Distributed Mode to Education in Morocco: Exploring Students' Experience of Distance Learning During Covid19

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Abstract. Like most countries, COVID19 pandemic lockdown forced Morocco to resort to distance learning to ensure the continuity of instruction. Being a novel experience in Morocco, it posed a wide range of difficulties and faced various criticisms. This was mainly attributed to lack of infrastructure, high internet access cost, and lack of or inadequate ICT teacher training (Bachiri and Sehli 2020). Nevertheless, this paper argues that distance learning can be the future mode of education if adopted within a distributed approach. Adopting a mixed-method approach, the study surveyed 444 students from seven Moroccan universities, and interviewed a focus group of 54 students from Mohammed V University in Rabat online. The administered questionnaire aimed at investigating learners' perception of the online learning experience as well as its perceived influence of the enhancement of their autonomy related constructs as defined by Bradley et al. 2017. Data analysis included the use of descriptive and inferential statistics along with interpretive content analysis. The findings reveal that distance learning can be an asset to make strides towards learner's autonomy enhancement, quality assurance, and ICT integration if properly adopted as a hybrid mode. This has multi-leveled policy and pedagogically related implications for the implementation of distance learning and enhancement of learners' individual agency, and youth's active citizenship.

Research Contribution: This study evaluates online learning in Morocco during Covid19. It highlights the potential gains it brought about to learners' agency and the avenues it opened for ICT integration and active digital citizenship development. The results are informative for educators and policy makers because they offer new perspectives for quality assurance which is conceptually framed within a distributed approach to education.

Keywords: distributed approach · quality assurance · ICT integration · learner autonomy · active digital citizenship

1 Introduction

Within the industrialized world, online education models (single or blended) have already been the adopted mode of education in a wide array of learning domains (Edelson and

Pittman 2001). This growth has been paralleled by extensive research which seeks to describe distance education programs, compare group academic achievement in distance classes and face-to-face classes, or match individual learner characteristics such as learner's autonomy with media variables (Lynch and Dembo 2004).

In Morocco, the sudden shift to online learning was not a choice but a reality forced by the outbreak of the COVID19 pandemic. The transition to distance learning was inevitable to ensure the continuity of schooling for millions of students of all grade levels. It is true that ICT integration in the education system has been a fundamental concern clearly stated in Article 10 of the National Charter of Education and Training (1999). The article considers teachers' and students' familiarization with and adoption of different multimedia-based learning platforms a priority; subsequently, different related programs, such as GENIE (2005) and ITQANE (2013) were launched to enhance educational engineering, instructional technology, and online tutoring.

Nevertheless, from its inception, online learning raised concerns about quality from the established educational community and society at large. It has been confronted by a number of challenges and criticisms that were primarily attributed to lack of infrastructure, high internet access cost, and lack of or inadequate ICT teacher training (Bachiri and Sehli 2020; Elfirdoussi et al. 2022; Belamghari 2022). As a result, many learners and teachers expressed their unpreparedness to and dissatisfaction with distance learning; they perceived it as subsidiary to face-to-face education which is considered the most preferred and effective mode of education (El firdoussi et al Ibid; Slimani 2021; El Aouri 2021).

Many of the studies conducted on distance learning as a novel experience for most educational institutions in Morocco have highlighted the dark side of this experience and stressed the shortcomings it brought about to academic achievement. They considered the shift to online learning was challenging and unsuccessful given the reasons already outlined above (Bachiri and Sehli 2020; Elfirdoussi et al. 2020; Belamghari 2022). In doing so, they overlooked the benefits online learning can bring to learners' individual development, and they missed the point that this novel experience can be a stride towards quality assurance and ICT integration in Morocco.

Distance education, including online learning, offers learners opportunities to promote their autonomy related attributes (Strickland 2014, Schoon 2018). The adoption of distance learning can contribute positively to the development of learner's autonomy since the learning space-environment where the individual learns- be it the physical classroom or the digital space- both affects and is affected by the individual learner (Strickland 2014).

