
Higher education in the face of the Covid-19 crisis: critical analysis of the incomplete use of distance learning in Cameroonian state universities

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ABSTRACT

This article deals with the practice of distance learning in Cameroonian universities. It uses the Covid-19 crisis as the starting point for an in-depth reflection on the constraints to the success of the pedagogical transition that the Cameroon government has been carrying out for two decades. Starting from the observation that the Covid-19 pandemic has disrupted the pedagogical habits in our universities, this analysis highlights the multiple challenges faced by university actors in the implementation of distance learning in Cameroon. After an inventory of the difficulties encountered, the legal framework and the existing infrastructures, this text proposes possible ways to succeed in the pedagogical transition, which will be useful both to ensure pedagogical continuity in times of crisis and to help universities to absorb the continuous increase in student numbers recorded each academic year.

KEYWORDS

higher education; distance learning; Covid-19; university

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Résumé

Cet article traite de la pratique du télé-enseignement dans les universités camerounaises. Il utilise la crise du Covid-19 comme point de départ d'une réflexion approfondie sur les contraintes du succès de la transition pédagogique que porte le gouvernement camerounais depuis plus de deux décennies. En partant du constat que la pandémie du Covid-19 a bouleversé les habitudes pédagogiques dans nos universités, notre analyse fait ressortir les défis pluriels auxquels sont confrontés les acteurs universitaires dans l'accomplissement du télé-enseignement au Cameroun. Après un inventaire des difficultés rencontrées, de l'encadrement juridique et des infrastructures existantes, ce texte propose des voies possibles de réussite de la transition pédagogique dont l'utilité sera à la fois d'assurer la continuité pédagogique en temps de crise et d'aider les universités à résorber la hausse continue des effectifs d'étudiants enregistrés chaque année académique.

Mots-clés: enseignement supérieur; télé-enseignement; Covid-19, université.

INTRODUCTION

The advent of the Covid-19 pandemic has imposed serious challenges on global education systems, particularly in Africa where the use of digital tools remains marginal in education (Mafouen and Kouakep, 2020). In this context, the Cameroonian government had to take measures in order to support state universities in using distance learning to ensure educational continuity, given the establishment closure measures adopted to limit the spread of the Coronavirus within society¹. With such a measure, the use of Information and Communication Technologies (ICT) has turned out to be a powerful means to carry on lessons and avoid what is now called "a blank year" whose effects could have been even more damaging for young students and the professional environment.

¹ Indeed it was on March 18, 2020 that the Cameroonian government decided to lock down public schools including universities.

By avoiding “a blank year” in 2020-2021, the Cameroonian Minister of Higher Education inaugurated, an innovative chapter for teaching practices in Cameroon, obviously against his will, with the risk that the result might not be at the level of satisfaction compared to what we usually experience with “face-to-face” lessons. In fact, the use of distance learning would fundamentally change the relationship between knowledge and transform like the usual interactive system between teachers and students. By reducing the “face-to-face” between the first and the second, distance education has created a “network system” (Jacquinot-Delaunay, 2010: 164) in which “remote presence” (Idem) has exposed the general lack of preparation by Cameroonian higher education stakeholders; which has led to a laborious hybridization of teaching practices³.

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From this perspective, the Covid-19 pandemic can be presented as a “window of opportunity” for the government, whose talk on digital technology at university dates back more than a decade (Njibnu-Messina, 2017; Njoya, 2018). However, far from crowning a well-crafted strategy of reforming the higher education system, distance education in the era of Covid-19 in Cameroon seems to have been simple a stepping stone to manage the health crisis before resuming the ordinary modality of face-to-face teaching. Suffice to say that it was only cyclical, and intended to plug the “Cameroonian do-it-yourself” in the resistance to Covid-19. The question therefore remains open: what is the relevance and scope of distance learning in the continuity of university public service in times of Covid-19 in Cameroon? What are the challenges, particularly in terms of public policies for higher education and academic performance? These questions aim to identify on one hand the structural and infrastructural determinants of the use of ICT by Cameroonian teachers and students in the era of the pandemic, and on the other hand to project us beyond the Covid -19, by questioning the normative and administrative framework of distance learning in Cameroon.

To shed some light, it seems useful to recall that the work on the digitization of higher education reveals a series of factors, cyclical, personal, social and pedagogical, to explain the understanding of ICT in higher education in the world on a global scale (Bertrand, 2003; UNESCO, 2003; Bellon et al., 2007). In the specific case of Cameroon, if the official talk gives a certain place to this aspect in educational practice, it should be noted that there remains a general laxity in the transition to distance learning, generically referred to as E-learning⁴. Theoretically, distance learning is understood as “any teaching provided via the Internet” (Mbengue et al., 220) (E-learning) and can group together three categories of teaching practices: face-to-face teaching with massive use of ICT, mixed teaching with more than 30% of the time online and teaching of which more than 60% of the hours are done remotely (Thibault et al., 2021). In the case of Cameroonian, it was more of a hybrid system, mixing distance and presence on campus. The objective was “*on the one hand, to respond to the urgent need for [students] to have access to education in the face of the immediate impact of the COVID-19 crisis, and on the other hand to anticipate the 'magnitude of educational needs that could result from the possible extension of the closing time of institutions'*” (Njibnu-Messina and Kouanken, 2021).

