Differentiated Pedagogy and Efficiency of the Practice of E-Learning in Secondary School

Manuel Sören KAMGANG

PhD Student, Assistant Lecturer, Department of Sciences of Education – HTTC Bertoua, University of Ngaoundere Cameroon

*****Corresponding Author:** *Manuel Sören KAMGANG,* *PhD Student, Assistant Lecturer, Department of Sciences of Education – HTTC Bertoua, University of Ngaoundere Cameroon*

Abstract: *Out of the three aspects of pedagogy, we hitched up ourselves in this dissertation to differential pedagogy and the efficient practice to E-learning in secondary schools, since the advent of COVID-19, students and teachers in the city of Bertoua, especially those at Mokolo IV High School, are confronted with distance education that changes traditional practices based on the presenter. These new forms of teaching take intoaccount characteristics based on the adaptation of teachings and the consideration of the environment, hence a new practice called differential pedagogy. The application of this seems to be appropriate to respond to the context of e-learning. Concerning our question, we asked ourselves: does differential pedagogy make the practice of E-learning in high school efficient? Thus the aim of this study is to show that differential pedagogy makes the practice of e-learning efficient. Thanks to the theory of socio-constructivism of Vigotsky (1997) and Bruner (1960), we formulated a general hypothesis that differential pedagogy makes the practice of e-learning in high school efficient. This gave rise to two research hypotheses. H1: The adaptation of teaching by teachers facilitates efficient practice to e-learning in Government High School Mokolo IV. H2: Socio-cultural milieu facilitates efficient practice to e-learning in Government High School Mokolo IV .In order to verify these hypotheses, we have conducted an interview guide addressed to seven subjects' learners of Government High School Mokolo IV. The treatment of these data has been done by analyzing the content of this designed speech. Analysis of our respondents' data allowed us to verify our assumptions and we can say to our respondents that differential pedagogy makes the practice of e-learning efficient. In light of these results, several recommendations have been made to education stakeholders, government and Guidance and Counselors to tie down their activities to the practice of e-learning.*

Keywords: *Pedagogy, Differentiated Pedagogy, Efficient, E-learning.*

1. INTRODUCTION

Different definitions are applied to the word pedagogy. We can define it as all the methods and practices of teaching and education as well as all the qualities required to transmit any knowledge, which can be categorized according to several criteria. Clerc (2002) designates it as the set of scientific and practical knowledge, relational and social skills that are mobilized to design and implement teaching strategies. We have, among others: general pedagogy, specific pedagogy and differentiated pedagogy which designates an education in which the pupil is considered as a person with his own representations of the training situation. In other words, it is a varied learning method that offers a range of approaches opposing the identity myth of uniformity according to which everyone must work at the same pace, for the same duration and by the same routes; hence distance education, which for ages has been seen as a way of making education accessible to anyone who cannot enroll in "normal education." Sometimes it can be geographic remoteness, lack of financial resources, crises like the health crisis (COVID 19), or even lack of time (on the part of those who work). Distance education offers have been developed at all levels in secondary education (correspondence courses, support courses in vocational training and higher education), using traditional means, mail, television as well as from the radio. Information and communication technologies have opened up new perspectives and allowed an extraordinary development of this type of education. The use of the Internet has greatly facilitated access to education and to a wide variety of audiences around the world.

The pandemic has come to allow the education system to look back. Indeed, triggered in China between September and October 2019, according to official sources (CBA Training), it was around mid-February that the number of subjects infected outside China, due to international traffic, will actually cause a real psychosis and several countries will start to take the situation very seriously. Africa and particularly Cameroon, will truly enter the battle in the month of March 2020 with more-or-less restrictive barrier measures, enacted by the government in order to protect the populations. In addition to closing the borders, the suspension of lessons in all schools will be one of the measures that reveal something new in Cameroon, at least for recent generations. Social distancing is therefore one of the strongest recommendations; which imposes remote work as the only means for the millions of learners in Cameroon. COVID-19 thus gives the opportunity to promote the alternative modes of training which have been modes set out for several years, but which until then have had difficulties in being implemented, due to the fact that some do not consider themselves ready, to the extent that teachers and learners still have a difficult and distant relationship with technology. This pandemic would therefore be an opportunity for states like that of Cameroon to catch up on the already accused delay.

