Distance learning: Feedback on the effectiveness of its practice during the 2019 health crisis

L'enseignement à distance: Retour d'expérience sur l'efficacité de sa pratique pendant la crise sanitaire 2019

BOUSDIG Khadija
Enseignant chercheur
Ecole Supérieure de Technologie de Salé
Université Mohammed V de Rabat
Laboratoire de Sciences de Gestion de la FSJES Agdal-Rabat
Maroc
Khadija.bousdig@est.um5.ac.ma

TAHIRI JOUTI Hiba
Enseignant chercheur
Ecole Supérieure de Technologie de Salé
Université Mohammed V de Rabat
Maroc
Tahiri.jouti.Hiba@gmail.com

Abstract

The global health crisis of 2019, caused by COVID, has produced a great disruption on all vital sectors of Moroccan society. Indeed, this crisis has largely affected the education sector at its various levels. However, it was almost to give up an entire school and university year, since almost 80% of the teaching for the year 2019-2020 was provided in face-to-face.

Substitution by online teaching was the only solution to consider, if not the only one. This sudden, unexpected transition from face-to-face to remote has had its negative repercussion on all the actors representing the pedagogical triangle, namely the teacher, the learner, and knowledge in its didactic transposition.

Based on this method of teaching imposed by COVID-19, this study presents the results of a qualitative study carried out by students of ESTS. The objective is to assess the effectiveness of this practice in an emergency setting, according to the Kirkpatrick 2007 training analysis model.

Keywords: COVID-19; online education; training; efficiency; satisfaction.

Résumé

La crise sanitaire mondiale de 2019, causée par COVID a produit une grande perturbation sur tous les secteurs vitaux de la société marocaine.

En effet, cette crise a touché en grande partie le secteur de l'enseignement sur ses différents niveaux. Cependant, il était presque impossible de renoncer à toute une année scolaire et universitaire, vu que presque 80% de l'enseignement de l'année 2019-2020 fut assuré en présentiel.

Toutefois, la substitution par un enseignement en ligne fut la seule solution à envisager, voir même l'unique. Ce passage brusque inattendu du présentiel au distanciel a eu ses répercussions négatives sur tous les acteurs représentant le triangle pédagogique, à savoir l'enseignant, l'apprenant, et le savoir dans sa transposition didactique.

Partant de ce mode d'enseignement imposé brutalement par le COVID-19, cette présente communication présentera les résultats d'une étude qualitative menée auprès des étudiants de l'EST salé, afin d'évaluer l'efficacité de cette pratique dans le contexte d'urgence, selon le modèl d'analyse de formation de Kirckpatrick 2007.

Mots clés : COVID-19 ; enseignement en ligne ; formation ; efficacité ; satisfaction.

Introduction

The whole world witnessed a total disruption in most institutions and industries. Education was one of the industries that was carried out and transferred to online mode in most countries all over the globe. To ensure the continuity of the twin processes of teaching and learning; online learning was the sole alternative during Covid 19 pandemic. By and large this study contributes to a large extent to the evaluation of the new experiences of both learners and educators in online education and also the accessibility and feasibility of virtual methods of learning.

This study is an attempt to test the extent to which online education was effective during the pandemic. It tends to assess the quality of the twin processes of learning and teaching at various levels: at the level of teaching practices then at the level of the climates and their relation with students' performance; achievement and adjustment of their own behavior.

-Research Questions

This research project raises a number of important questions on which investigation and analyses are based; they are as follows:

- To what extent do the physical and the emotional environments influence students behavior and motivation to learn online

- Do teachers ways of giving instructions online influence students' motivation; engagement and satisfaction towards the learning process.

-Research Project organization

The research project is an effort to investigate the perception of different respondants groups related to the factors that influence online learning in higher education during the Covid -19 pandemic. This paper covers three major sections. Section 1 briefly delineates some major concepts and theories about distance learning that were long carried out and approved by prominent scholars to test the effectiveness of online teaching and its impact of student's motivation. It sets the tone for the whole research project as it allows deeper analyses of results and findings. In section two; the research method and hypotheses are developed and the analysis and interpretation of the results is also presented. Finally; section three draws conclusions and offers some suggestions for future research.

1- Review of the literature

This section is considered as the project's framework as it offers a wide range of approaches

and theories that would shed light on e-learning facets and how it is conceived by the two parties namely teachers and students. This part is divided into four main subparts mainly the conceptualization of e-learning; its advantages and disadvantages in education; students' motivation and satisfaction toward e-learning.

