections, no computer room, and no computer at our disposal. Sometimes even in some courses or we have to do TP, as we do not have a computer, that is, some who do not have one. From where we do not know how to do. Even as part of the computer course sometimes there are places where computers are still chalkboard. Really ICT is a problem. Even if you go to different institutions it's always the same thing. The computer is not really available to us. We had to put at our disposal for ICT to facilitate our training really. Some courses there is no video projectors".

Many say that they do not have easy access to computers for practical work in the context of some teaching. Yet Mbangwana and Ondoua (2006, p.82) note that "the pedagogical integration of ICT is the effective use of information and communication technologies as teaching aids during formal pedagogical sequences in the learning process."

4.2. Discussions

Our results show that in most institutions of Higher Education and University, especially in Lubumbashi, the conditions are not fully met for ICT to be an important object in the process of training students. The results show that the relevance of ICT in higher and university education is shared by the majority of teachers. This position, which we have identified in the positive attitudes of students, shows that ICT (the computer, Internet access) is an important issue in the training of students. As a result, we propose to institutions of higher education and universities to get involved in order to integrate ICTs by: the construction of buildings (lecture halls, classrooms and labs, labs, libraries and offices for teachers, etc. .), Construction of autonomous installations for research laboratories (rooms, offices, various equipment), campus autonomy in energy and running water (equipment supply, labs, etc.), engines running to ensure effective integration of ICTs. As noted by

Karsenti and Larose (2005), knowledge of the conditions under which ICT integration occurs is a factor of success and effectiveness.

5. Conclusion

ICTs have become, today, pillars of all contemporary society. Congolese higher education and university education must be in step with this evolution and Universities must integrate this new data into the training process. Our study demonstrates the importance for senior and academic institutes in developing future strategies for integrating ICT into student training. Our observation allowed us to identify representations of students regarding the use of computers and the availability of ICT in their training. The vast majority of students have negative views about the availability of ICT at the university. As a recommendation, the setting up of computer rooms and the availability of an internet connection should be suggested in the higher and university institutes, in order to allow the students a mastery of the computer tool, to serve as a teaching tool as part of the computer courses and to modernize the quality of teaching. We can also recommend to universities and higher institutes to provide teachers with computers connected to the Internet and equipped with educational software. This study will make it possible to consider more broadly the pedagogical integration of ICT in Congolese higher education and university institutions, particularly in Lubumbashi.

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