It is on this basis that we decided to work on the theme: "Differentiated pedagogy and efficiency of the practice of e-learning in secondary education. To facilitate our work, we took the case of the Government High School Mokolo IV". The objective pursued in this study is to investigate the efficiency of differentiated pedagogy in the practice of E-learning at Government High School Mokolo IV.

2. PROBLEM

2.1. Report

With COVID-19, students face exceptional and difficult circumstances as learning is intimately linked to the emotional. From there, digital technology offers considerable strengths to nurture the student/teacher relationship with the aim of strengthening it first of all: the role of the teacher is set to evolve considerably with digital pedagogy. So the pandemic brings to light the digital divide in Cameroon. We also note with this epidemic that the priority areas to be linked to ICT are education and health.

The recent survey conducted by the Minister of Secondary Education reveals that only 20 to 25% of teachers in Cameroon have internet access, and most do not have ICT skills. However, the latter, advantageously used, can very well serve the educational purposes to consolidate learning.

2.2. Pedagogical Practice

At the pedagogical level, it is clear that in terms of online learning, the ways of doing things for nearly two decades have not had the expected success, both on the side of students and professors Blin and Munro (2007). Educational institutions struggle to implement viable forms of online learning: students feeling isolated; high attrition rate; marked dissatisfaction and resistance from faculty; onerous upstream design and general administrative concerns in relation to the production of quality e-learning resources.

According to Sammons and Ruth (2007), professors report many difficulties in teaching online, that is, in asynchronous mode. Many do not consider themselves technologically competent and often do not have the time or desire to familiarize themselves with the technology required for the media coverage of their Maguire courses (2005). At the end of the day, professors feel lost when it comes to teaching their courses online and feel like they've given up some of their hold in favor of designers and programmers.

Also teachers who offer virtual lessons also denounce the time consuming asynchronous mode. However, this results in feelings of dissatisfaction and frustration, especially when the faculty is under pressure from the administration, professors who teach in asynchronous mode also report the feeling of being "disconnected" of students, this connection being often the main reason they chose to teach in the first place.

2.3. At the Level of Human Resources

Training consists of the accumulation of capital within individuals and its breakdown is in fact real. By looking at the workforce in primary, secondary and higher education, if we make an assumption of

accumulation over a certain period, we will realize that the State is the loser at the macroeconomic and microeconomic level, and if the state loses then individuals and society too. Distance learning requires the use of digital tools and the Internet. However, mastering new tools takes time and can create some stress for teachers who do not intend to become distance teachers, especially as many have chosen this profession to teach face-to-face. The trained teachers, although there are insufficient numbers, require distance training mechanisms, this at a higher cost than face-to-face training insofar as it (distance learning) incorporates personalized approaches. Also, multimedia resources are not accessible to everyone. In poor countries, part of the population does not have easy access to digital culture since there is the problem of language barrier especially given that most of the resources are in English, English being the digital language. In these countries, the better acquired training must be transmitted in the learner's mother tongue or one that is most familiar to the learner.

2.4. In Terms of Availability

In January 2020, Cameroon had 7.8 million people connected to the internet, according to a report published by *"Hootsuite"* and *"We Are Social"*, two organizations with platforms for monitoring flows on social networks and Internet. With this number of Internet users, we learn that the internet penetration rate in Cameroon is 30%.

Indeed, according to the same reports, more than 59% of Cameroonian internet users connect to the web via smart phones, at the same time, only 39.4% have access to the internet via computers and 13% via tablets.

