Digital Literacy: The Case of Côte d'Ivoire (Port-Bouët, Yopougon)

Moussa Mamadou DIALLO

ABSTRACT: Being literate in a given language is a vital issue, it is an essential condition to allow a speaker to achieve greater autonomy in his socio-professional field of reference. In Côte d'Ivoire, upgrading the national education system and expanding it in terms of training opportunities is a central part of the government's strategy ; the aim being to strengthen national unity and support economic growth. And, considered as tools of potential contribution to education and training, Information and Communication Technologies for Education (ICTE) could help anyone wishing to acquire skills and competences to improve professional, economic and social well-being. Hence the idea of using them in an innovative literacy approach called « digital literacy » with « Alphatic ». The experimental framework chosen falls within the municipalities of Port-Bouët and Yopougon (District Autonome d'Abidjan).

KEYWORDS: literacy, ICTE, skill, innovative approach, digital.

INTRODUCTION

The International Year of Literacy (UNESCO, 1990) has had the merit of disseminating an observation for the end of the previous century : « (…) nous vivons sur une planète plutôt analphabète » (we live on a rather illiterate planet). Approximately one billion people are affected by this scourge. People who cannot read, write or calculate have real difficulty working alongside people with these skills. Moreover, it is now clear that illiteracy is linked to poverty.

Admittedly, this is not always in line with certain forms of knowledge and wisdom. But the fact remains that illiteracy very often prevents access to modern knowledge and taking an active part in socio-professional life. Under these conditions, in the case of Côte d'Ivoire, sustainable development cannot be initiated effectively; given that several informal activities are carried out by people who have not received a school education and who therefore find themselves in a situation of handicap in the face of the digital changes of the modern world.

It is in this sense that our subject of analysis which relates to "study of digital literacy, case of Côte d'Ivoire (Port-Bouët, Yopougon)" takes on all its importance. This is a literacy experience to enable learners to acquire skills and competences in reading, writing and digital written calculation, with the aim of increasing the productivity and profitability of companies that employ them, or even the full development of these learners in terms of greater autonomy in managing the technical and/or administrative positions for which they are responsible. We will focus mainly on women in the primary and informal sector. This is explained by the fact that they are there in greater numbers, that they showed the most interest in our study and because, very often, this type of project is intended for them.

I. Specification of the problem

We will attempt to identify and formulate all the problems raised by the subject of analysis and to indicate the research objectives.

1.1. Identification and formulation of the problems raised

The African continent is the most affected by illiteracy. Indeed, about 60% of Africans are still illiterate (*afribone*, 2007). With the former Vice-President of the République de Côte d'Ivoire, Daniel Kablan Duncan (Présidence de la République de Côte d'Ivoire, 2017, Le portail officiel du Gouvernement de Côte d'Ivoire, 2017), on the 51st International Literacy Day, Côte d'Ivoire recorded an illiteracy rate of 43% out of an estimated population of more than 24.05 million inhabitants (I. BA, 2014). He also noted that illiteracy was « (…) un véritable handicap et une sorte de barrière étanche qui isole la personne concernée de la société et du reste du monde (…) » (a real handicap and a kind of watertight barrier that isolates the person concerned from society and the rest of the world). Illiterates are present in all sectors of activity, particularly the primary and informal sectors.

However, Côte d'Ivoire aspires to a satisfactory level of sustainable development with a large part of its literate population. To do this, it must take the necessary measures so that its adult population, which has no skills in the areas of reading, writing and written arithmetic, can do so fairly quickly. Therefore and privileging the important role of education as the main vector of sustainable development, in relation to the Sustainable Development Goals (The Sustainable Development Goals, 2015), precisely

the objective 4.6 which leaves no one behind[1], Côte d'Ivoire will have to make efforts at this level, in order to facilitate integration into society and particularly in this era where digital technology has made considerable progress. Already at the end of the 1970s (A. R. Baba-Moussa, L. M. Moussa, J. Rakotozafy, 2014, p.203), UNESCO recommended updating teaching aids by integrating content relating to digital technologies. Moreover, the importance of ICT in the world of literacy, through the implementation and execution of numerous literacy projects, in particular LUCIE (Raïssa Banhoro, 2020) pour l'autonomisation de la femme, Quelasy (Thierry N'Douffou, 2014) and which is the first African tablet intended for education, « AmBC » is an application designed by the firm BYTE informatique (BYTE Informatique, 2019), and, it is implemented on experimental sites by the

Direction de l'Alphabétisation et de l'Éducation Non Formelle (Ministère de l'Éducation Nationale et de l'Alphabétisation, Côte d'Ivoire) …. There is also the application Alphatic it has been implemented by UNESCO and the Nestlé company since 2017 in Côte d'Ivoire.