² This commitment is contained in an interview given by the Minister in charge of higher education, Jacques Fame Ndong, in Journal Mutations, n ° 5062 of March 23, 2020.

³ Hybridization consist of a mixture of “face-to-face” and “remote” devices on the one hand, and “synchronous” and “asynchronous” teaching on the other.

⁴ In researching field data to feed this article, for example, we found that at the central level, the Ministry of Higher Education is struggling to provide consolidated data on the inventory of distance education. in Cameroon. These data remain both sparse and imprecise, which reflects insufficient consideration of distance education in the priorities of this ministry.

Our reflection will be centred around three points. First, it will analyze the meaning and practice of distance learning in Cameroonian reality, focusing on the mechanisms of its assimilation by the actors during the Coronavirus crisis. Then, it will be a question of taking a critical look at the performance capacity of this practice beyond the time of crisis, by questioning the reforms and non-reforms adopted in this area by the Cameroonian government after the Covid-19. The reflection will end with a prospective look at the possible ways of improvement to achieve the optimal assimilation of ICT in the Cameroonian university system, in order to better face in the future emergency situations such as the one imposed by the Covid -19 or simply govern the continued growth in annual student enrolment at our state universities.

I. DISTANCE EDUCATION IN THE COVID-19 ERA IN CAMEROON: FROM SPEECH MAKING TO PRACTICE

The adoption of distance learning by Cameroonian universities dates back in the early 2000s, with a confirmed commitment by the then Minister of Higher Education, Jean-Marie Atangana Mebara⁵, to support universities in accelerating the use of ICT in their educational formulas. This was the period of the state's enthusiasm for adopting a set of legal reforms and administrative innovations favourable to the digitization of Cameroonian higher education. If since then the government has maintained a rather offensive dialogue on the issue, it has been observed that a huge gap remains between the government's declaratory postures and the reality on campuses. Indeed, the practice of distance learning has often been marginalized, and its use has remained limited to a few selective training courses in the universities of Dschang, Yaoundé 1, Yaoundé 2 and Douala. The Covid-19 pandemic only confirmed "the infrastructural and behavioural difficulties" (Njibnu-Messina and Kouankem, 2021: 32) of digital devices assigned to distance learning, as much as it enabled us to understand that the digital situation at the university was a reflection of the technical dissemination of the Internet within the global society.

To better analyze the importance of the use of ICT in Cameroonian universities in the era of Covid-19, it is important to take stock of the legislation and an inventory of digital infrastructure in state universities. It is in this light that we will question the practices observed during the periods of closure of institutions imposed by this pandemic.

A. Legal framework and inventory of digital infrastructure in Cameroonian state universities

Cameroon has eight state universities, one Cameroon-Congo inter-state university, and several institutions with special status such as the National Institute of Youth and Sports (INJS), the National School of Post and Telecommunications (ENSPT), National School of Public Works (ENSTP), and the National Football Academy (ANAFoot). These universities and institutions provide education and vocational training to an annual population of over 400,000 students. Traditionally, the vast majority of teaching at these universities has been done in "face-to-face", with an increased value for the "face-to-face" between the teacher / trainer and the student / learner.

But, for two decades now, the talk on educational reform has slowly introduced the interest of the transition to distance learning, with the support of international partners (Canada, France, OIF, AUF) and the Ministry of Posts and Telecommunications. Till date, if our efforts to have a complete picture of the infrastructural device for distance learning in state universities have come up against the absence of centralized data in this direction, we have been able to identify the following elements which testify to the feverish conversion of Cameroon to digital education.

(1) A diversified, but fragile regulatory system

Distance education in Cameroon more broadly follows the normative framework of distance education. The legal framework for this other form of education dates back to 19986, with the Presidential Decree reorganizing the Higher Teachers Training College in Yaoundé. This decree is the first text which, in its article⁶, explicitly gives a possibility to distance learning at the university: "the department of internships, continuing education and educational research which includes internship, distance education and educational research services".

⁵ Jean-Marie Atangana Mebara was the Minister of Higher Education who inaugurated the practice of distance education in Cameroon, specifically at the University of Dschang in 2000

⁶ This is Decree No. 98/1328 of September 28, 1998 on the organization, study regime and status of the Yaoundé Higher Normal School.

Later on, we will have it by ministerial decree⁷ that the University of Dschang will offer itself the very first Centre for distance learning, a matter of giving more scope to the dynamic partnership of the faculty of agronomy and of agricultural sciences created a few years earlier.

The creation of this Centre took place following Law n ° 2001/005 of April 16, 2001 on the orientation of higher education, in which the legislator recognizes the use of digital pedagogy as a normal form of higher education. This law also reinforced a pedagogical orientation initiated a decade earlier with the creation of University Institutes of Technology⁸, then presented as crucibles in terms of training and the development of technical skills among students.