However, ignoring certain training courses by thinking that the information or a tutorial is available online poses a problem in crisis or emergency management situations when the crisis is accompanied by a general blackout of electricity or internet access. The disparity is evident between pupils and students in the big cities and those in the hinterland. These educated people in most cases do not have the majority of computers and smart phones to tie in with E-learning. People suffer from long-term power cuts. Apart from the high cost of accessing the course by videoconference, i.e. 500 to 1500fcfa per session, we also deplore the low coverage of 3G and 4G mobile networks. Students in this region are forced to meet regularly in front of a town bakery to benefit from the electricity of this local business. Such inconveniences are frequent throughout the country and hamper the conduct of online courses during the course.

3. AIM

In the context of this research, it is about a main question and secondary questions that should allow the operationalization of the central question of our research.

The observation presented allowed us to lead to the main research question which is the following: does differentiated pedagogy make efficient the practice of E-learning at Mokolo IV high school? This question raises other specific questions.

Specific Questions

- Does the adaptation of teaching by teachers make the practice of E-learning efficient?
- Does taking into account the socio-cultural environment make the practice of e-learning efficient?

We naturally divided our objectives into the main objective and the specific objectives. Our main aim here is to investigate the efficiency of differentiated pedagogy in E-learning.

Specifically

More specifically this research aims to:

- Investigate the adaptation of teaching in E-learning;
- Investigate the consideration of the socio-cultural environment in E-learning.

Our two hypotheses are formulated as follows:

H1 - The adaptation of teaching by the teacher makes the practice of E-learning efficient at Mokolo IV high school.

H2 - taking into account the socio-cultural environment makes efficient the practice of e-learning at the secondary level.

4. METHODOLOGY

4.1. Type of Research

We opted for a qualitative type of research in order to show that differentiated pedagogy makes the practice of E-learning efficient. This type of research, applied to a small sample, helps us to identify, determine the problems or properties of situations or events. In our case, it was a question of identifying the problems that students face, of knowing their impact on their academic performance. For that, this study was carried out in a very precise place.

4.2. Description of the Study Site

Located in the eastern region more precisely in the division of Lom and Djerem, in the sub-divisional community of Bertoua 1, on the eastern side of the city, 3 km after the Mansa hotel, this educational institution was created in 1991 as GSS (government secondary school). The choice of this high school was due to the fact that we framed some student/teachers in the said institution. So we are already in some ways familiar with the environment of this school thanks to the participation in numerous lessons and lectures. From there, we found that some classes practiced E-learning and because of the presence of COVID -19, the students had to respect the barrier measures decreed by the government by a half-time system.

To carry out the research, it is limited geographically. The site here is a public government high school institution located in the sub-division of Bertoua 1, division of Lom and Djerem and in the EAST region. This institution was created as a Government Secondary School (GSS) of Mokolo IV by decree of the Prime Minister no 1990/1226 / PM of August 18, 1990. It became a high school for reasons of population explosion and strong demands for education in the locality, on August 05, 2005 by Decree n0 2004/2143 / PM.

Table1. *Summary of classrooms by division*

Classes	6ème	5ème	4ème	3ème	2nde	1ère	Tle
Divisions	4	6	9	10	13	13	11

4.3. Study Population

Our parent population being all students of general secondary education and technical education in Cameroon, the target population of our study is made up of all students from the Lom & Djerem division in general and in particular from those of the district of Bertoua I. Our study therefore concerns a part of this population. So our accessible population is made up of students in the class of Terminale of Government High School Mokolo IV. This population is relatively estimated at seven.

4.4. Sampling Technique Used

As part of our study, we based ourselves on the concept studied which is the differentiated pedagogy and efficiency of the practice of E-learning in high school and on the above-mentioned criteria for using the non-probabilistic sampling method. In other words, we applied more precisely the reasoned sampling technique, adapted to qualitative studies Depelteau (2003). In fact, this mode is done on the basis of one or more characteristics fixed in advance. The purpose is to collect information on members of the population with these characteristics. In the present case, this reasoned sample is typical, compared to the fact realized.

4.5. Study Sample

Our research is based on multiple case sampling. We have presented the research by multiple cases with reference to research that uses interviews. It is precisely based on students in the final year of school at the Government High School Mokolo IV.

4.6. Choice and Description of Data Collection

In order to reach a concordance of the research hypotheses and the field results, for an objectivity of the information, for the scientificity of this study, we used the interview guide.