1.1. Conceptualizing e-learning

Nowadays ; the possibility of using a plethora of technologies brings about new ways of learning ranging from distance ; online ; hybrid or blended online courses. E-learning was among the terms that is used to describe the learning process and how it was carried out via digital tools and applications. As (Nicholas,2008) puts it *« E-learning is a common term used to describe anything on this continuum that incorporates digital technologies in the learning process. »* p :6

Nicholas's saying emphasizes the fact that e-learning constitutes an integral part in the continuity of education. In other words, e-learning is not only an alternative for learning but a part and parcel in the twin processes of learning and teaching. However, in order to deepen our knowledge of distance education; a clear distinction should be set up between e- learning and online learning. In so doing (Baker,2005) points out that *« the terms online learning and e-learning are used interchangeably but makes the distinction that e-learning can encompass any form of technology while online learning refers specifically to using the internet and the web. The term fully online is used to distinguish distance courses where students must have access to an internet capable device to undertake the course. »* p6

Baker's statement indicates that the effectiveness of e-learning lies in the fact that it encompasses all what helps students ensure their educational path by having access to the internet through the use of several devices. This what makes it distinct from other terms like online learning which simply mean having access to the internet and the web. (Ally,2008) widens the notion of online learning by including diverse practices and technologies, He defines it as follows : *« the use of the internet to access materials ; to interact with the content ; instructor and other learners and to obtain support during the learning processes in order to acquire knowledge ; to construct meaning and to grow from the learning experience. P : 5*

Ally emphasizes that online learning is an umbrella term that include various practices and uses that help students have access to online materials and keep in touch with the educational staff. It can also take part in acquiring and constructing knowledge and grow independently via these learning experiences. Ally also sheds light on learner's autonomy as it is enhanced by

online learning. He clarifies that the learner can gain also control over his educational journey. The growth mentioned in Ally's quote simply highlights how online learning experience help students grow mentally as it enables them to make decisions ; choices and increase their ability to be in charge of their learning without neglecting the teachers' support and availability. (Garison & Bayton ,1987) conclude by saying *« Control is concerned with the opportunity and ability to influence and determine decisions related to education process. This can be achieved by striking a balance between independence like freedom to make choices, power as competence or the capability to be responsible for the learning process 'P :9*

Because of the lack of consensus around e-learning and online learning , one cannot use them in an interchangeable way but it all depends on the context they are being referred to. Bates and Ally's definitions are centered on one point which is that both e-learning and online learning stand for all what set students and teachers apart by using digital tools.

1.1. Disadvantage and advantages of e-learning

Online learning has been conceived as more practical but quite challenging and tough for others. Beginning with the positive sides of online learning; one cannot neglect the fact that online learning is proven to be the only way to ensure the continuity of learning during the pandemic. Its effectiveness resides on many levels be them social ; economic etc. Digital learning comes also to meet students' needs as they grow addicted with technologies which can make learning a worthwhile journey. Some students show more engagement and sense of commitment in online classes rather than they do in traditional ones. As (Koh & Kan,2020) put it *« the ability to participate in digital learning has allowed teachers to have a greater number of students . another advantage is to aid students with physical ; social or emotional disabilities in their involvement with class and interactions with others.* » P :10

However ; online learning has several shortcomings and limitations but during the pandemic it was often judged to be effective in that it allows education to be continued in a safer manner for both parties. The lack of internet and technological accessibility and students inability to use technology in a way that they can get their lessons represent two important drawbacks that were of major concerns for students and teachers. Despite the variety of technologies available in today's world ; there were inequal opportunities in distance learning as some students did not have the privilege to use the internet to continue their studies. This category of students constitutes the low socio economic backgrounds and this lack of resources ranks them in a

disadvantage position. As (Potter,2018) puts it « *while technology and the ability to access the internet are very common in today's society ; it is not an accurate assumption that all studentshave this privilege* »

The second disadvantage is basically the lack of face to face interaction between teachers and students. How technology can be used inadequately by students; especially vulnerable ones. Those who feel unable to understand online courses. This drawback puts a stress on the importance of teachers support and supervision which can contribute to students motivation and achievement.