The Alphatic project was born from the will of the actors of the field to adapt their program to the current needs of the learners in a society which tends to digitalize, that is to say to grant more and more spaces to the activities carried out by through digital. It is therefore this project that will be the basis of our analyzes in the context of this work. By considering offers developed from ICTE, we wonder about the question of their accessibility to illiterate learners.

1.2. Research objectives

The overall objective is to present an effective literacy model based on functional literacy and digital literacy (R. Pourtier, 2010, p-101-114). Indeed, awareness of the technological backwardness constituting an obstacle in a series of major issues – social exclusion, public services, quality of life, education… – has led Côte d'Ivoire to place the education and training as a national priority. This is how the National Development Programs (PND 2016, PND 2021) grant a driving role, in their strategic axis no. 2, to the education sector. These are mainly the upgrading of the national education system and the expansion of the objectives of various modern training opportunities. These objectives must allow the achievement of a digital literacy offer and this, in an identification of the types of knowledge for the learners, in a determination of the impact of the said literacy on the living and working conditions of the learners considered.

Consequently, in line with the general objective, three (03) specific objectives emerge: first, to acquire instrumental skills in reading, writing and written calculation, then, to identify types of knowledge and skills generated among learners, and finally, determine the effects of digital literacy on the living and working conditions of learners.

II. Conceptual approach, theoretical framework and survey data

We present some concepts of the research, as well as its theoretical framework and the data collected in the field.

2.1. Conceptual approach

For the proper understanding of our study, we address the issue of types, phases and approaches to literacy, as well as the definition of some important terms. Together with the types of literacy, it is theoretical methods usually used for literacy, namely the traditional method initiated and developed during the industrial revolution (1760-1840) to train the illiterate masses in reading, writing and arithmetic through manuals and for use as clerks in factories. There was no sustainability of the achievements. And, the functional method presented by UNESCO in 1965 in Tehran (Iran). Functional literacy theory was meant to be appropriate against adult illiteracy in member countries. The knowledge acquired is directly linked to profitability and increased income for learners (K. M. Koffi, 2015, p.10-11).

With the method of conscientization (Paulo Freire, 1961), the purpose is the political liberation of the oppressed illiterate strata, by becoming aware of their conditions as exploited masses. The theory behind it sees illiteracy as a visible materializing factor of social stratification. Thus, the literate have access to knowledge and can free themselves from the domination of employers. As for the TICE, they will be considered as « l'ensemble des technologies issues de la convergence de l'informatique et des techniques évoluées du multimédia, des télécommunications pour l'amélioration du traitement de l'information, de sa mise en mémoire, de sa diffusion (…) » (A-S. Bellair, 2013, p.623-626) (all the technologies resulting from the convergence of computing and advanced multimedia techniques, telecommunications for improving the processing of

information, its storage, its dissemination). Thus, digital culture can be conceived, in a generalizing dimension, as a dynamic ecosystem, always in tension between an "algorithmic tendency with a strong normative dose" and "a dynamic of the efficiency of uses".

2.2. Theoretical framework

Data collection took place in two (02) municipalities of the city of Abidjan: first in Port-Bouët which concentrates many economic activities (the Autonomous Port of Abidjan, the Félix

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[1] In other words, it is about "ensuring that all young people and a considerable proportion of adults, men and women, can read, write and count by 2030" (…).

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Houphouët-Boigny international airport, the departure station of the "Abidjan-Niger" railway, the municipal slaughterhouse, an important industrial zone, a large market made up of numerous small businesses, etc., the sites of which served as the place of investigation; then in Yopougon where additional economic activities take place (the extension of the Autonomous Port of Abidjan, the thermal power plant of Azito, an important industrial zone, a large market made up of many small shops, etc.). As for the target population, it is made up of all the people who work within the companies and who partially served as the target audience. We can note the presence of five hundred and ten (510) learner beneficiaries of the digital literacy project with « Alphatic », initiated by UNESCO and NESTLE (Agence de presse africaine, 2022 ; NESTLE, 2019).