Our interview guide has been put together with the main key points of the interview to which the respondent must answer; the questions asked here are not precise: just general reformulations allowing to focus, discuss or re launch the debates.

It was designed taking into account the variables of the main question, the themes used in the research depending on what we expect from the interviewee:

⬩ *Theme 1:* Adaptation of teaching by teachers

Sub-theme 1: reformulation of teaching content

Sub-theme 2: taking into consideration the intellectual level

Sub-theme 3: taking into consideration the programs in force

⬩ *Theme 2:* Considering the socio-cultural environment

*Sub-theme 1:*easy access to the internet

Sub-theme 2: possession of a cell-phone or a computer

Sub-theme 3: presence of electrical energy in the locality

Sub-theme 4: presence of a multimedia centre

⬩ *Theme 3:* Appreciation of E-learning

Sub-theme 1: love for E-learning

Sub-theme 2: enriching practice of E-learning

Sub-theme 3: wish to renew this practice.

4.7. Data Analysis Technique

We opted for the thematic content analysis which aims "to identify the semantic units that contribute to the discussion universe of the statement" (Negura, 2006: 27). It allowed us to have an in-depth qualitative approach to all the information produced and to present an analysis grid to better materialize the information obtained.

Table2. *Analysis Grid for Information*

Variables	Themes	Codes	Sub-themes	Remarks/Discussion
Differential Pedagogy	Adaptation of lessons by the teacher	A	Reformulation of content teaching	
			Taking into account the intellectual level	
			Taking into account the programs in vigour	
	Taking into account the socio-cultural environment	B	Easy access to Internet	
			Possession of cell-phone or computer	
			Presence of electrical energy in the locality	
			Presence of a multimedia center	
Efficiency in the practice of E-learning	Appreciation of the practice ofE-learning	C	Love for E-learning	
			Rewarding practice of E-learning	
			Wish to renew the practice	

5. PRESENTATION OF THE RESULTS

It is our responsibility here to present our respondents as well as the interviews with them.

Table3. *Presentation of Respondents*

Surveyed	School	Ages	Sexes	Classes
S1	LM4	17	F	TD
S2	LM4	18	M	TC
S3	LM4	18	F	Tesp
S4	LM4	16	M	Tesp
S5	LM4	19	M	TC
S6	LM4	16	M	TD
S7	LM4	17	F	Tall

S1 Remarks :

According to the first respondent S1, the adaptation of teaching by the teacher involves reformulating the teaching content *"Yes!" Because distance courses are more explanatory and detailed, for example in physics, we observe experimental phenomena compared to the classroom situation where there is no experimental device "*. It does not take into account the intellectual level of the learners, but moreover takes into account the programs in force, illustrated by the chosen piece of the verbatim: *"everything that we are taught in the networks is part of our program since, before receiving these courses the head of department takes a look at them"*.

However, in terms of consideration of the socio-cultural environment, it appears that for a good differentiated pedagogy based on poor easy access to the internet, it is necessary to have a cell-phone or a computer, corroborated by the lack of electricity in the locality, highlighted by the verbatim *"Eneo does not like our district, but in the neighbouring districts there is electricity. So we use solar panels at home"*.

Speaking of the appreciation of the practice of E-learning which is done out of love for E-learning: *"my parents give me money and this money they give me is for my snack, but I transfer it to my phone"*. The S1 respondent assures us with regard to the enriching practice of E-learning corroborated by the wish to repeat this practice: *"yes, I enjoyed the distance courses because I can watch reruns as many times as I want"*.

S2 Remarks:

Respondent S2 gave various opinions during her interview. Regarding differentiated pedagogy, she affirms an adaptation of teaching by the teacher and taking into account the socio-cultural environment. However, for our interviewee, this adaptation within her establishment was not made by reformulating the teaching content, hence the chosen piece: *"No because E-learning courses are not accessible to all due to the fact that not all students have access to these communication tools."*. This was done by consideration of the intellectual level. The S2 interviewee ensures that their adaptation does not take into account the programs in force.

