Revisiting sustainable development Goal 4 in the context of COVID-19 Pandemic: A case study of online teaching in Algerian higher education institutions

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ABSTRACT

The unanticipated transition from traditional/on-campus to distance learning has not only posed challenges in different contexts at the global level, but it also caused disparity in terms of access to education. As a mandate, Goal 4 of Sustainable Development Goals states that by 2030 all member states should work to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (UNESCO, 2015). In practice, however, the responses of different international education institutions during the Covid-19 confinement indicate that the achievement of this equity plan at the global level is rather unfeasible. To address this issue from a local lens, this study seeks to examine the plan implemented for online teaching in the Algerian higher education institutions. It draws on a key body of literature on online infrastructure and pedagogy to explore (1) the different online teaching models that were implemented, (2) Algerian higher education teachers’ practices within the framework of this new model of teaching, and (3) the different challenges encountered by teachers during this transition. To achieve this end, a qualitative study that is based on an analysis of teachers’ interviews is conducted to explore teachers’ practices in different higher education institutions in Algeria. The results of this research will not only highlight the prevailing disparities, but will also serve to offer recommendations that could be relevant to future teachers’ professional development programs.

KEYWORDS

Algeria, Covid-19, disparity, infrastructure, online teaching

1 | INTRODUCTION

The impact of Covid-19 on all spheres of life has been unquestionably intense. It is an authentic example that illustrates the interconnectedness of the world; hence, it adds more relevance to the teaching of 21st century skills of solidarity, empathy, respect for diversity, and mutual understanding. Likewise, Covid-19 has highlighted the different inequalities that exist in the world and even within the same nation states; Equal access to education is a very relevant example in this context.

Following the spread of this global pandemic, many institutions worldwide have been forced to cancel on-campus teaching and to adopt different measures to ensure the completion of the curriculum by the end of the academic year. In the Arab region, the transition in K-12 hinged on the state’s financial capacity. UAE, for instance, offered free courses on digital platforms for 50 million Arab school children. On the contrary, school closure in regions such as Algeria, Morocco, Egypt, Libya, Jordan, and Tunisia could be considered as an equivalent to “no teaching.” Instead, the government resorted to local television stations to broadcast the compulsory lessons. Expectedly, in “conflict-plagued” countries such as Syria and Yemen, the outcomes are even more devastating not only due to the lack of infrastructure and modern telecommunications, but also the absence
of decent schools that left thousands of children without education (Tahar, 2020).

In the Algerian context, higher education campus closure coincided with Spring vacation that was prolonged to 15 days. On April 4th, 2020, the institutions have been then instructed by the Ministry of Higher Education and Scientific Research to switch to online teaching and to upload course materials on digital platforms designed specifically for this purpose. In the meantime, students were instructed to provide their information that was required for the creation of personal accounts to facilitate access to the course materials (Ahres, 2020). Similarly, different other platforms have been used in other institutions throughout the country to save the academic year. The question that is posed in this context is to what extent did higher education institutions, faculty and students manage to adjust with the online transition during Covid-19 pandemic? How does the transition to online classes operate considering not only the inadequate infrastructure but also the unreadiness of teachers, students and the administrative staff? In fact, O'Neill, Singh and O’Donoghue (2004) highlight three main challenges pertaining to the online teaching transition: transformation of the physical, cultural, and managerial aspects to accommodate students’ needs, students’ adjustment to the unfamiliar learning context, and the pressure exerted on the faculty in creating completely new approaches for a successful teaching and delivery. In the context under scrutiny, the unexpected structural change to accommodate students’ and teachers’ needs will probably make the transition to online teaching even more challenging.