And, the data collection technique was focused on network sampling, due to the size of the target audience. We interviewed people who matched the profile we were looking for. Then, they were asked to identify any throughout the survey area. This gives the following statistics: 84 learner beneficiaries, i.e. 50 in the municipality of Yopougon (Sicogi, Selmer, Wassakara) and 34 in the municipality of Port-Bouët (Derrière Wharf, Vridi, Gonzagueville).

2.3. Survey data

With respect to the age criterion in Yopougon (Table 1), the youngest population in our survey and whose age varies between 16 and 30 years represents 12%, that belonging to the age group of

31 to 50 years is estimated at 66%. And, the oldest segment represents 22%: it is between 51 and 80 years old.

Table 1 : statistics by age (Yopougon)

identifier according to age	number of beneficiaries	percentage validated	frequency
16 à 30	6	6	12%
31 à 50	33	33	66%
51 à 80	11	11	22%
Total	50		100%

For the criterion relating to the level of schooling in Yopougon (Table 2), it shows the summary of the level of schooling of the beneficiaries. It shows that 16% received schooling during their childhood and 84% did not receive any schooling during their childhood.

Table 2 : statistics by level of schooling (Yopougon)

identifier	education level	percentage validated	frequency
educated	8	8	16%
unschooled	42	42	84%
Total	50		100%

As for the municipality of Port-Bouët, we have the following statistics according to the age of the beneficiaries (Table 3): most of the respondents are aged between 31 and 50, i.e. 79.61% of the beneficiaries. Then, 2.94% represent the age group from 16 to 30 years old, and 17.65% for beneficiaries from 51 to 80 years old.

Table 3 : statistics by age (Port-Bouët)

identifier according to age	number of beneficiaries	percentage validated	frequency
16 à 30	1	1	2,94%
31 à 50	27	27	79,61%
51 à 80	6	6	17,65%
Total	34		100%

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With the criterion of the level of education in Port-Bouët (Table 4), the statistics are 35.71% for the school population, or 64.71%. This high rate shows that in this municipality, there is a high school enrollment rate; hence the interest for the beneficiaries to take an interest in the digital literacy project.

Table 4 : statistics by level of schooling (Port-Bouët)

identifier	number of beneficiaries	percentage validated	frequency
educated	22	22	64 ,71%
unschooled	12	12	35,3%
total	34		100%

III. Discussion of data according to objectives

We present the results of our survey according to our objectives before interpreting the main results.

3.1. Survey results

First, according to the data collected in the field, it appears that digital literacy is more difficult than traditional literacy. However, the use of digital in the literacy process is one of the aspects capable of positively influencing the acquisition of skills and competences in reading, writing and written calculation of learners. Indeed, starting from the initial illiteracy situation, comparisons between digital literacy and traditional literacy (without the use of digital) are possible. This was updated during the administration of the survey questionnaire. When asked to do so, the learners gave opposite answers in two main tendencies: when one party asserted that digital literacy is more difficult than traditional literacy, the other argued the opposite. These two trends are reflected throughout the tables below (tables 5, 6, 7, 8).

Table 5 gives us an idea.

Table 5 : digital literacy is more difficult than traditional literacy

Identifier	number of beneficiaries	percentage validated	frequency
OK	24	24	28,57%
NO	60	60	71,43%
total	84		100%

The statistics in Table 5 indicate that 28.57% of learners say that digital literacy is more difficult than traditional literacy. On the other hand, 71.43% believe that digital literacy is no more difficult than traditional literacy. Such a propensity can also be explained by the fact that digital literacy takes longer than traditional literacy (see "Table 6").

Table 6 : digital literacy takes longer than traditional literacy

identifier	number of beneficiaries	percentage validated	frequency
OK	22	22	26,2%
NO	62	62	73,80%
total	84		100%

Here (Table 6), the statistics show that 26.2% of the beneficiaries surveyed felt that digital literacy took longer than traditional literacy, while 73.80% said the opposite. This last trend justifies it by the fact that this type of literacy would leave time to attend to other occupations, for example carrying out transactions relating to the digital domain, better managing activities generating additional income, participating in the family management of more efficient way.

Table 7 : distribution according to the motivation of the learners

identifier according to the motivation	number of responses per learner	percentage validated	frequency
acquisition in reading, writing and arithmetic	59	59	70,23%
economic activity management	14	14	16,67%
family management	11	11	13,10%
total	84		100%

Here (Table 7), the statistics are 70.23% of the beneficiaries surveyed according to motivation and who consider that they have acquired knowledge in the reference areas (reading, writing, arithmetic). However, we note that others carried out quite low complementary activities respectively of 16.67% for economic activity and 13.10% for family management. This can be put down to the difficult beginnings of the application of any innovative project and the first contacts of the learners with the digital tool. Afterwards, the motivation will help them to improve the different percentages.