In addition, our interviewee insists that for taking into account the socio-cultural environment, easy access to the internet is lacking, illustrated by the verbatim *"No, the internet connection is excessively expensive, tools like telephone, computer are not accessible to all. The intense electricity seizures make the procedures even more complicated for us"*. In view of the low income presented by families in eastern Cameroon, our interviewee certifies that she does not have a telephone or computer and similarly there is a problem of electricity instability in the locality and the presence of a multimedia centre. Despite everything, the S2 respondent gives an appreciation of the practice of E-learning, this interviewee certifies that she has no love for E-learning, in the same vein she assures that she is not leading an enriching practice of E-learning and also does not wish to repeat the experience never lived.

S3 Remarks:

It emerges from the interview with the respondent S3 who ensures, with regard to the adaptation of the teachings by the teacher, that no reformulation of the teaching contents has been taken into account within his institution, where the track chooses *"No because, when he sets up the courses to*

send us with pressure, he picks up everything he sees concerning the course to put on digital media". The interviewee insists that their intellectual level is still taken into account in the context of differentiated pedagogy. Regarding the taking into account of the programs in force, S3 ensures that their adaptation takes into account the programs in force.

In addition, taking into account the socio-cultural environment highlights the sub-themes presented by our interviewee who thinks that he does not have easy access to the internet, he says that he also does not have a cell-phone or computer, hence the verbatim : *"No, I don't have a phone and a computer. I work with my parents' phone and I don't have the ability to use their phones all the time. ".*In the same log, our interviewee describes the lack of electrical energy in his locality and the presence of a multimedia centre.

However, our interviewee made a poor assessment of the practice of E-learning, he assures us that he has no love for this learning method, hence *"no, because online courses are too difficult to assimilate while the classroom lessons are comprehensive".* We note that the latter attests to find enriching the practice of E-learning and moreover does not wish to renew this practice.

S4 Remarks:

We noticed from the interview with S4, very positive opinions for each topic. The latter ensures with regard to the adaptation of the teachings by teacher that he admits the existence of a good reformulation of the teaching contents, the taking into account of the intellectual level and my taking into account of the teaching programs in force. .

It emerges from the taking into account of the socio-cultural environment that S4 ensures that it has easy access to the internet that it uses from its cell-phone or a computer and ensures in its locality of residence to have permanent electricity and presence of a multimedia centre. The latter also gives a good appreciation of the practice of E-learning, hence an unconditional love for this learning aid tool which is due to the fact that our interviewee hammers out a rewarding practice hence the chosen piece: *"There is indeed a multimedia room; we only go there for practical computer lessons except that there is no internet connection and the regular power cuts often make tasks impossible".* However, S4 assures us that we wish to renew this practice.

S5 Remarks:

S5 gives advice on all questions allowing us to master the different contours of our central theme concerning differentiated pedagogy, adaptation of teaching by the teacher and taking into account the socio-cultural environment. However, for our interviewee, this adaptation within her institution was made by reformulating the teaching content; this was done by taking into account the intellectual level. The respondent S5 ensures that their adaptation takes into account the programs in force.

In addition, our interviewee insists that in order to take into consideration the socio-cultural environment, there are easy access points to the Internet made available to her. In view of the sociological background from which she comes, our interviewee certifies having a cell-phone or computer and also having no electricity stability in the locality and the presence of a multimedia centre.

Despite everything S5 gives a good appreciation of the practice of E-learning, this interviewee attests having love for E-learning, in the same vein she ensures to lead a rewarding practice of E-learning and at times also wishes to renew the lived experience.

S6 Remarks:

It emerges from the interview with the respondent S6 who ensures, with regard to the adaptation of teaching by the teacher, that reformulations of teaching content have been taken into account within his school, hence the chosen piece *"yes, because the lessons are more detailed, the teacher explains a lot and gives more examples.".* The interviewee insists that their intellectual level is still taken into account in the context of differentiated pedagogy. In addition, S6 ensures that the programs in force are taken into account.