1.2. Online learning and motivation

Students' motivation represents a major concern in online education. In virtual classrooms ; teachers witness the lack of motivation on students part especially the ones who are devoid of a sense of accountability from working with others. (Trespalacios,2017) affirms that learning in virtual classrooms is challenging for students who also need to communicate ; to be encouraged and rewarded by their teachers once they achieve positive results. These incentives in real life classroom give them a push to carry on studying harder and develop accordingly. Trespalacios points out that « *A major disadvantage with digital learning is the difficulty in offering tangible rewards and punishments for good and bad efforts and participation while there may be digital incentives it can be difficult to use as motivator if students are not logged in or online.* » P :4

Trespalacios asserts that tangible rewards or incentives oscillate between good and bad rewards ; good for nice results and bad for punishments . these incentives would simply enhance learner's control over their behavior and how they should develop intrinsic motivation. Simply put ; in today's world, students use of technology and learning online should be done intrinsically. As (Riley,2016) said « *if a student is intrinsically motivated to take extra time to understand a concept then externally the student may see an improved grade. Factors such as rewards ; deadlines ; competition create a motivation to reach personal goals and ideals for achievement ; it is vital that in order for external factors to be effective there must be some level of self-determination because the external factors must have value in the eyes of students in order to be motivated.* » p :5

Riley's quote describes motivation as the engine of learning as it can have an impact on the learning process. However; motivated learners are more likely to be determined in making choices and deciding what they need to learn and are able to undertake challenging activities;

tasks and enjoy the learning experiences as a result.

1.3. E-learning and students' satisfaction

At times of Coronavirus Pandemic ; Multiple perception ; approaches and views come to define and evaluate students satisfactions vis-à-vis online learning. Beginning with interaction ; it has been conceived of as playing a crucial role in both face to face and online learning atmospheres. Interactions need to be assessed not only by the numbers of meeting between teachers and students but most importantly by the quality of students interaction in the learning climates. The quality suggests the extent to which teachers and students ' messages were clearly conveyed regardless of the impact of external factors like lack of connection ; availability and ability to learn. As (Gonzalez,2012) puts it *« Both quantity and quality of students interaction are highly correlated with student satisfaction in almost any learning environment. Demographic and cultural consideration also impact the design of appropriate interactions ; techniques in onlinelearning ». P :6*

Added to learners' difficulties in getting connected; cultural and demographic factors influence students engagement and usage of online tools to learn and acquire knowledge. The above quote deduced that the success of an e learning system depends on the understanding of certain antecedents that would impact the students' opinions of such e-learning systems. In other words; social and cultural factors are important to consider in investigating students ways of behaving in e-learning environments. (Ke & Kwak, 2013) trace five basic features that constitute students satisfaction namely: learner relevance; active learning; authentic learning; autonomy; technology competence. Relevance and authenticity constitute two important components when it comes to learning remotely. Both of them play a major role in meeting student's needs.

These two elements touch upon the real beauty of learning online according to students. As it lends itself to his style of learning. Hence; learners are required them to figure out things for himself and not being taught what to do. This is where online learning can amplify students skills. Students skills are updated. At the level of authenticity; Kwe statement discusses the effectiveness of human connection experienced in face to face to classrooms which can be classroom converted to online classes. This can be achieved by the use of unique techniques like digital moments. Online pedagogical style could stimulate students creativity and having a sense of belonging and ownership of their online learning community.

Measuring students satisfaction vis-à-vis online learning should be done in a systematic and a

methodical way. In that; Kirkpatrick offers his prominent model of evaluation which is recognized globally. This model of evaluation refers to the outcome of students learning and training as it is assessed at four levels namely reaction; learning; behavior and results.

Level 1: Reaction: includes the extent to which participants find the training favorable engaging and relevant

Level 2 : learning : the degree to which participants acquire the intended knowledge ; skills , attitude ;confidence and commitment

Level 3 : Behavior ; the degree to which students apply what they learned during the training when they are back

Level 4 : Results the degree to which targeted outcome occur as a result of learning : »[1]

To put it simply; Kirck Patrickk Model is founded primarily on students' needs and interests and it can be applicable in online learning which makes students learning journey at once enjoyable and engaging. Besides; content relevance would change students attitude towards a subject once it fits and develops their skills and capacities of learning. As a matter of fact; Patrick's levels are interrelated as one could not deny the importance of how classrooms' instructions and climates would have a large impact on students' demeanour and hence the learning objectives would be achieved eventually.