This system will be reinforced and accelerated by regulatory means with two other ministerial texts which gave concrete content to the speeches and approaches previously initiated in the integration of digital education in Cameroonian universities. This is, on the one hand, Order n ° 06 / 00707MINESUP of June 19, 2006 on the creation and organization of the Interuniversity Centre for Information and Communication Technologies (CITI) in higher education, and on the other hand Order n ° 10/0064 / MINESUP of February 16, 2010 on the creation and opening, in regularization, of the Departments of Information Technology and Educational Technologies and Modern Letters at the Higher Teacher Training College of the University of Yaoundé 1. Through the first text, the government has chosen to create a platform for the coordination of digital activities in universities, through close collaboration between this Centre and the Multimedia Centres located in all Cameroonian universities. Hosted at the University of Yaoundé 1 campus, this interuniversity centre is supposed to serve as "support for the approval of information and communication technologies from Cameroonian university institutions"⁹. As such, the government assigns it the mission of "contributing to capacity building in higher education by promoting mastery of information and communication technologies" (Idem). For the second text, it was a text of an act of catching up and regularizing, following the previous creation of institutions within the University of Yaoundé 1. The Department of Informatics and Educational Technologies thus created gives meaning to the ambition displayed by the government to train qualified personnel in technological innovation and the implementation of digital pedagogy both in universities and in schools in secondary level.

In other words, there is indeed a legal process for the supervision and organization of the use of information and communication technologies in the educational policy of higher education in Cameroon. This approach remains non-coercive, however, and does not commit universities, let alone students, to an obligation of results in the use of digital tools. In addition, the legislation remains very insensitive to distance education, mentioning it in a vague way, without specifying either its methods, its duration, or its validity in the modulation of the final results of the teaching units. The Covid 19 has thus found a paradoxical environment in which the distance education imperative in this period has come up against weak legislation and very imprecise on the practical modalities of its operationalization.

This certainly explains the trial and error and infrastructural difficulties that we observed in the realization of the distance learning achievement during the closure of universities imposed by the Covid19 pandemic.

(1) State of play of tele-education infrastructures in Cameroon

It is difficult to make an exhaustive inventory of digital infrastructure in Cameroonian state universities. Precisely, in the context of the drafting of this work, the steps we have taken have made it possible to identify a significant number of digital devices varying from one university to another. In accordance with the aforementioned legal framework, and with the financial support of China, the government has initiated a vast program of six (06) billion, entitled E-National

⁷ Order No. 01 / 0040MINESUP / DDES of May 29, 2001 establishing and organizing a Center for Distance Education at the Faculty of Agronomy and Agricultural Sciences of the University of Dschang.

⁸ We can cite mainly Decree No. 93/031 of January 19, 1993 laying down common provisions applicable to university institutes of technology and Order No. 008 / CAB / PR of January 19, 1993 establishing university institutes of technology.

⁹ Article 2, paragraph 1 of Order No. 06 / 00707MINESUP of June 19, 2006 establishing and organizing the Interuniversity Center for Information and Communication Technologies (CITI) in higher education

Higher Education Network declined in 6 components, directed at the same time towards the autonomy of students in digital matters and towards the densification of the digital infrastructure in universities.

- Distribution of 500,000 laptops to Cameroonian students of public and private higher education institutions;
- Construction and equipment of 09 university digital development centres (one per university and one at the Cameroon-Congo Inter-State University);
- Establishment of the National Network of Digital Interconnection of Cameroon Universities (RIC), as well as the construction and equipment of the National RIC Management Centre;
- Construction and rehabilitation of computer networks of the main campuses of the eight State Universities;
- Development of the Integrated Network Management Information System for Higher Education in Cameroon (SIGIRES);
- Cameroonian funding (2.5 billion CFA francs per year) for the provision by the Cameroon telecommunications operator (CAMTEL) of high-speed Internet access (9 gigabits) to the RIC, for the benefit of the 08 State Universities.

In addition to these devices, we can mention that there is a Centre of Excellence in Information and Communication Technologies (CETIC), housed at the National Polytechnic School of Yaoundé, and built with funding from the World Bank. In addition, all the universities each have an IT Resource Centre which serves as a melting pot for the local development of innovative pedagogy and the training of staff in the educational uses of IT tools.

More specifically, the University of Dschang, which is one of the most advanced Cameroonian universities in the use of digital technology, the State has, since 2001, set up a Centre for distance education at the faculty of Agronomy and Agricultural Sciences (FASA). Despite the many difficulties encountered by this Centre, it remains one of the advanced places for promoting distance education in Cameroon.

In any case, this infrastructural device is a sign that the State of Cameroon has realized the importance of new technologies in its public higher education policy. This awareness remains very declaratory and normative, and the inventory made above really reflects the serious operational difficulties which convince us of the idea that "the development of technological infrastructures remains a great challenge" for the Cameroonian government; this is seriously impacting the shift to distance learning, legitimately presented as the ultimate phase of success in integrating digital technology into universities. To be convinced by this, it suffices to look at the laborious uses observed in the practice of distance education at the height of the pandemic crisis linked to Covid-19 (Ngnoulayé and Gervais, 2005: 37).