Algeria witnessed the implementation of the Licence, Master, Doctorat (LMD) reform since 2004. The reform has been adopted with the aim of relocating and improving the higher education system throughout promoting competitiveness (Azzi, 2012) and mobility of learners following the European standards (Berrouche & Berkane, 2007). The LMD system is based on 3 years of License (Bachelor’s degree), 2 years of Master’s program, and 3–5 years of Doctorat program (Ph.D.). This goal which implies the improvement of the quality of education has already made the integration of online teaching of paramount importance. However, based on my experience as an instructor at the tertiary level, everyday course delivery still follows the traditional mode of instruction with a very slight integration of technology and online teaching. Oftentimes, teachers transport their personal computers and projectors to deliver their lecture. Additionally, the implementation of online teaching inside the campus is deemed to be impossible due to the lack of access to internet in teaching spaces. Indeed, there are multimedia labs; however, these spaces are reserved for special events, such as hosting international scholars to hold virtual conferences or the training of newly recruited university teachers. The latter takes place in one week during which teachers learn how to design a course using technological platforms (e.g., Moodle). As a result, teachers feel extrinsically motivated to take this course to get confirmed in their teaching position after one year of teaching experience following the recruitment. Alas, what is learnt is not implemented in real life teaching due to many reasons, such as teachers’ satisfaction with traditional teaching mode and reluctance to change, the insufficient infrastructure, students’ limited resources and students’ restricted access to internet.

What motivated me to write this article is my reflection on the different experiences that learners and teachers from both developed and developing countries may have in virtual teaching during the Covid-19 confinement. Additionally, it is inspired by my interest in highlighting the inequalities that exist in terms of access to quality education, especially within the framework of Sustainable Development Goals. As a mandate, Goal 4 states that by 2030 all member states should work to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (UNESCO, 2015). In addition to the challenge of realizing this goal, the transition to online teaching in developing countries is more likely to hinder the achievement of goal 4.7 which puts education that embraces global citizenship and other noble goals of human rights, gender equality, peace, and cultural diversity at the top of its agenda (UNESCO, 2015). Moreover, highlighting these inequalities will unveil Algerian teachers’ challenges; hence, suggesting some practical recommendations may contribute to the improvement of future professional development programs on online teaching. Therefore, the study is guided by the following questions:

Q1. What are the different online teaching models that are currently implemented in the Algerian higher education institutions?

Q2. To what extent are Algerian higher education instructors prepared to teach within the framework of this new model of teaching?

Q3. What are the different challenges encountered by instructors during this transition?

To examine this topic, the article draws on previous research conducted in the field of online teaching/learning. In this respect, it offers a description of the different online models, barriers to online teaching and the importance of planning. Since the focus of the article is on the experiences of Algerian university teachers, the different teaching competences required in the age of digital technology are also highlighted. The article will be introduced with a brief overview on the development of the higher education sector in Algeria as this will set the context of the study and facilitate the interpretation of teachers’ current practices.

2 | THEORETICAL BACKGROUND

2.1 | The development of higher education sector in Algeria

Since the independence in 1962, the higher education sector in Algeria witnessed enormous developments. The first reform or “the reform of 1974” was the most successful and positive one as it contributed to the economic growth of the state, revival of the national identity and the formation of national university faculty (Berkane, 2005; Benghabrit-Remaoun & Rabahi-Senouci, 2009). This achievement, however, did not last for long as there are different factors that contributed to the weakening and malfunctioning of the sector. These factors include the decline of enrollments in the fields of “Applied Science” and “Technology” with an increasing enrollment in generic fields or “Formation Générale,” the inadequate training and supervision of students, the mismatch between the university diplomat and the job market and the poor management system of higher education institutions (Berkane, 2005). In this article, the
malfunctioning of the sector will be highlighted with respect to the new LMD reform, students’ increasing enrollment and funding of the sector. 

First, the LMD model, also referred to as the Bologna process, was the second major reform that was adopted in the academic year of 2004–2005 as a pilot study in 10 higher education institutions, and then extended to 64 institutions by the academic year of 2008–2009 (Berrouche & Berkane, 2007). It was launched by the Algerian government with the hope of creating a robust educational system that would improve the state’s political and economic situation. This goal turned to be a necessity following the “crisis” of the 1980s which reached its peak with the beginning of the 1990s and resulted in a deterioration in the quality of research and teaching. The decline was attributed not only to the lack of resources and poor working conditions, but also the dearth in scientific contribution caused by the exile and migration of the marginalized cultural and scientific elite (Khalfaoui, 2009). During these conditions, the LMD reform was offered as a “turnkey” product with the hope of reviving the Algerian higher education sector (Khalfaoui, 2009). These critical conditions contributed to the importation of an educational model that is not compatible with the socioeconomic reality of the country (Benghabrit-Remaoun & Rabah-Senouci, 2009). Using Bourdieu’s words, there is rather a “hysteresis” (Curto, 2016) that resulted from the importation of this reform in the Algerian context. The long-term outcome, however, is pessimism and cynicism of teachers who found themselves obliged to adapt to this model and struggle to make it work despite its failure.