In addition, taking into account the socio-cultural environment shows from the interview that concerning easy access to the internet is effective, hence the verbatim: *"yes, because there is presence of connection data recharging networks",* she also says she owns a phone or computer, hence the

words: *"yes I have an android laptop with which I download the lessons via the net and I also have fun.".*In the same launch, our interviewee describes the availability of electrical energy in her locality and the presence of a multimedia centre.

Nevertheless, our interviewee gives a good appreciation of the practice of E-learning, she claims to have love for this method of learning. We note that the latter attests to find enriching the practice of E-learning and also wishes to renew this practice.

S7 Remarks:

Our last interviewee S7 gives advice on all questions allowing to master the disputes, the twists and turns of our central theme concerning differentiated pedagogy. Adaptation of teaching by the teacher and taking into account the socio-cultural environment. However, for our interviewee, the adaptation within his institution was made by reformulating the teaching content, this was done by taking into consideration the intellectual level and also their adaptation takes into account the programs in force.

In addition, our interviewee insisted that in order to take into consideration the socio-cultural environment, there are no easy access points to the Internet made available to them. In view of the sociological background from which he comes, our interviewee certifies that he owns a telephone or computer and, moreover, does not have energy stability in the locality and the presence of a multimedia centre.

Despite everything, S7 gives a good appreciation of the practice of E-learning, this interviewee attests having love for E-learning, in the same vein, he ensures leading rewarding practice of E-learning and at times also wishes to renew lived experience.

6. THEORETICAL DATA

Socio constructivism is a process by which a learner, through a series of exchanges with his peers and the teacher, interacts his knowledge with knowledge, with the objective of creating new knowledge adapted to the constraints and resources of the situation he is currently facing in order to use his new knowledge. In addition, it introduces the relational dimension of a subject who learns with others by interacting with them (teacher or student) in a social context which influences the construction of knowledge and which therefore necessarily includes an affective dimension (Raymond, 2006).

In a very similar way, Fuchs and Bishop (1992) distinguish between routine adaptations and specialized adaptations. Routine adaptations relate to variations that the teacher introduces in order to provide differentiated instruction, while specialized adaptations are those that are made systematically in light of the specific difficulties of the students. These adaptations therefore imply that beyond the routine adaptations that sometimes arise, teachers make more substantial modifications to their planning when it comes to responding to specific difficulties in certain pupils in particular (Fuchs, Fuchs et al. Bishop, 1992).

Specialized adaptations must also be designed taking certain conditions into account: they must be feasible and implemented by the teacher within the normal course of class activities; they must not disturb pupils considered to be in difficulty or other pupils in the class; they involve a process of consultation and collaboration with other teachers, including the teacher specializing in remedial education, and other specialists as needed, such as the psychologist, speech therapist or specialist educator (Fuchs and Fuchs, 2001) .

Bandura's Social Learning Theory describes how children can learn new behaviors by observing other people: they mimic patterns of behavior that are rewarded, not punished. This theory designates three acquisition procedures that have their source in the entourage of the individual:

So-called vicarious learning is that which results from imitation by observing a peer who performs the behavior to be acquired (trainer or member, leader-group),

Social facilitation refers to improving the performance of the individual under the effect of the presence of one or more observers, which in many cases favors group training. Cognitive anticipation is the integration of a reasoning response from similar situations, which will lead to methods of cognitive educability, primarily intended for adults.

Furthermore, Vygotsky (1989) considers that learning takes place initially in a collective activity supported by the trainer and the social group; then in a second step during an individual activity and it then becomes an internalized property. Bruner (1960) adds an additional element to this: the role played by the "cultural environment" of the individual. Its learning and its success also depend on culture.

7. INTERPRETATION AND DISCUSSION

The point here is to interpret and succinctly discuss the results from the two research hypotheses.