B. The practice of distance education in the Covid-19 era in Cameroonian state universities

In a television show of March 20, 2020 on the Cameroonian national television Crtv, Jacques Fame Ndong, Cameroonian Minister of Higher Education affirms: "we have decided to tie ourselves definitively to digital education, that is to say to tele-teaching, but also to tele-evaluation and even tele-research" (Fame Ndong, 2020). This position taken at the heart of the Covid-19 health crisis sounded like a commitment from the government to ensure continuity in education during the closures of institutions imposed by this pandemic. It is also surreptitiously for the minister to make up for the delay in the assimilation of ICT in Cameroonian universities. To verify the implementation threshold of this ministerial talk in state universities, we wanted to gather the opinions of key players, namely teachers on one hand, and students on the other. To do this, our reflection was based on a precise methodology, combining qualitative and quantitative aspects, and a data collection procedure based essentially on the questionnaire. It is from these data that we took a fairly wider look at the operational distance learning system put in place for the circumstance.

(1) Methodology adopted

The choice of our research method had to answer two fundamental questions: How have universities have been able to operationalize distance learning and how have their students integrated it into their learning methods? How did the university authorities organize themselves to overcome the obstacles of distance learning in Cameroon, particularly in terms of infrastructural deficit and teacher unpreparedness?

To answer these questions, we used a fairly large sample of students and teachers, and used the questionnaire method to establish our hypotheses.

SAMPLING

Our sampling focused mainly on both teachers and students. We targeted teachers and students from five specific institutions: the Higher Teacher Training College in Yaoundé (ENS), the Institute of International Relations of Cameroon (IRIC), the National Advance School of Polytechnic School of Yaoundé (Polytech), the Faculty of Law and Political Science (FSJP) of Douala, the Faculty of Sciences of the University of Dschang (FS / Dschang). The choice of these institutions was based on the idea that their programmatic differences could better inform us about their capacities to integrate distance. In fact, some of these institutions are basically places of accelerated digital practice (H.T.T.C Yaoundé, School of Polytechnic for example), and are therefore more willing to quickly convert to distance education. Others are dominated by a traditional practice of "face-to-face and speech making" teaching (Onguéné Essono and Onguéné Essono, 2006), without often making digital technology an important element of educational strategy. Here, the transition to distance learning will experience more significant difficulties linked both to the infrastructural devices in this area and to personal dispositions not very inclined to the digitization of pedagogy.

Concretely, we targeted a range of 125 teachers from these different establishments, to whom we sent our questionnaire. But, only 46 gave us feedback, according to the following breakdown:

- Higher Teacher Training College Yaoundé: 12 Teachers (09 Assistant and 03 Lecturers);
- Cameroon Institute of International Relations: 08 Teachers (06 Assistants and 02 Lecturers);
- School of Polytechnic Yaoundé: 07 Teachers (02 Assistants and 05 Lecturers);
- FSJP of Douala: 17 Teachers (12 Assistants and 05 Lecturers);
- FS / Dschang: 07 Teachers (05 Assistants and 02 Lecturers)

In interpreting our sample, we were able to note that more than 60% of the Teachers who answered our questionnaire are Assistants, and all have less than 04 years of experience in the Corps of Higher Education Teachers in Cameroon. They are generally less than 50 years old, and provide 75% of the courses of which main teachers are full lecturers (Senior Lecturers and Professors).

With regard to students, the situation is different from one institution to another. In some cases, such as at the H.T.T.C of Yaoundé, at the Institute of International Relations of Cameroon or at the School of Polytechnic Yaoundé, the institutions extend an obligation on attendance that weighs on students in normal times. They are therefore obliged to participate in online education to avoid recording their absence in the disciplinary file. In other cases, such as at the FSJP in Dschang, if attendance at the tutorials remains under supervision of the supervisors, the online courses are experiencing a relaxation in terms of attendance, the monitoring of students sometimes being done on platforms where the traceability of identities is difficult. Anyway, through the managers of the student platforms of these institutions, we targeted a number of more than 6,000 students, and obtained 255 responses to our questionnaire. The breakdown is as follows:

- H.T.T.C of Yaoundé: 66 students from different fields;
- Cameroon Institute of International Relations: 52 students from different fields;
- Polytechnic School of Yaoundé: 47 students from different fields;
- FSJP of Douala: 63 students of law and political science combined;
- FS / Dschang: 27 students from different specialties.

QUESTIONNAIRE USED

We collected the statistics through a questionnaire survey, administered to a very large audience of students, since all levels of study were affected by distance learning during the closures imposed by the pandemic. Our questionnaire collected feedback from 255 students and 125 teachers, broken down as follows:

TABLE 1: Statistics of responses to our questionnaire

Establishment of affiliation	Teachers who reacted	Students who reacted
Higher Teacher Training College Yaoundé (ENS)	12 Teachers	66 students, all levels combined
Institute of International Relations Cameroun (IRIC)	08 Teachers	52 students, all levels combined
National Advanced School of Polytechnic Yaoundé	07 Teachers	47 students, all levels combined
Faculty of Law and Political Science (FSJP) Douala	17 Teachers	63 students, all levels combined
Faculty of Science, University of Dschang	07 Teachers	27 students, all levels combined

The questionnaire focused on three main areas which are: the possession of a computer and the ability to use its functionalities, the ability to manipulate the distance learning tools set up by the universities and the frequency of use and connection to the platforms. dedicated to distance education for the occasion. The questionnaire was constructed using a qualitative approach, using the Likert scale, that is to say, using graduated scoring of responses.