The deterioration in the quality of the Algerian higher education system in light of the Bologna process is just one facet of the challenges. Another factor that contributed to its critical situation is the enrollment of students which remained in constant growth since the implementation of the new model. For instance, student enrollment increased from 29.89% in 2010 to 34.48% in 2014, and then to 51.37% in 2018 (UNESCO Institute of Statistics, 2020). This increasing enrollment could be attributed to the free education for all policy in Algeria. The ideology that could also be justified by two reasons: the state’s goal in meeting the needs of international agenda of equity and access to education for all and the need to maintain control over the content taught (Berkane, 2005).

The third factor that follows from that of enrollment is expenditure. In fact, all institutions are public and entirely financed by the state with 93.13% of funding comes from the government and 6.74% from business enterprises (UNESCO Institute of Statistics, 2020). As such, the higher education budget is in constant competition with other budgets devoted to other sectors of the government. This fact did not only contribute to the weakening of the quality of training, but it is also posed a threat for the closure of some training programs (Berkane, 2005). What added the burden to the expenditure of the sector is the automatic access which is guaranteed by obtaining the Baccalauréat exam by high school students. At this stage, the newly admitted Bacheliers gain the privilege of having access to free education, a scholarship, and free access to subsidized services (food, transportation, and accommodation). Additionally, the difficulty to access to the job market after graduation pushes students to extend the period of training; hence, another source that weakens the functioning of the higher education sector (Berkane, 2005).

2.2 The development of online learning in the field of higher education

Since the mid-20th century, revolution in International Communication Technologies affected economic and social life (Harasim, 2000). This revolution motivated educators to embrace these technological innovations to back up their practices and to add value to the traditional way of instruction. Therefore, many higher education institutions at the international level were faced with the pressure from policymakers and stakeholders to integrate different online learning strategies as a response to these global challenges (Mackeogh & Fox, 2009). Eventually, different terms emerged to describe this new and sophisticated way of instruction including but not limited to “online teaching/learning,” “e-learning,” and “virtual classrooms”; all the terms denote a “paradigm shift” in learning (Harasim, 2000).

Urdan & Wegggen (2000) defined online learning as a subset of distance learning. It is one component of technology-based learning which embraces any type of learning that takes place via the net. It could be either “basic” including the transfer of course texts, graphics, activities, tests and grade records, or “sophisticated” including online mentoring or group discussions which require video/audio systems. A more general, simple, and wide-ranging although not very different definition is the one provided by Mason (2001), who associated online teaching with either a very slight or extensive integration of online technology in teaching. Although both online and traditional teaching share the purpose of supporting students’ learning, what makes the former unique is “the resource based” nature of learning that does not involve any kind of human interaction (Goodyear, Salmon, Spector, Steeple and Tickner, 2001).

In terms of course delivery, Urdan & Wegggen (2000) identified two types of online teaching: “synchronous” and “asynchronous.” In synchronous delivery, the instruction is equivalent to a real-time online learning event, instructor-led and involves the contribution of all the participants who have a simultaneous access and direct communication with each other. Examples include virtual classrooms and audio/video conferencing. Asynchronous delivery, on the other hand, refers to a learning event which does not require real time communication as teachers and students can have access to the material at any time. Instruction examples include “videotaped classes;” “streamed audio/video Web presentations;” “online chats and discussion groups;” and “e-mails.”