3.2. Interpretation of the main results

Two (02) types of assessment will be identified, namely the level of the objectives for the acquisition of instrumental skills and the level of the specific objectives assigned to the acquisition objectives.

3.2.1. Interpretation of the results in Table 5 according to the objectives of acquiring instrumental skills (reading, writing, written calculation)

Of the 84 learners surveyed, 70.23% said they had enrolled in the digital literacy course in order to learn to read, write and calculate. They are now capable of it. 16.67% of the learners affirmed, according to the initial motivations, to be now able to manage the expenses of money without however touching the goodwill, keeping an account book and having a sheet for keeping stocks. Some learners mention the reasons of autonomy for which they take digital literacy courses. They manifest, through their words, the desire to no longer depend on others. 13.1% said they learned about family management and now they participate in family expenses, or other related activities. However, it should be noted that the fact that a learner belongs to one of the categories does not exclude her from the others. Thus, the 16.67% motivated by the acquisition of technical and professional skills have certainly also acquired management skills.

3.2.2. Interpretation of the results according to the specific objectives above

The first specific objective focused on the acquisition of instrumental skills in reading, writing and written calculation. It was therefore a question of learning to read in order to be able to become more independent during administrative procedures, to find work, to leave home and to be able to manage on your own, to integrate society and better understand the world that surrounds him. surrounds, gain more self-confidence, monitor the children's schooling (attend and speak at parentteacher meetings, have lessons reviewed at home, read and interpret the information on the transcript, etc.), access the world of writing and the pleasure of reading and writing, and of writing the story of one's life. In this order of ideas and according to A. F. Loukou (2011, p.52-58), everyone should have the opportunity to acquire the skills and knowledge necessary to be able to play an active role in the information society and the knowledge economy, to understand how it works and to take full advantage of it.

This is where digital literacy stands out as a new, more innovative and more accessible approach in the adult teaching-learning process. This literacy can be seen as a means of teaching-learning and optimizing achievements in the effective management of adult education. Therefore, as developed, the application Alphatic is less restrictive in terms of the time to devote to teachinglearning: a position supported by 73.80% of learners who believe that their participation in this offer does not affect the conduct of their other activities.

As for the second specific objective, it was related to the identification of the types of knowledge and skills generated in the learners. Here, the contribution of digital literacy is invaluable in the process of acquiring technical and professional skills. At the end of the digital literacy project with the Alphatic project, 70.23% of female learners declared having acquired instrumental skills such as reading, writing and calculation in writing and 16.67% claimed to have acquired technical and professional skills.

With regard to the third specific objective in connection with the determination of the effects of digital literacy on the living and working conditions of learners, it is difficult to measure the effects with the learners in our survey, because the project having started recently, it has not yet reached the term fixed by its designers.

Notwithstanding this, based on certain verbatim of the learners during the survey-interview, we can realize that the literacy of these women, via Alphatic, was beneficial to them, in particular, when one of between them says, « avant je louais la table sur laquelle je vendais et aussi le parasol… et chaque soir je devais payer pour ça… que mes marchandises marchent ou pas… ce qui était dur pour moi… mais l'enseignant m'a dit que je devais pas faire comme ça… ainsi… et il m'a montré comment faire… maintenant j'ai ma propre table et j'ai acheté mon parasol, les dépenses ont diminué… » (« before I used to rent the table I sold on and also the parasol… and every night I had to pay for it… whether my goods worked or not… which was hard for me… but the teacher told me that I shouldn't do like this… so… and he showed me how to do it… now I have my own table and bought my parasol, the expenses have gone down »). In addition, 16.67% claim to be now able to plan money expenditure, keep an account book, fill out a form relating to the inventory of product stocks, without however touching the goodwill.

CONCLUSION

We have found that digital literacy gives illiterates an additional opportunity to acquire skills essential to their development, such as instrumental skills and the improvement of their living and working conditions. So, according to I. Salengros (2005, p.205-212), the consensus around the Internet makes it possible to note the large number of possibilities offered by digital technology for teaching-learning.

However, it is clear that in addition to the usual digital possibilities, in the case of Côte d'Ivoire, it is a question of developing a more active interactive teaching-learning to always capture the attention of the target populations. This will be a major challenge to be met, due to the "absence of the trainer" – he is not physically present – and the low socio-financial level of the populations considered !

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