We can summarize the responses obtained as follows:

- On the possession of a computer and the use of its features

This section allowed us to verify the place occupied by the computer in the lives of teachers and students. As for all the other sections, we removed all the forms that did not answer all the questions asked, in order not to distort the results and the production of statistics. We will realize that the interest of owning a computer remains decisive among all teachers and students, but "for lack of financial means"10, many of them do not have one, and even those who do sometimes have limited use due to the difficulties in obtaining a regular and permanent Internet subscription at home. Hence the use of computers for public and commercial use in cyber cafes and other secretariats and public offices providing IT services. The results are as follows:

TABLE 2: Statistics on the possession and usage of computers

of the 125 teachers surveyed	of the 255 students collected
<ul style="list-style-type: none"> • 100% have a personal computer • 95% say they know how to use the features well • 43% say they often share their computer with a third party • 78% say they nevertheless use public computers in cybercafés and public offices 	<ul style="list-style-type: none"> • 45% have their own computer • 58% know how to use the features • 100% say they use a public computer in cyber cafes or in documentation and information centres (CDI) • 100% prefer the Smartphone for the follow-up of the online courses

- On the handling capacity of distance learning tools

The objective at this level has been to observe the type of relationship that Teachers and students have with the development platforms of distance learning. Furthermore, we wanted to know how the relationship between the first and the second is now managed, given that the face-to-face has been greatly reduced. It should be noted that in this interaction, the relationship of dependence remains because the action of the students depends on the prior deposit of the teachings

by the Teachers on the platforms. Thus, while Teachers are primarily concerned with filing files or presenting certain explanations, students are focused on downloading and following lessons previously recorded by the teacher. The fact remains that, from the responses to the questionnaire, it emerges a variable ability to manipulate the tools put in place to provide distance education, depending on whether or not the user is initially familiar with the use of computer tools.

We obtained the following results:

TABLE 3: Statistics on the familiarity between the distance Learning platforms with teachers and students

Of the 51 Teachers	Of the 255 students surveyed
<ul style="list-style-type: none"> • 65% master their use • 25% have an intermediate level • 10% were on their first use 	<ul style="list-style-type: none"> • 53% are suitable for handling • 27% have difficulty • 20% are novices

- On the frequency of use and connection to distance learning platforms

At this level, it was a question of seeing the frequency of use of distance learning platforms. This assumed that the users also had to answer the question on the quality of the Internet service and the usual place of their connection.

The answers allowed us to draw up the following table:

TABLE 4: Statistics on the frequency of use and connection to distance learning platforms

Of the 51 Teachers	Of the 255 students surveyed
<ul style="list-style-type: none"> • More than 10 hours per day: 6% • Between 5 and 10 hours per day: 58% • Less than 5 hours per day: 36% 	<ul style="list-style-type: none"> • More than 10 hours per day: 15% • Between 5 and 10 hours per day: 75% • Less than 5 hours per day: 10%

(2) On a practical level

In the field, the practice of distance learning by students and teachers has rather taken place in a "creative disorder" (Sindjoun, 1996), without any real structuring by the university hierarchies. At the same time, in the absence of a formal obligation to use ICT, many teachers and students have not easily given in to the digital transition, often doing so under "obligation", without traceability and in a rudimentary fashion. Distance education then proceeded at two speeds during campus lock down due to the pandemic. On one hand, a fairly efficient and well-supervised distance education practice, mainly held in university institutions where Computer Science is one of the main training modules for students (Polytech for example). On the other hand, a rather disorganized and unreliable practice, widely recorded in the fields of human and social sciences, where the practice of face-to-face teaching is traditionally the rule.

In the first case, distance learning took place both following operational platforms in these institutions even before the arrival of the pandemic, and through a massive use of social networks, especially that a good part of these students were able to benefit from a computer, thanks to the operationalization of the E-national Higher Education Network program, on behalf of which 500,000 laptops have been distributed to students since January 2018. In this context, institutions like the School of Polytechnic in Yaoundé or the Faculty of Sciences of the University of Dschang have accelerated the formalization of their distance learning devices that the Covid-19 pandemic has simply reinforced. In these institutions, distance learning has largely consisted of making Internet links available per establishments specifically dedicated to facilitating interaction between teachers and students. These links are carried by platforms on which a list of teaching units is clearly established, with the possibility for the student to connect via a username and a security password, generated automatically after initial registration on the platform. It is from there those students can download files previously submitted by their teachers, with the possibility of asking questions sometimes on a "chat" tab provided for this purpose, sometimes elsewhere on the pages and discussion groups. set up on social networks.