The earliest delivery of online courses dates back to the 1990s (Harasim, 2000; Hill, 2012; Mackeogh & Fox, 2009). Since then, they have grown steadily. In China, for instance, “China Education and Research Network” (CERNET) was the first higher education e-learning model adopted in 1994 (Guodong & Zhongjiao, 2010). In the UK, the government launched a policy to integrate e-learning in higher education institutions “in a sustainable way, by 2010” (Mackeogh & Fox, 2009). According to Anderson’s et al. (2006) review of national e-learning strategies, the embedding of online teaching in higher education institutions is strategic in nature and motivated by two goals: (1) to upgrade skills of the population so that they can keep up with the challenges posed by the information and knowledge society and (2) to develop a system that is accessible and flexible in light of the constant change in the nature of
society and lifelong learning agenda (as cited in Mackeogh and Fox, 2009). In addition to access and flexibility, the progress in online technologies created virtual learning environments which are similar to campus-based learning, although the former better contributed in generating student-centered learning approaches (Bennett & Lockyer, 2004). Subsequently, this investment in virtual learning contributed to the increasing competition and disparity among different international higher education institutions. Whereas some institutions are seeking new markets to expand their programs globally, there are those institutions that are self-satisfied with their current practices; hence, they are running the risk of "legging behind" (O'Neill, Singh and O'Donoghue, 2004).

2.3 | The classification of e-learning models

There are different criteria which have been adopted for the classification of online models. This fact has led to the emergence of three different categories that are delineated according to the different modes of course delivery, the method of course design, and the course development.

### 2.3.1 | Classification in terms of mode

In terms of modality, Harasim (2000, pp. 46–48) identified three different modes of educational delivery: "the adjunct mode," "the mixed mode," and "the totally online mode." First, the adjunct mode is the earliest example of online education where the network is used as a tool of enhancement rather than a requirement that impacts the course grading activity. An example of this mode includes the navigation of different online resources for research purposes using emails or computer conferencing. The adjunct mode is used for the purpose of collaboration, discussion and exchange of online-course material between the teacher and students or among students. When employed by teachers, it also serves administrative reasons, such as the announcement of class notes, assignments, posting grades, and offering individual feedback. Second, the mixed mode includes a full integration of the network in the curriculum and the activities discussed online are part of the course material and assessment. It could be used to accomplish different activities either in a traditional face-to-face or distance mode course. An example of this mode includes a networked classroom with participants from different geographical locations who share information, resources, joint projects, and social interaction. Lastly, the totally online mode involves the integration of computer networks in online courses as the "primary" environment for discussion. In this respect, e-learning is entirely used in course activities such as presentation of information, discussion, and group work.

### 2.3.2 | Classification in terms of method of course design

Although online teaching came to supplement and sometimes replace traditional teaching, Hill (2012, pp. 86–92) criticized the traditional and online teaching dichotomy as "simplistic" due to its failure to spot the variations existing within online models with respect to the method of course design. To this end, he provided a different classification to draw the boundary between different online course design methods which diverge in terms of their characteristics. The classifications are presented in Figure 1 above.

### 2.3.3 | Classification in terms of course development

Davis, Little and Stewart (2011) classified online learning systems into nonideal (real) and ideal types. The design of the real system is driven by different reasons, such as the limited resources, reskilling of the staff, the reinvention of new policies, and the inadequate governance. In reverse, the ideal type is built from scratch, and it is based on two considerations: The needs of students and the intended learning outcomes of the program. In terms of the students' needs, different factors are taken into consideration including but not limited to students' prior learning experience, background with technology, expectations, financial resources, access to the web and online networks, bandwidth, preparedness and equal participation in the online experience. With respect to the intended learning outcomes, the background knowledge is required for many reasons including but not limited to the design of a learning assessment system, specification of the prerequisites, and measurement of the quality of offering.
2.4 The importance of planning in online teaching

The transition to online teaching requires fundamental changes in the institutional structure. It involves an analysis of potential challenges and possible solutions for their treatment. Therefore, a careful planning for this transition is required in collaboration with academics, managers, and policy makers (O’Neill, Singh and O’Donoghue, 2004). This planning involves a clear specification of the desired outcomes and a consideration of the current capacity and attitudes of the relevant staff (Mackeogh & Fox, 2009), decision making, and training (Davis, Little and Stewart, 2011). The importance of planning also turns the development of infrastructure into a process that evolves in order to meet the changing students’ needs, technologies, and the curricular (ibid). To stress the importance of planning, Davis, Little and Stewart (2011) put it: “without effective structures and processes, the selection, deployment, and ongoing performance of an online learning system will prove challenging, and perhaps unsuccessful” (p. 122). In this respect, they identified different components of online learning systems.