The opportunities that distance learning provides for learners are assumed to support self-directed learning and by extension enhance learners' autonomy (Benson 2022). This can be possible thanks to the interaction with the vast arrays of resources that are distributed across the digital space (Benson, Ibid). Thus, in the process of using and selecting online resources, learners are presented with challenges they can only solve by self-direction and autonomy regardless of how abundant those resources are (Benson, Ibid);

Equally important, distance education can be an asset to enhance quality assurance and ICT integration in Morocco if properly adopted within a distributed approach. A great

deal of literature supports the migration toward distance education in undergraduate and graduate education as it allows the erosion of existing geographical and non-geographical barriers (Powell 2007). Distance education carries the potential benefit of facilitating access to students with physical disabilities by eliminating or reducing the need to travel to on-campus sessions and usually affords more flexibility in scheduling (Powell 2007).

Furthermore, distance education is far from being monolithic (Powell 2007). It is the ideal way for the effective integration of ICT tools as it encompasses both a variety of media and synchronous and asynchronous modes of delivery. An asynchronous mode might involve the utilization of platforms to communicate with students while more synchronous delivery modes can include the use of web conferencing, virtual chat, or web cams to provide for real-time interaction between instructor and students or between learning sites (Powell, Ibid).

Given the acknowledged merits of distance education, this study seeks to explore the opportunities Moroccan online learning experience during Covid19 might have offered to learners and the possible avenues it could have opened up for quality assurance. More specifically, the study explores how Moroccan university students evaluate their experience on distance learning during COVID19 and identifies the potential gains it might have brought for the enhancement of learners' autonomy, active digital citizenship and improved ICT integration.

2   Method

The present study adopts a mixed-method research design that uses both qualitative and quantitative data collection methods including a survey questionnaire and a focus group interview. The sample included 166 male students and 278 female ones; 177 were Semester four and 267 were Semester six students from seven Moroccan universities. The number of students from each university is presented in Table 1.

The study adopted Cluster Sampling to select seven public Moroccan universities out of thirteen. Purposeful sampling was used afterwards in the selection of one class from each university and ended up in the selection of 444 students in total. Similarly, the surveyed students were selected purposefully; their professors shared with them the survey link and only volunteering students filled in the administered questionnaire.

Table 1. Selected Universities

Selected Universities	Number of students
Abdelmalik Essaâdi	69
Cadi Ayyad	40
Mohammed V	150
Hassan II	38
Ibn Zohr	40
Hassan I	58
Moulay Ismail	49

2.1 Data Collection Instruments and Analysis

To collect the relevant data, the study administered a survey questionnaire online via Google form and conducted an in-depth semi-structured focus group interview. The questionnaire was in three sections and included twenty-eight items in total. The first section included three items to elicit demographic data. The second section included three items to explore participants' perception of their online learning experience during Covid19. The third section was longer as it was meant to investigate students' perceived impact of online learning on their autonomy/agency. This section was further divided into four sub-sections each of which included items on autonomy related attributes as suggested by Dembo and Lynch (2004). The items were adopted from Bradley et al 2017, and Dziuban, et al 2015, and were adapted for the specific purpose of the present study. The autonomy related attributes included in the questionnaire were: Motivation (2 items); Time-management (2 items); Study-environment skills (4 items); and learning management skills (9 items).

The in-depth semi-structured interview involved fifty four students from Mohammed V University as one focus group; all were at Semester six and studied at the English department. The interview was online via a Google Classroom conducted by the end of May 2022 and lasted for about 65 minutes. The process of formulating the guiding questions was informed by Dziuban, et al 2015 conceptualization of the defining elements of students' satisfaction. The questions were basically about the participants' perception and evaluation of their online learning experience during Covid19; that is to say, the extent of their (dis)satisfaction and the reasons underlying it. The questions were also about the learners' perceived effect of online learning on their autonomy related constructs. As the discussion flowed, questions about the challenges they encountered, the gains they had, and the best way(s) they think have to be adopted to maximize the benefits of distance learning were asked.

Data collected was then analyzed both quantitatively and qualitatively. Quantitative data analysis was done through SPSS 20. It involved the use of Frequencies, Descriptives, Independent Samples t-Test, and Correlations. Qualitative Data Analysis was conducted through the use of Interpretative Content Analysis of participants' recorded responses during the focus group interview.