7.1. Interpretation and Discussion of the H1 Hypothesis

Our research hypothesis H1 formulated as follows: The adaptation of teaching by the teacher makes the practice of e-learning in secondary school efficient. Our respondents give positive opinions or 71.42% on the reformulation of teaching content which is the majority, moreover for what is taken into account of the intellectual level or 85.71% of positive cases hence the chosen piece *" yes they take into account my level because, they are all courses which are part of our program".* However, with regard to the taking into account of the programs in force it emerges from the majority of verbatim i.e. 85.71% of our sample hence the chosen piece of one of our interviewees *"yes they take the program into account because the lessons we are given are the lessons that are part of the program that our teachers gave us at the beginning of the year", hence* our hypothesis is confirmed at 80.95%. These results find meaning in the theory of socio constructivism, which is a theoretical current in pedagogy that draws its sources mainly from work on the evolution and adaptation of the human being by Piaget (1976). He advocates that the individual builds his knowledge through experimentation and discovery. Indeed, the individual is not alone, he is surrounded by other people who have an impact on him and his development. Socio constructivism is one of the main theoretical currents of learning. It wasn't until the publication of the book *" Between Science and Reality: The Social Construction of What?"* De Berger and Luck Mann (1966), who we see appearing as *"social construction".*

Socio constructivism is a process by which a learner, through a series of exchanges with his peers and the teacher, interacts his knowledge with notion, with the objective of creating new knowledge adapted to the constraints and resources of the situation he is currently facing in order to use his new knowledge. In addition, it introduces the relational dimension of a subject who learns with others by interacting with them (teacher or student) in a social context which influences the construction of knowledge and which therefore necessarily includes an affective dimension (Raymond, 2006).

In a very similar way, Fuchs and Bishop (1992) distinguish between routine adaptations and specialized adaptations. Routine adaptations relate to variations that the teacher introduces in order to provide differentiated instruction, while specialized adaptations are those that are made systematically in light of the specific difficulties of the students. These adaptations therefore imply that beyond the routine adaptations that sometimes arise, that teachers make more substantial modifications to their planning when it comes to responding to specific difficulties in certain pupils in particular (Fuchs, Fuchs & Bishop, 1992).

Specialized adaptations must also be designed taking certain conditions into account: they must be feasible and implemented by the teacher within the normal course of class activities; they must not disturb pupils considered to be in difficulty or other pupils in the class; they involve a process of consultation and collaboration with other teachers, including the teacher specializing in remedial education, and other specialists as needed, such as the psychologist, speech therapist or specialist educator (Fuchs and Fuchs, 2001) .

7.2. Interpretation and Discussion of the H2 Hypothesis

Our research hypothesis H2 was formulated as follows: Taking into account the socio-cultural environment makes efficient the practice of e-learning at the secondary level. Regarding this variable, we notice that our seven interviewees by category give positive opinions regarding easy access to the internet, i.e 57.14% of our sample being illustrated by one of the pieces chosen: "*Yes, internet access is possible in our city very well"*. In addition, with regard to the possession of a telephone or a

computer it appears that 71.42% of our workforce ensures highlighted by the chosen piece *"Yes I use a cell-phone and the lessons reach to me by means of WhatsApp, telegram and many other means offered by the phone"*. However, with regard to the presence of electricity in the locality, our interviewees hammered out positive opinions, i.e. 14.28%.

However, with regard to the sub-theme, the presence of a multimedia centre supported by the aforementioned verbatim below *"For the recharge of DATA I use the telephone credit that I convert into data where I connect to a wifi network either in the house or through large structures near us"*, hence 100% of opinions refer to the presence of a multimedia centre. This hypothesis is also confirmed by Bandura's social learning theory which describes how the child can learn new behaviors by observing other people: he imitates behavior patterns which are the object of rewards and not of punishments. This theory designates three acquisition procedures that have their source in the entourage of the individual:

- So-called vicarious learning is that which results from imitation by observing a peer who performs the behaviour to be acquired (trainer or member, leader-group),

- Social facilitation refers to improving the performance of the individual under the effect of the presence of one or more observers, which in many cases favours group training,

- Cognitive anticipation is the integration of a reasoning response from similar situations, which will lead to methods of cognitive educability, primarily intended for adults.