1. **The development of a courseware:** This is done in the form of an initial proposal which involves: identification of the program objectives, the intended student market, the online learning approach, and a composition of the development and delivery team.

2. **Learning management system (LMS):** Whereas the ideal system involves aspects such as the choice of LMS based on the course needs, availability of qualified staff, or limitations on the use of current systems, the real system is imposed by the institution or company’s decision and constrained in terms of costs and the availability of human resources.

3. **Course management system (CMS):** It is divided into web content and document management systems. It also contributes to the functionality of the creation, collaboration, production, and the publishing of the learning materials.

4. **Library and digital resources:** They involve the librarian’s understanding of knowledge management and intellectual issues which is very crucial to the development of the online delivery.

5. **Learner services:** This involves the nonacademic support to learners to ensure success and satisfaction (technical support, advising, counselling,...). Whereas these services are equally developed with the curriculum in an ideal situation, they already exist in a real situation; so, all what is required is their conversion and enhancement for online learning.

6. **Interconnection with the student information system:** Through linking the LMS to the student information system (SIS), students will be automatically placed in the right course at the right time with all student information available to the corresponding instructor and others who need it.

7. **The User’s portal:** This involves a secure login to the portal which allows the learner to access the LMS, grades, documentations, and other learner services.

8. **Quality assessment:** It is a plan for independent evaluation which contributes to the achievement of the stated learning outcomes.

Indeed, the implementation of e-learning requires resources and a careful planning; otherwise, the process will result in a failure. That being said, there are always barriers that might hinder a successful online teaching process such as the insufficient hardware and software, slow internet connectivity, student motivation, lack of technical skills, inadequate student orientation, and the insufficient time for the design and teaching of online courses (Nkonge & Gueldenzoph, 2006). In light of these barriers and challenges, the burden that is added to teachers’ practice remains the most prevalent one. In this respect, teachers are not only required to address different technical and management issues that may arise from the online teaching, but also to incorporate different forms of online communication to keep students updated. Moreover, the formality of the written language and the absence of nonverbal communication from online teaching is another interesting challenge that drives teachers to use extra efforts to avoid students’ confusion and misinterpretation as a requirement to ensure the success of the course (Bennett & Lockyer, 2004). Based on these facts, the issue of teacher training in online courses comes to the fore. Goodyear, Salmon, Spector, Steeplees andTickner (2001:69) identified eight key competences that are required for online teachers. These competencies which I would call “the 21st century teaching skills” could be also transferrable to traditional face to face teaching. According to them the following characteristics are what define teachers who are competent in technology; “process facilitator,” “advisor-counselor,” “assessor,” “researcher,” “content facilitator,” “technologist,” “designer,” and “manager-administrator.”

3 | METHODOLOGY

Seven higher education teachers who belong to different departments (English Language and Literature, Sciences des Matériaux, and Relation Diplomatiques et Consulaires) took part in the study. The participants were selected from different higher education institutions in Algeria in terms of the structure of the institution as this will contribute to pinpointing the nuances prevailing at the local level. Among the seven teachers, five participants teach in public universities, whereas two participants teach at Ecole Normale Superieur (ENS). The latter differs from public universities in terms of the selective nature of the students admitted to these institutions, quality of training which is enhanced by the participation of foreign visiting teachers, institution management, and funding. Additionally, since the quality of training and resources vary according to the region, we drew on teachers’ experiences in four different regions: Oum El Bouaghi, Constantine, Oran, and Annaba to have an overall picture about the organization of online teaching at the national level. Background about the participants is summarized in Table 1 below.