In this hypothesis of social networks precisely, they have enabled these establishments to maintain, as much as possible, the teacher-student relationship, in a “collaborative” and “interactionist” perspective. Thus, on Facebook, WhatsApp, Telegram, Jisti, ZoomMeeting or Google Classroom, there has been a proliferation of “pages”, “groups” and “forums” intended to serve as places of discussion and exchange between students and teachers at first, and then between students. These functioned in a logic of “co-construction of knowledge” and “sharing of interests and experiences” (Strioukouva, 2006: 2) as advocated by what Olivier and Viscogliosi (2014) called the "Reverse pedagogy". It is thanks to these groups, pages and forums that the students were given the opportunity to ask direct questions to their teachers, and to receive explanations under the same conditions. Of course, it should be noted that this possibility was strictly supervised to avoid slippages that could arise from the large number of students to follow or from the possibility that students have to ask several questions at the same time, at the risk of weighing down the exchanges. and to extend the time for discussions. A student from the University of Dschang specifies that "in order not to embarrass other comrades more, you are sometimes obliged to keep your questions and ask them outside the platforms. It avoids a fixation on his person, even if it does not necessarily benefit all. "

In the majority of cases, the provision of courses by teachers was often done through class delegates, these student representatives appointed as intermediaries in the relationship between teachers and students. They are the ones who also served as a transmission belt for student complaints when they were not satisfied on the discussion platforms set up for the occasion.

We can summarize in the table below the practical management of distance education in the university institutions that we have taken as a case study.

TABLE 5: Management of distance learning platform by some institutions in state the University

School	Number of courses considered	Platforms or social networks used	Activities carried out (by teachers and students)
ENS Yaoundé 1	65	<ul style="list-style-type: none"> • Central platform of the University of Yaoundé 1; • ENS Yaoundé technical platform • Social networks: WhatsApp, Telegram, Google Classroom 	<p>By teachers:</p> <ul style="list-style-type: none"> • Filing of course files (in various formats depending on technical requirements); • Courses by videoconference; • Submission of the continuous control test and final examination; • Written answers to student questions and bibliographic orientations <p>By the students:</p> <ul style="list-style-type: none"> • Course download; • Filing of continuous assessment or final exam papers; • Transmission of various questions and concerns
IRIC Yaoundé 2	43	<ul style="list-style-type: none"> • IRIC technical platform; • Special platforms of foreign partners (Jean Moulin Lyon 3 University for example); • Social networks: WhatsApp, Telegram, Zoom Meeting. 	
ENSP Yaoundé	52	<ul style="list-style-type: none"> • Central platform of the University of Yaoundé 1; • Technical platforms of the establishment; • Social networks: WhatsApp, Telegram, Jisti, Google Classroom 	
FSJP Douala	32	<ul style="list-style-type: none"> • Central platform of the University of Douala; • Social networks: WhatsApp, Facebook, Telegram 	
FS/Dschang	28	<ul style="list-style-type: none"> • Central platform of the University of Dschang; • Technical platform of the faculty of science; • Social networks: WhatsApp; Jisti, Telegram, Zoom Meeting, Google Classroom 	

II. BEYOND THE COVID: THE CONSTRAINTS OF DISTANCE EDUCATION IN THE CAMEROONIAN CONTEXT

The Coronavirus pandemic has exposed the difficult digital transition in higher education in Cameroon. Beyond the speeches on university digitalization and show cases like the "distribution" of 500,000 computers to Cameroonian students since 2018, the use of the Internet and its derivatives remains very limited in universities. Apart from a few establishments such as the ENS of Yaoundé, the University Institutes of Technology (IUT), the School of Polytechnic Yaoundé or the Higher School of Information and Communication Sciences (ESSTIC), most institutions remain "indifferent" to the deep integration of digital technology into their educational strategies. In this context, the practice of distance learning can only suffer the effects of a structural and technical lack of preparation, the effect of which has been to carry out an operational "do-it-yourself" in the government's attempt to maintain pedagogical continuity in times of closure of establishments following the Covid-19 pandemic.

Three sets of limits can be noted in the practice of distance learning in Cameroon. The first relates to the structural constraints of Cameroonian universities, the second relates to the overall philosophy of the teacher-student relationship in Cameroon, and the last relates to the overall environment of Cameroonian higher education.

A. Structural constraints of distance learning in Cameroon

The first operational limitations of distance learning in Cameroon are structural. Indeed, Cameroonian universities are largely marked by a structural deficit in digital matters. Despite a vast government campaign launched since the beginning of the 2010s on the popularization of E-learning in universities, the reality of the 08 state campuses shows that the Internet remains a scarce resource in the educational policy of universities. While the launch of 09 digital educational development centres has not yet made it possible to achieve the digital conversion of academics and their students, the campuses themselves offer an architecture that is deeply unfavourable to the implementation of distance learning.

In fact, in the eight state universities, apart from a few exceptions already mentioned, several shortcomings are notable in this direction:

- The quality of the buildings: most of the buildings serving as classrooms or amphitheatres in Cameroonian public campuses remain of average quality. They were not designed to facilitate the use of the computer tools by students and their supervisors. It is not uncommon to find that on the FSJP campuses in Douala, for example, there is a lack of simple electrical installations capable of accommodating the simultaneous connection of several computers. In the absence of electrical outlets provided for this, students and teachers are often tempted to carry tools such as extension cords with them to facilitate the transportation of energy from the single distribution point available in the amphitheatre to their laptops. In some cases, moreover, the classrooms are only vast "gymnasiums" transformed into amphitheatres, with a simple sound projection device to carry the voice of the teacher from his master's desk.

This situation rather contributes to consecrate face-to-face teaching as the only "real" educational path in Cameroonian universities. Computer use therefore becomes exceptional as most students are used to copying lessons onto paper after a teacher has read them.