3 Findings and Discussion

Data analysis shows that the students' views were quite ambivalent towards their overall online learning experience. Generally, they were dissatisfied with the experience; nevertheless, they admitted it brought about a number of advantages they could not deny and would very much maintain in the future. The results reported in Table 2 shows that students held an ambivalent view towards their online learning experience during Covid19. Thus, although the mean suggests that learners were satisfied with online learning (M = 30.04), the result could not be interpreted as a representation of their consensus given their highly scattered responses (SD = 9.62).

It is interesting to note that no significant group differences between Semester four and Semester six students were reported regarding their overall evaluation of online learning t = -.816, $p = .415$ as can be attested in Table 3.

Table 2. Students' Overall Perception of Online Learning

	N	Min	Max	Mean	Std. Deviation
Students' perception	426	7	42	30.04	9.62

Table 3. Independent Samples Test of Students' Perception of Online Learning

	M	df	t	Sig
Students' overall perception	-,75	421	-.816	.415

The in-depth students' interview supports this pattern of finding and reveals some of the reasons that might have underlined such an ambivalent view. In fact, the interviewees provided interesting accounts for both their dissatisfaction and satisfaction with online learning.

3.1 Reduced Interaction and Increased Distraction

According to data collected through focus-group interviews, the students' ambivalent view towards online learning can be attributed to three main reasons. They were dissatisfied first because interaction (teacher-student and student- student) during online classes was reduced due to virtual social communication barriers. The students explained that in face-to-face interaction, they were more encouraged by their teachers to share their opinions and ask questions while during online classes the interaction took a delivery mode on the part of the teacher. This was further flawed by lack of physical contact including teachers' eye contact and body movements which are considered by most of the interviewees very critical for understanding and enhancing class interaction.

Student-student interaction was also very much reduced not only because of virtual social communication barriers but also because of an increased sense of 'individualization' which learners described as the byproduct of distance learning. The interviewees explained that in traditional classroom environment, they used to collaborate and work together with their classmates while in online classes, most of the students were reluctant to share information, resources and notes; they were even reluctant to respond to posted questions and inquiries; most of the time, they had to rely on themselves and look for their own ways to find supplementary resources other than what is shared by their professors. As a result, absenteeism was very costly for some students because they were cut from the classroom community; hence, they were deprived from accessing courses since all classes were synchronic and not recorded.

Another equally important factor of students' dissatisfaction is the amount of distraction caused by the online class environment. In fact, the interviewed students explained that it was difficult for them to stay focused when various online distractors, especially social media messages, were hovering around. According to the students' responses, the real classroom environment is more conducive to higher levels of concentration

thanks to many variables such as teacher's authority, classroom interaction, and continuous nurtured interest. Thus, in traditional class context non-linguistic communication tools (body language, eye contact, and voice) continuously sustain learners' interest and motivation when these later are lost or lowered.

3.2   Need for Digital Inclusion and Digital Literacy

Similar to other studies conducted in this respect (Bachiri and Sehli 2020; Elfirdoussi et al. Elfirdoussi et al. 2020; Belamghari 2022), in the present study students' dissatisfaction was also related to problems of technology access and use. In fact, two prevalent reasons emerged from qualitative data analysis. The first one pertains to digital inclusion and the second to digital literacy. The students reported that many of their colleagues were unable to attend online classes because they did not possess a technological device. They explained that this was due to poverty and the difficulty to cater for the needs of four or five children in large families. In other cases, which are no less frequent, physical boundaries were a barrier to effective and successful online sessions. Most of the students reported that they live in small apartments and at least four members of the same family were required to work online; this created a very noisy and disturbing environment.

Ideal circumstances where technological access was afforded were confronted by issues relevant to technological literacy. The students' responses reveal that many students and teachers lacked the very basic technological literacy to handle such mode of learning/teaching. As a result, many online classes were either missed by the technologically unqualified student or were not delivered by the untrained teacher. During the interview, the students shared their stories of online classes being missed because some professors could not use their Google class account.