A structured interview was the main tool of data collection. It is composed of 29 questions divided into four different sections: “background information,” “Teaching before Covid-19,” “Teaching during Covid-19,” and “e-learning training.” We found the structured interview more effective and convenient compared to the open-ended or the semi structured one due to its established agenda that is planned by the researcher throughout a fixed set of questions (Nunan, 1992).
All the interviews have been conducted online using different softwares including “messenger,” “WhatsApp,” and “viber.” Since the interviewees belong to different departments with varied level of proficiency in English, the interview was more informal, and teachers have been invited to codeswitch between English, Arabic, and French to express themselves freely.

### 4 | DATA ANALYSIS AND FINDINGS

**Q1. What are the different online teaching models that were implemented in the Algerian higher education institutions?**

Following campus closure, the Algerian Ministry of higher education and scientific research guided the universities to use Moodle platform (Modular Object-Oriented Dynamic Learning Environment platform), which is an open source LMS free to download, use, customize, redistribute, and modify (ethinkeducation.com, 2020). Meanwhile, the faculty were advised to integrate other softwares/platforms that could be effective to deliver their course material. Despite the difficulty in its management, five of the interviewed teachers reported that Moodle is the platform that is mostly used during the transition to online teaching. Additionally, one teacher has been advised to use SANAKO connect platform which is a browser-based platform that does not require students’ accounts. One teacher from the US who came to ENS, Constantine on an exchange program reported her mastery of technological skills; therefore, she implemented different softwares to support her teaching. Due to the nature of the course that she teaches (oral expression), the American exchange teacher in collaboration with different teachers at ENS uses different softwares including zoom, padlet, and google classroom.

Based on the interviews, six of the participants defined their online teaching as “basic” and “asynchronous.” All what they are required to do is to upload simplified lesson plans and activities to the Moodle or SANAKO platforms; however, there is no virtual interaction with students. Even though students were only required to download course material and submit their activities without any online interaction with the teacher, the interviewed teachers reported the unsatisfactory participation of students as displayed in Table 2 above.

Moreover, six of the interviewed teachers reported that they post questions on the discussion forum; however, there is no response received from the students. Instead, only few students turn in their work via email to the teacher. This students' lack of participation is accompanied with “no assessment” that, according to the ministry notice, is postponed until classes resume in September 2020. Table 3 below indicates the nature of assessment before and during Covid-19.

Students’ unsatisfactory access or lack of participation in the virtual online classes will be addressed by delving more into issues related to teachers’ preparedness in terms of the mastery of technology and experience with e-learning as well as the different barriers that hindered students’ participation from the teachers’ perspective. This will be discussed in Question 2 and 3 respectively.

**Q2. To what extent were Algerian higher education instructors prepared for the new model of teaching?**

Unsurprisingly, six of the interviewed teachers reported that they have never integrated the use of technology in teaching content courses before the transition to online classes, except for some courses that require authentic language material. Therefore, learners’ adjustment to the new virtual learning is unrealistic especially with the lack of resources. For instance, based on my experience in teaching, very limited number of students possess or use laptops as part of their everyday practice. Considering this situation, how can we expect learners to access to this virtual education if technology is barely used not only by teachers, but by students as well? If the lack of technological access is one reason, how about students and teachers that have access? In this respect, failure to use technology could also be attributed to the absence of the culture of technology itself inside Algerian higher education institutions as teacher 1 reported: “In fact, we don’t have time. We have a very long curriculum.”

With respect to e-learning experience, e-mails are the most commonly used by some of the interviewed teachers as a tool for the circulation of administrative information and course materials to students. In addition to emails, Facebook groups, google classrooms,
TABLE 3  The nature of assessment before and during Covid-19

| Assessment before Covid-19 | Assessment during Covid-19 |
|---------------------------|---------------------------|
| · Formative               | · Formative               |
| TD mark (based on continuous evaluation: Quizzes, presentations, students’ participation); students’ portfolios | No portfolios which is attributed to students’ lack of participation in the platforms |
| · Summative              | · No summative assessment |
| Final exam                |                           |

...and WhatsApp are also used for the distribution of course materials. Surprisingly, only the fellow teacher describes her current teaching as a combination between synchronous and asynchronous online teaching. However, despite the overall insufficient participation of students in the class, she admitted that the innovative teaching materials and the practice of soft skills have motivated the participating students. On the contrary, six of the interviewed teachers described their current experience as merely asynchronous. Moreover, the different negative attitudes they expressed about their online experience reveal both teachers’ and students’ alienation as expressed in the following quotations: “it is not even an online teaching” (T4), “students neither have the means nor the habits to follow this type of instruction and they are completely unmotivated” (T5), “this experience is an utter failure, students are not even consulting their accounts and those who did were passive! I did not feel motivated to do this given that this is the first time in addition to the difficulties I faced while using the platform” (T6), and “Not very encouraging as many students did not participate” (T7).