- The quality of Internet services: in the wake of the digitization strategy of Cameroonian university campuses, the Ministry of Higher Education and the various universities have continued to proclaim the establishment of Internet distribution facilities on all campus. Overall, it is in the form of WIFI that Internet access is organized. Except that in reality, it is really is nothing, since the quality of these services remains approximate and often ends up discouraging users. For example, it should be noted that IRIC students remain permanently "off the network", despite the presence of an Internet supply installation set up by the public Internet distribution operator CAMTEL. Under these conditions, only stationary computers, exclusively used by administrative staff, sometimes manage to obtain an approximate Internet connection, and often moreover very unstable. For others, you must have a Modem-type device with you, easily transportable and capable of light connection in all circumstances.

- The lack of real support centres for digital education in universities. It is these poles that could have taken charge of supporting students and teachers in the effective use of the platforms available for distance education. They would be the best hubs for online filing and online exam security. At the same time, these poles were to serve as major players in the support of teachers and students in the appropriation of innovative teaching tools, and any other skills in educational engineering, project management, digital communication audio-visual and multimedia.
- The instability of electricity supply: it should be noted that electricity is the first condition for the success of distance education. However, in the Cameroonian context, in town as in the countryside, the supply of electrical energy is so uncertain that no guarantee of stability is offered to university actors to achieve their ambitions in distance education. The recurrence of "load shedding" will be a determining factor in the concretization of the discourse on university digital, with a desired collaboration between the universities and the public electricity distribution operator. Otherwise, it is not excluded to encourage universities to consider their strategies for autonomy in this area, in particular through a consequent development of alternative energies (geothermal, solar, etc.) likely to take over from energy. public in the event of a power cut.

B. Constraints linked to the overall philosophy of the teacher-student relationship

The second series of limitations of distance learning in the Cameroonian context relates to the overall philosophy of the relationship between teachers and students. It must be said that the Cameroonian university operates according to an authoritarian and hierarchical register, leaving very little room for positional equality between learners and their supervisors. This hierarchical logic, which is the product of a culture of authority in Cameroon (Morillas, 2018), results in a vertical structuring of the educational relationship. Above is the teacher, and below, the student, with almost a posture of "submission" and "docility" carefully maintained by the two components.

Under these conditions, any attempt to "decentralize" educational policy is poorly accepted, and perceived as a logic of authoritarian "dispossession" of teachers. They are very attached to face-to-face meetings, as are their students who prefer to experience the course in the presence of a teacher. Distance learning is then presented as a way of breaking the physical and moral interaction that is supposed to bind students and their teachers.

C. Constraints linked to the overall environment of Cameroonian society

Thirdly, we note that distance education remains a prisoner of the overall Cameroonian environment. As the university is not outside of society, it is understandable that its overall difficulties have an impact on their educational policies. Three points can be noted in this direction: the general impoverishment of the population, the striking disconnection between secondary and university education and the low penetration of the Internet in Cameroonian society.

In the first case, we have seen that the general level of student income is quite low, in a context where the guaranteed minimum wage is less than 40,000 FCFA per month, around 60 euros. This level of income does not promote the purchase of a personal laptop, nor does it promote sustainable subscriptions to cyber cafe connections that are found around college campuses. It is in this sense that the government operation to "distribute" 500,000 computers to students was seen as an important moment in the conversion of the student community to digital. However, without a real global vision to capitalize and perpetuate this type of policy, it is easy to argue that this operation was only a sword in the water, so much challenges of the digital transition at the university go beyond just owning a computer. Moreover, during the closures of institutions linked to the Coronavirus pandemic in 2020, it was noted that most of the students "managed" to connect from cyber cafe, with the vagaries (noises of other customers, the instability of the Internet connection, etc.) of such environments for efficient online course monitoring.

On the teachers' side, the question has arisen as to who should bear the costs generated by the use of distance learning, given that the devices mobilized by the institutions are not free¹¹ to access. By purchasing a personal Internet subscription to ensure pedagogical continuity during the crisis, the teacher finds himself, against his will, financing public higher education policy, without this being compensated in his monthly salary. The same is true of the time taken to design and post digital educational content online, which is much longer than the usual time spent in class and in ordinary exam follow-up.

Secondly, distance education at university suffers from the disconnection between secondary education and university. This is because generally, the educational policy in force in high schools and colleges does not place an emphasis on the use of ICTs, and therefore distances the learner from the digital universe being able to familiarize him beforehand with methods such as those adopted in distance education. The fact that the future Cameroonian academic has not been "socialized" in the handling of the necessary educational tools puts him in a situation of discovery once at the university. At the same time, its teacher is generally the product of the same system, and also operates in a kind of amateurism in its relation to new digital pedagogical tools that support distance education. During the pandemic period, for example, many teachers from FSJP Douala and those from IRIC often had to use the services of some of their students, who were keener in handling ICTs, in order to be able to successfully submit their papers online. teaching or even remote monitoring of their students.

Finally, distance education in Cameroon universities suffers from insufficient Internet penetration in Cameroon. According to Hootsuite and We Are Social, two organizations monitoring social media flows, Cameroon reached in January 2020 a level of around 7.8 million Internet users out of a population of over 28 million, a percentage about 30% of the population¹². This rate, relatively appreciable compared to the general situation in sub-Saharan Africa, masks multiple paradoxes. In fact, of these 30% of Internet users, entertainment uses are the most notable. And this is the Internet used for simple communication or for reading and commenting on social media. In this, the level of technical requirement in terms of quality supply is relatively low, unlike a connection for distance education which requires a substantial supply and a very stable connection to succeed.