For these reasons, the interviewed students argued that the solely adoption of online learning mode is not the best option. Instead, they suggested the integration of asynchronous distance education modes. For instance, some of them proposed the recording of online sessions to be accessed later by those who might miss them; as such, they explained, obstacles related to access of information could be overcome. They also supported the use of other asynchronous modes of delivery and learning such as video delivery, in-person sessions as well as platforms as databases to share information and submit assignments. Simultaneously, online learning could be adopted to enrich discussions of content already presented and explained in a real classroom. For them face-to-face education is a must and to be maintained for at least 50% in the delivery of knowledge and interaction.

In spite of their dissatisfaction with online learning, the interviewed students considered the experience interesting and worth institutionalizing if developed in ways that overcome the barriers discussed so far. Analysis of students' responses identifies three major gains of online learning: 1) The erosion of geographical barriers; 2) increased sense of autonomy; and 3) enhanced active digital citizenship.

3.3   The Erosion of Geographical and Non-geographical Barriers

All of the interviewed students agreed that online learning was very effective in the erosion of existing geographical and non-geographical barriers (Powell 2007). The experience was very much helpful in saving so much of the time they usually spent commuting to and from on-campus classes. It was also beneficial as it reduced the cost of buying books and copy making by allowing free online access of shared resources.

The interviewees added that thanks to online classes, students with physical disabilities had the chance to attend classes and access information easily. They explained that some of their physically disabled colleagues were rarely able to attend classes especially those held upstairs because of lack of physical access facilities; this made online learning effective in taming such obstacles.

Part of the students' satisfaction with the online learning experience stems from the flexibility it allows for all kinds of students. This was particularly true for students with a permanent or part-time job. They believe that distance education presents itself as a real opportunity for students who are impeded by work obligations to attend regularly; in online classes they can be in both places at the same time. Hence, online learning offers more chances for life-long learning education necessary for individual and societal development compared to traditional classes.

3.4   Enhanced Learner Agency

The results also show that the students' satisfaction with online learning could be attributed to its perceived impact on autonomy-related constructs, namely time-management and study environment management skills, learning assistance skills, and motivation.

When asked whether their overall autonomy was enhanced throughout online learning, all of the interviewees agreed that it did to varying levels. Some assured that even though they were already autonomous and possessed the necessary skills to manage their time, find extra resources, and get rid of distractions, the online learning experience provided them with more opportunities to develop those skills and refine them. Others explained that it was a chance for them to get acquainted with the use of technology, find ways to access information, and most of all get to know how to manage their time and motivate themselves. Because of the kind and amount of interaction (described by the students as "mechanical," "robotic," and "detached") offered by the online class, they had to ensure that the study environment is conducive to learning and restructure it, know when help is needed, identify sources to help, obtain help, evaluate their progress, and motivate themselves when tasks are difficult or long. In other words, they all agreed that thanks to online learning, they have become more active, have learned how to take full responsibility for their learning, and have discovered they can learn by themselves.

Manifestation of increased sense of students' autonomy-related constructs is further supported quantitatively as displayed in Table 4.

Table 4 shows that there is a consensus among the surveyed learners on the improvement of their autonomy-related attributes during the online learning process, especially their motivation (M = 8.29) and time-management skills (M = 4.16). Besides, the results

Table 4. Descriptives of Learners' Perceived Development in Autonomy-related Constructs

	N	Min	Max	Mean	Std. Deviation
Motivation	430	2	12	8.29	2.61
Time-management	433	1	6	4.16	1.63
Study-environment	429	4	24	15.91	5.38
Learning assistance management	425	8	48	32.04	9.62

Table 5. Correlational analysis of Students' Perception and Autonomy-related Constructs

	Motivation	Time management	Study environment	Learning Assistance Skills	Students' perception
Motivation	1				
Time-management	.709**	1			
Study environment	.718**	.762**	1		
Learning assistance	.721**	.740**	.801**	1	
Students' perception	.746**	.735**	.767**	.789**	1

**. Correlation is significant at the 0.01 level (2-tailed).

suggest that even though the students' responses were scattered to what relates to learning assistance (SD = 9.62) and study environment skills (SD = 5.38), their respective means (M = 32.04, M = 15.91) attest to some levels of perceived improvement of these two constructs. For instance, it is interesting to note that quite a good percentage of students (32.7%) reported that online learning has helped them find new ways of learning; 23.9% agreed they have become more active as learners, and 45% discovered they can learn by themselves. The results also attest to a noticeable perceived positive impact on their motivational skills when tasks are difficult or long. More than that, the learners stress the fact that their time-management skills have developed as 30.7% state they learned how to plan their time for study effectively during online learning.