1.4. Conclusion

All in all, this part sets the tone for all the research project as it provides several theories and approaches of online learning. Learning remotely or teaching remains essential in students learning development. Compared to conventional learning; online learning has many benefits as well challenges that one could overcome by avoiding certain factors like lack of feedback on both pants; lack of the adequate technology that is effective to conduct online learning. To sum up; online education brought about positive influence in both students and professionals. Online learning can be at once time saving; low cost and also an incentive for students to improve their learning skills.

2. Methodological and epistemological research Framework

In order to answer the research question: was distance education as it is practiced in Moroccan universities during Covid 19 pandemic effective according to beneficiaries tutors. We adopted an exploratory and interpretivist research as we followed a basically abductive and an inductive reasoning adequate to our qualitative endeavour. (Thietart, et al,2014).

Our fieldwork's objective was to assemble data that correspond to our research question. Hence; we carried out 30 semi structured interviews which is at once a good start to have concrete feedback that would explain how university distance courses were undergone and experienced. (Imbert & Izard,2010)

Our sampling is composed of EST student belonging to ICT department. Our choice is not implemented randomly but by looking at students mastery of ICT tools. (Hlady-Rispal,2002) Once data were fully collected (Savoie-Zajc,1996); we transcribed interviews and then analyse them by using the analytical method of the developed content. The analysis method of the content is an often used technique in scientific research which may help a researcher to better objectively describe the content during the so called discussions executed with the interviewees. (Berelson, 1971)

We opted for Nvivo 12.1 specialized in analysing data qualitatively conceived to provide a space conducive to work and reflexion where organization; visualization and analysis of non-structured data would take place in a pertinent way.

Through the collected data during the semi structured interviews and according to the research question: what was your feeling towards distance education experience and what were the positive sides of this latter; we deduced that there exist a large difference between the obligation of adopting the online mode of education and the real practice in face to face classroom during the covid 19.
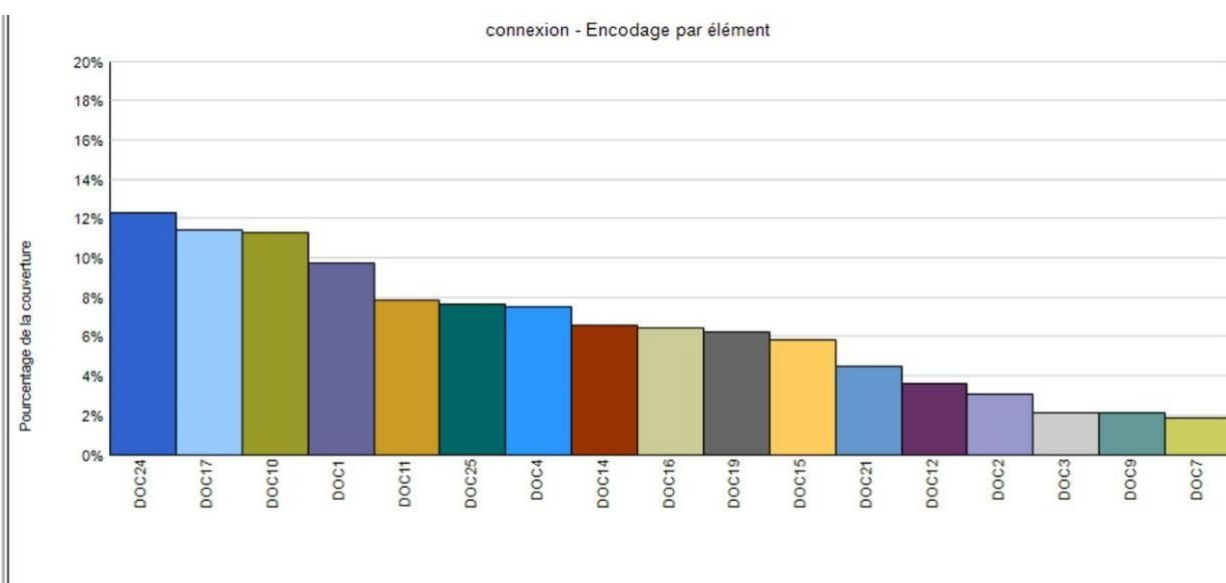
Below there is a presentation of results that are treated as follows:

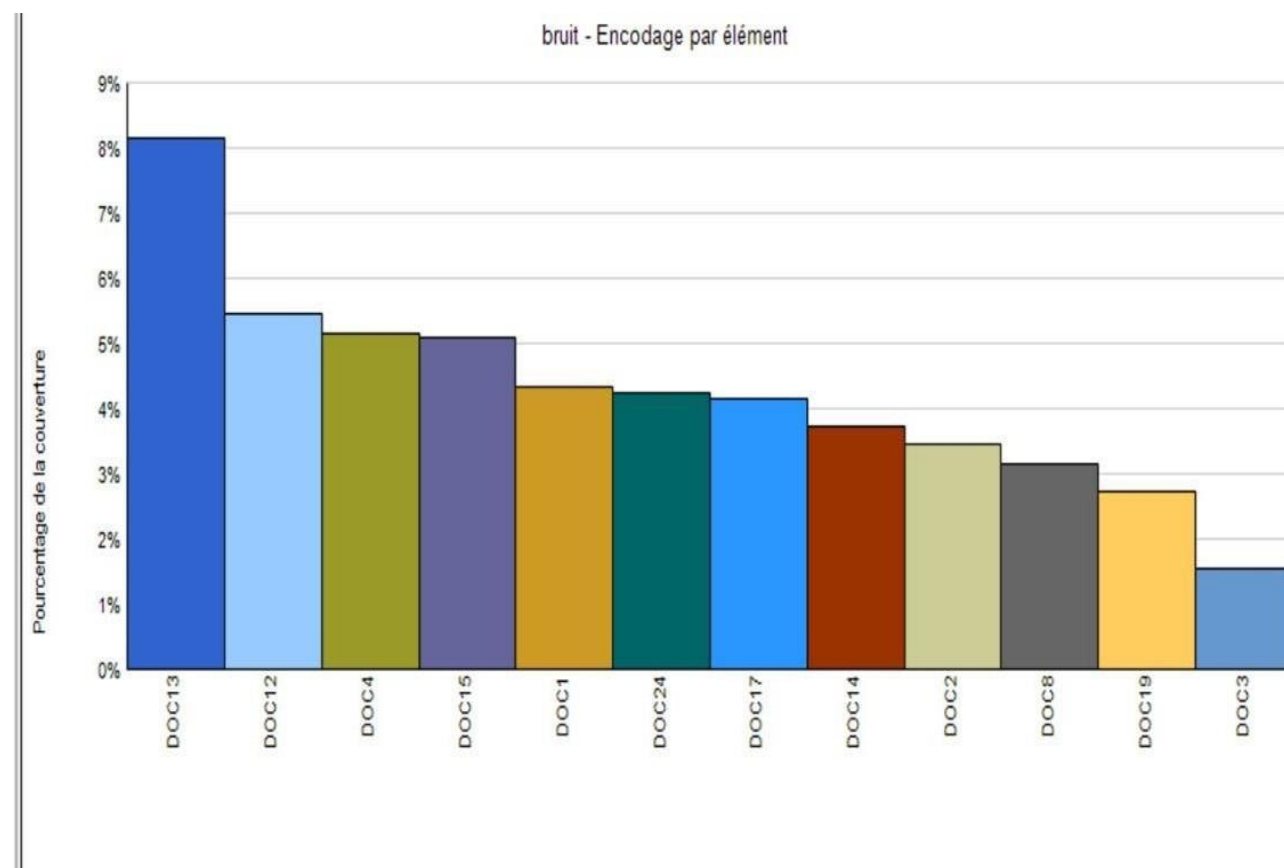**Figure N°1 : A set of words standing for all the interviews implemented**
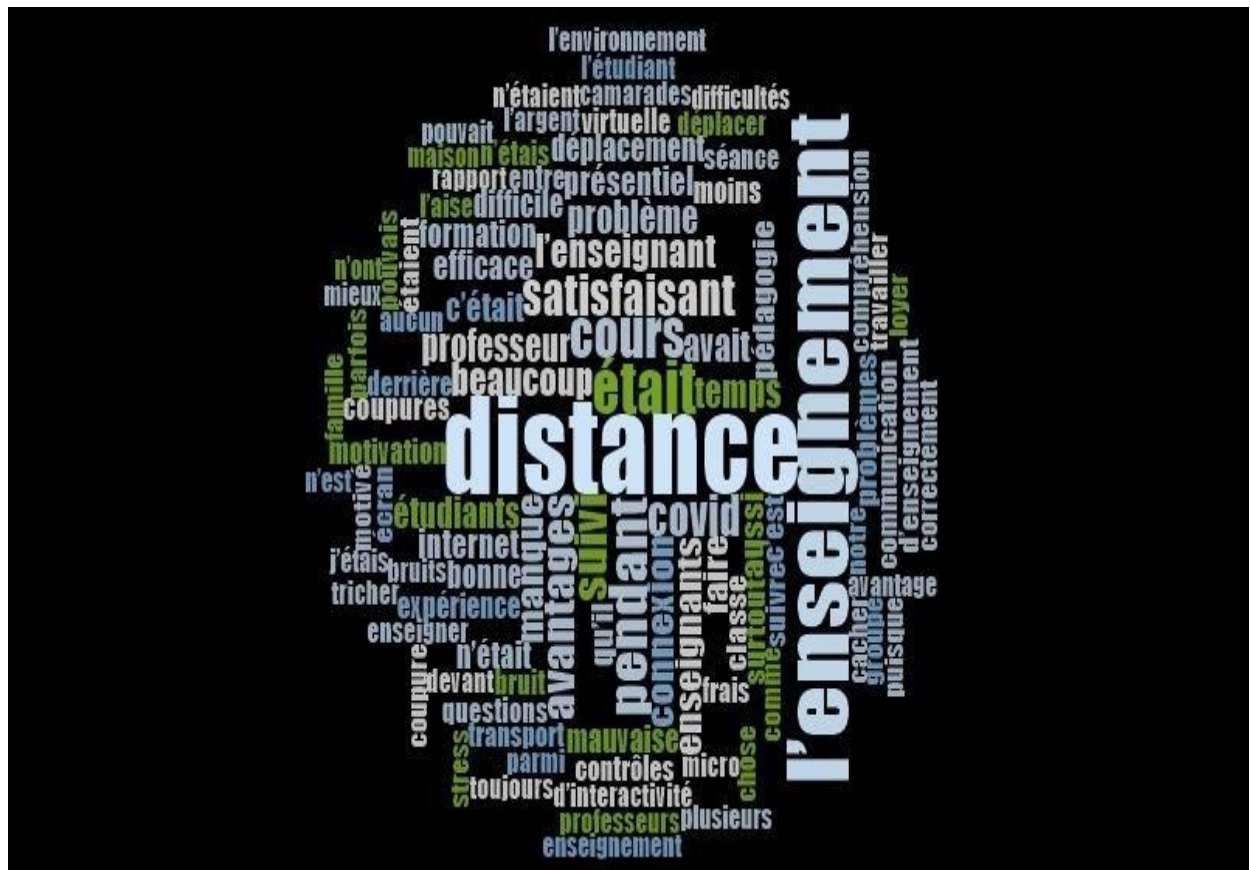
Source : Result made by Nvivo Software