Furthermore, Vygotsky (1989) considers that learning takes place initially in a collective activity supported by the trainer and the social group; then in a second step during an individual activity and it then becomes an internalized property. Bruner adds an additional element: the role played by the individual's "cultural ambience". Its learning and its success also depend on culture.

8. CONCLUSION

The objective of this study was to investigate the efficiency of differentiated pedagogy in the practice of E-learning, in particular the adaptation of teaching by the teacher and the taking into account of the socio-cultural environment in connection with the assessment of the practice of E-learning. We started from the observation that with the advent of COVID-19, students are faced with exceptional and difficult circumstances as learning is intimately linked to the emotional. From there, digital technology offers considerable advantages for nurturing the student/teacher relationship with the aim of strengthening it. So the pandemic brings to light the digital divide in Cameroon.

It emerges from this analysis that the adaptation of teaching by the teacher makes the practice of e-learning at the secondary level efficient by exploring indicators, reformulating teaching content, taking into account the intellectual level and considering account of programs. Indeed, the verbatim of our subjects allowed us to confirm this first hypothesis entitled the adaptation of the teachings by the teacher makes the practice of E-learning efficient at the government high school of Mokolo IV.

REFERENCES

[1] Bandura, A. (1986). Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, NJ: Prentice Hall.

[2] Bertrand, Y. (1983). Théories contemporaines de l'éducation. . Lyon: Chronique Sociale Lyon et (Montréal) : Editions nouvelles.

[3] Blin, F. e. (2007). Why hasn't technology disrupted.: Computers et Education.

[4] Bruner, J. (. (1960). The proces of education. . Cambridge: Harvard University press.

[5] Bruner, J. (1960). The process of education. . Cambridge: Harvard University press.

[6] Clerc, F. (2002). In pratiques et logiques en pédagogie. Paris: Nathan Université.

[7] De, B. e. (1966). La construction sociale. Paris: PUF.

[8] Depelteau, F. (2003). La démarche d'une recherche en sciences humaines : de la question de départ à la communication des résultats.:. Bruxelles : De Boeck.

[9] Depover, C. e. (2002). E-learning et formation des adultes en contexte Professionnel. .Bruxelles: De Boeck-Université.

[10] Fuchs, L. F. (1992). Instructional adaptation for students at risk. Journal of Educational Research, 86(2).

[11] Fuchs, L. F. (2001). Principals for the prevention and intervention of mathematics difficulties. Dans Learning Disabilities Research et Practice.

[12] Maguire, L. (2005). Online Journal of Distance Learning Administration.

[13] Negura, L. (2006, 10 01). L'analyse des contenus dans l'étude des représentations Sociales . Sociologie (en ligne), Théorie et Recherche: http/sociologie.revue.org/993 mise en ligne .

[14] Piaget, J. (1976). La représentation du monde chez l'enfant. Paris: PUF.

[15] Raymond, D. (2006). Qu'est-ce qu'apprendre et qu'est-ce qu'enseigner ? Montréal: Association québécoise de pédagogie.

[16] Sammons et Ruth. (2007). The invisible professor and the future of virtual faculty.

[17] Vygotsky, L. (1997). Pensée et langage. Dans Pensée et langage (3eéd. ; traduction de F sève).1er éd. : 1934).

AUTHOR'S BIOGRAPHY
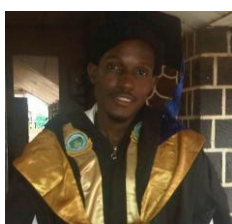
Manuel Sören KAMGANG, is born on the 20th June 1985 in Poitiers (France). Cameroonian by nationality, after his General Certificate of Education – Advanced Level (GCE A/L), he pursued his studies and obtained a bachelor's degree in Accounting and Finance, a professional teaching diploma in Economics and a Master's degree in Sciences of Education, active and creative pedagogy under education engineering in the option Educational Technology. The author defended his professional teaching diploma under the topic "*The Effects of Public Educational Spending on Enrolment and Employment in Cameroon*" and defended his Master's degree with the topic "*Impact of Educational Technology on the Development of Digital Economy in Cameroon*". He is in his final year as PhD student and preparing his defence.