This pattern of finding supports Schoon's (2018) socio-ecological theory whereby agency constructs and social structures are conceptualized as being dynamically interrelated in such a way that multiple structural influences shape the development of agency. Accordingly, the digital space is a social structure that produces structural constraints and influences which interact positively with learners' autonomy constructs as Table 5 illustrates.

The results reported in Table 5 demonstrate that students' time management skills are significantly influenced by the extent of their overall satisfaction with online learning ($r = .735$). Similarly, students' study environment skills ($r = .767$), learning assistance skills ($r = .789$), and motivation ($r = .746$) display the same pattern of results. Thus, all of the studied autonomy-related constructs showed significant positive correlation with

students' overall perception of online learning. This suggests that the digital space can be a supportive structural context conducive for the enhancement of learners' individual agency if appropriately adopted.

3.5 Enhanced Active Digital Citizenship

Analysis of the qualitative data suggests remarkable perceived enhancement of students' active digital citizenship. Throughout the focus-group interview, some of the interviewees admitted that the online learning experience during Covid19 contributed to the improvement of their digital literacy by providing them with opportunities for technology use. The fact that online learning was the only possible mode of education at the time forced them to learn how to use technology in order to access information, interact with peers and teachers, and to submit assignments. This could be interpreted as an important stride towards ICT integration in general and digital citizenship enhancement more particularly (for both teachers and students) by encouraging the active use of the abundant array of technological advances available in the modern era.

Overall, both the collected quantitative and qualitative data suggest ambivalence in learners' perception of their online learning experience. Yet, the same set of data show that such ambivalence is more aligned to develop into a fulfilling experience given the gains it has especially in what relates to learner's agency, ICT integration and active digital citizenship.

4   Conclusion

In the present study, both the surveyed and interviewed learners considered online learning during Covid19 as challenging and not very much exciting; yet, the majority recognized the gains they derived from it in terms of easy and relatively inexpensive access to education (removal of geographical barriers and the expenses related to it), development of individual agency, and enhancement of active digital citizenship. Their views are insightful and have a number of interesting implications for the adoption and implementation of distance learning.

The findings of this study imply an urgent need for digital equity that ensures digital inclusion for all. Online learning could be a practical decision only if access to technology (technological device access and internet access) is facilitated. It is also mandatory to guarantee adequate digital literacy by providing separate teacher and student training programs on technology use.

The findings also suggest that online learning could be an effective context conducive to the enhancement of students' agency. Hence, this paper advocates that online education is a positive space-environment affected by learner's agency and does mutually affect autonomy-related constructs (motivation, time-management skills, study environment management skills, and learning assistance skills). In other words, although successful learning via the digital space is partly determined by individual learner agency, the former can be a favorable context to positively enhance the latter. Consequently, the interaction between the digital space and autonomy should be viewed as bidirectional rather than unidirectional since each might affect the other.

Online learning is also an important asset towards ICT integration and digital citizenship. The process of ICT integration in the learning process could be facilitated and accelerated if distance learning is institutionalized because it mainly requires the integration of various ICT tools. Concomitantly, ICT integration is a step towards the enhancement of active digital citizenship as it provides learners with opportunities to be active users of technology.

Finally, all of the interviewed students agreed that online learning can never be the only mode of education given the hurdle of difficulties it creates and challenges it raises especially with respect to technology access, affordance, and use. Alternatively, they argued that online learning can be possible in Morocco only if it is part of a distributed approach to education that integrates distance education methods (including online learning) and face-to-face education. This implies that the adoption of a distributed approach to education, whereby synchronous and asynchronous methods of delivery and learning are integrated in a hybrid/blended mode, is the best option.

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