Q3. What are the different challenges encountered by instructors during this transition?

In addition to teachers’ and students’ unpreparedness to this transition, the interviewed teachers alluded to different other barriers and challenges that hindered the success of their virtual teaching experience. These barriers are summarized in terms of access to internet, hardware issues, software issues, lack of motivation, absence of online teaching culture, and lack of teachers’ online teaching experience.

4.1 | Access to internet

In fact, this is the first crucial challenge that justifies the absence of students’ participation in the online classes. In partnership with internet providers, the ministry of higher education and scientific research initiated a project that allows learners to get a free access to their university websites. Despite this fact, access to online platforms remains very limited as most students either lack internet connection at home or have insufficient network that allows them to have access to online classes. In a report on Internet Users Statistics in Algeria, the results indicate that the number of users has increased from 0.2% in 2000 to 45.2% in 2017, and then to 58.0% in 2019 (Internet World Stats, 2020). Therefore, only half of the total population have internet access. Unfortunately, in some cases the unsatisfactory internet quality may even hinder the process of online teaching as Teacher 6 puts it: “Internet connection was so weak; I was obliged to wait for two days to upload a video of 4 minutes!”

4.2 | Hardware issues

In addition to the lack of access to internet for some students, the unavailability of technological tools is another reason that contributed to the failure of the virtual learning experience. This issue has been even more complicated with the closure of cybercafés during the confinement. These spaces could have been more helpful in raising the rate of students’ participation in light of the absence of the required technological tools to successfully contribute to the online teaching model as stated by T7: “Many students do not have a laptop and some not even digital mobiles.”

4.3 | Software issues

Due to the absence of an online teaching culture from the Algerian higher education institutions, teachers find the platform proposed by the ministry as unfamiliar and difficult to be managed especially in light of lack of technical support and the absence of contact between teachers and the administrative staff. In addition to that, the commonly used platforms, mainly “Moodle” and “SANAKO” are not relevant to the nature of the course since students’ access is limited only to uploading the course materials; yet, there is no real teacher-student interaction. In fact, the lack of software license and good internet connectivity turned teaching into content transmission rather than live discussions. In some cases, the contradiction is apparent in the incompatibility between the platform and the formative assessment. For instance, students send written work to be assessed for their oral proficiency in some courses such as “oral expression.”

4.4 | Lack of motivation

In addition to the hardware, software, and internet access issues, lack of motivation is another common barrier which could be attributed to the confinement itself and the lack of necessary tools to successfully participate in the virtual teaching. Other teachers alluded to the alienation caused by the new reform of LMD; so, the transition to online teaching caused another even more challenging alienation for students as one teacher pessimistically stated: “students were not motivated to learn in traditional classroom with the presence of the teacher let alone in distance learning.” In addition to that, students are purposefully refraining from the participation in the online teaching with the hope to graduate without taking classes as stated by one teacher “they want to graduate without taking exams to take part in the recruitment contest in September.” In ENS, this is part of the hidden curriculum as most students used to launch successive protests for different requests which end up with the administration approval of their demands just to maintain order.
4.5 | The absence of online teaching culture

Algerian teachers still lack enough knowledge about the difference between online and face to face teaching as the online teaching culture is totally absent from the training and everyday teaching practices. A Fulbright teacher currently teaching at Oran university reported: “there are many things that need to be changed in the methodology of teaching and assessment in particular to cope with the transition to online teaching.” Indeed, the mindset of an assessment that is based on standardized tests and exams should be changed in an age where face to face interaction is no longer the case. We need to promote the use of other tools which are less costly and more efficient in assessing our students’ performance. Tools that are more effective in real classes and could be easily transferrable to online teaching environments.