Suffice to say that universities and their actors suffer from this social culture of a rather disorderly use of the Internet, without often taking the time to think about a relevant digital transition. In the absence of an obligation to use ICTs in teaching practices, university players, in particular teachers, perceive distance education as an "additional burden"¹³, not falling within their initial teaching contract. Hence the urgency to put the awareness and training of teaching staff among the main areas of improvement of the distance education policy which, gradually, tries to standardize in the government talks on educational innovation at the university.

III. SOME AVENUES FOR IMPROVING DISTANCE EDUCATION IN CAMEROON

The Coronavirus pandemic can be seen as a window of opportunity for the digital transition in our universities. While it is important to note that these universities already have a relative basis in this direction, it is necessary to start from the defects observed during the Coronavirus pandemic to propose avenues for improving the transition to digital university education. Two groups of reforms can be taken into account: on the one hand, general reforms, and on the other hand, university-specific reforms.

A. General reforms

The first reforms can be made on two levels, some of a legal nature and others of a structural nature. For the former, it is quite urgent to strengthen the legal framework governing the use of E-learning in Cameroon. In particular, there is a need to review the status of distance education in universities by consecrating it as an ordinary teaching modality, with a general obligation on teachers and students to accommodate themselves to it. This obligation could consist of a proportional division of the course time of each teacher, so as to provide for a precise percentage of compulsory mandatory use of distance learning. In this way, distance education will begin a path of normalcy in the educational culture, and will even be able to help the government to better manage the phase difference between the ever-changing number of student numbers and the narrowness of the teaching infrastructure of higher education.

In addition, post-Covid university governance would benefit from better structuring the transition between secondary school and university. Thus, it will be appropriate to initiate a frank collaboration between the two ministries concerned to introduce the culture of distance learning at the secondary level, question of already initiating future academics to this aspect of educational innovation that is the distance education. Admittedly, this requires enormous efforts in human and logistical terms for the secondary cycle, but there could be a rather difficult start with a few establishments taken for experimentation in order to assess the real needs for a future national extension. As such, not only will it be essential to rethink the training of secondary school teachers (by instituting compulsory and transversal distance education modules for example),

but it will be necessary to reform the Baccalaureate exam, by at least instituting a subject to be taken online. for all applicants. This would force them to take the distance learning component during the year seriously and apply themselves to learning about it, in anticipation of what awaits them at university.

B. Reforms specific to universities

As for the universities themselves, it will be interesting to observe the future axes of the sustainability of digital education inspired by the Coronavirus crisis. Otherwise, all the efforts that were carried out during this health crisis should see a process of strengthening and sustainability intended to include digital culture in the pedagogical normality of the Cameroonian university system. In this sense, real adaptations are needed both at the level of university services and at the level of management of teaching and administrative staff.

On one hand, it is important to provide Cameroonian universities with real services in charge of digital technology and technological innovation. These will be intended to ensure the proper functioning of online procedures and the capacities of universities to provide distance education. In this sense, universities have an interest in making viable the intranet services through which all students and teachers identify and find a range of instruments and services favourable to the digital transition required by distance education. The major challenge of this type of service in universities will be to build a system of permanent connectivity and technical infrastructure intended to make universities true online learning environments.

On the other hand, the time has come to rethink the updating of the skills of administrative and teaching staff in universities. Indeed, the digital switchover is more a question of culture than a simple political decision. It is therefore interesting to see to what extent university authorities will be sensitive to the needs of university actors to acquire skills that are useful for the success of distance learning. This is an invitation to a trans-university policy of capacity building, both for teachers and administrative staff of universities. This leads us to think that the transition to distance education requires a combination of factors which should be taken into account in a cumulative and not exclusive manner.

CONCLUSION

At the end of the analysis, we note that the Covid-19 has profoundly changed teaching habits in Cameroonian higher education. By succeeding in makeshift remedy use of distance education in all public universities, the government has above all taken the gamble of pedagogical continuity, in order to avoid what has been called the " blank year". However, the urgency of the situation and the structural and logistical unpreparedness in the universities revealed the many flaws of this option, yet presented as a future escape route in the new digital university governance in Cameroon. The "forced transition" imposed by the Coronavirus pandemic is undoubtedly the real starting point of a prospect of improvement in this direction.

In any event, it is necessary that yesterday's lack of preparation, the amateurism prior to Covid and the insufficiency of various resources give way to professionalism and the mobilization of human, technical and logistical resources to accelerate the standardization of distance education in Cameroonian universities. It is finally a question of taking this new pedagogy out of its simple fashion effect, to institute it for the long term and set it up as a double barricade against the emergencies of the level of the recent pandemic and the overstaffing recorded each year in our universities. This type of challenge will only require a profound reform of university governance, where not only will transparency in career management and student recruitment be promoted, but also the emphasis will be placed on accelerating administrative decentralization in the future university governance driven by the development vision included in the 2035 agenda.

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