4.6 | Lack of teachers’ online training

Teachers’ training in online models is also a very crucial aspect that could have had an impact on the success of this virtual learning transition. Among the interviewed teachers, only two interviewees participated in an official training on the use of Moodle platform. It is an initiative that is launched by their university. Despite this fact, the training was just a matter of formality since it is not implemented in the field as stated by Teacher 6:

I received a training on Moodle in 2015 when I was recruited. The training was initiated by the MESRS to enable the teachers to teach online. In this training I learned things related to the platform (how to send lessons, upload photos, audio files, etc.). It was done only in 2 days which was not sufficient; and worst of all we never used it after the training.

The quality of training itself matters. This compulsory training is based on teaching teachers how to design a lesson plan online. However, what is required is an online training that is geared toward students’ and teachers’ needs. Therefore, a more practical and relevant content should rather be designed to address the current demands as stated by T2: “technology has not taken a primary place; teachers need to learn not only how to use technology, but also to address the new needs of online learners.”

5 | CONCLUSION

The results of the study illustrate the inequalities that exist between the Global North and the Global South in terms of access to education during Covid-19 pandemic. This, in turn, puts into question the ambitious goals of sustainable development which aim at achieving “inclusive” and “quality” education for all. In fact, campus closure and the different measures adopted to save the academic year are just some examples that reveal the inequal resources existing to meet this goal.

Drawing on the experiences of Algerian university teachers, the online mode of teaching during COVID-19 is proved to be unsuccessful due to the existence of many barriers summarized into the following: access to internet, hardware/software issues, lack of students’ motivation, the absence of online teaching culture and lack of teachers’ training. Further, the implementation of ad hoc teaching models is another crucial factor that justifies the failure of the online teaching experience. Therefore, e-learning should rather be viewed as a system that is based on careful planning and consideration of the different components as identified by Davis, Little and Stewart (2011): the development of a courseware, learning management system, library and digital resources, learner services, interconnection with the student information system, the user’s portal and the availability of quality assessment. Besides the careful planning, two important aspects should be taken into cognizance: the needs of the students and the intended learning outcomes (Ibid). Moreover, the issue of cyber security is another important aspect that should be highly considered otherwise “we lose the value of what we are doing” as one of the interviewed teachers reported.

In addition to the challenges that are spotted from the local context and make the availability of effective infrastructure and planning of paramount importance, issues pertaining to teacher training should also be addressed to ensure the success of online teaching models. In fact, we are living in an age where the mastery of content or teaching methodology alone is not enough; Likewise, the abundance of technological resources without meaningful teacher training is not sufficient. In this respect, we need to highlight new skills required to prepare teachers for the challenges of the 21st century, that is, “digital skills.” For the improvement of the quality of online teaching in the Algerian higher education institutions, teacher professional development and teacher education programs should consider the importance of technological skills. This could be justified by the contribution of the English fellow teacher at ENS which caused a positive experience compared to other teachers in other regions of the country. Thus, raising teachers’ awareness of the importance of online teaching could only be achieved through a consistent training that is done in parallel with students, although the problem of access to technology and internet still operates.

This research addressed some of the educational challenges that exist at higher education institutions which have been accentuated during Covid-19 pandemic. The results invite policy makers to reconsider the new reforms, to devote more efforts to the improvement of teacher training programs and to equip both teachers and learners with enough skills to deal with the challenges of the 21st century. Likewise, the context of the pandemic invites teachers to revisit their teaching philosophy and assessment methods. Although the study focused only on a small sample of university teachers, future research should be designed to highlight the educational challenges from the learners’ perspective along with the different resources that are used to navigate the unprecedented online teaching transition. It would be also extremely important to unveil the impact of this transition and the unequal access to education on learners’ motivation, research experience and the long term learning objectives. Lastly, a comparative study of teachers’ experiences in a developing and a developed country would be also an interesting area of research that might well further reveal these inequalities and contribute to the improvement of teacher education programs with regard to the aspects of technology.
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Data available on request due to privacy/ethical restriction

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