Figure N°2: Encoding per element: connection

Source: Result made by Nvivo Software

Figure N°3 : Encoding per element : noise

bruit - Encodage par élément

Source: Result made by Nvivo Software

Figure 1 displays some of the most often used words by students during interviews. This shows clearly that word distance is in the center which means that it is of major concern and interests.In the margins there exist other keywords be them: problem; difficult; lack; internet.

Figure 2 and 3 represent the decoding implemented by Nvivo software. They clearly represent the existence of hassles deduced during interviews. Students have expressed their dire need in getting connected in order to pursue their distance courses. Furthermore; they tackled the issue of noise undergone during online sessions. After the thematic analysis of findings; we moved to the classification of the following question: how was your feeling towards your online learning experience. We deducted two major subthemes which are motivation and satisfaction.Whereas question number 3 was classified under the subtheme of DT or distance teaching benefits. In so doing we classify them into the following:

Sub-theme 1: Satisfaction

- Logistics: internet; connection; microphone and laptop

- Physical environment: Noise

- Social and emotional climates: isolation;lack of interaction

Sub-theme 2: Motivation

- Pedagogical tool: interactive board

- *Methodological approach:communication techniques*

Sub-theme 3: DT benefits

- Cost

- Transport

- Rent

- Timesaving and autolearning

- A refuge for introvert and shy people

3. Finding discussion

Our inquiry as well as our data analysis have revealed the frequency of students' unsatisfaction towards the quality of distance education they have had.

As far as the first theme is concerned which is satisfaction; the DT limitation and efficacy shortcomings reside on the lack of logistics which is widely important related to ICT.

Furthermore; there was no interactivity in social environment since teaching was carried out remotely and hence interaction rarely happened. The student felt isolation from his university world.

We noticed that there was unsatisfaction vis-à-vis the physical environment where studies took place since it is conceived of as being less interesting not like cafés or homes and also the noise that existed which impacted students' focus.

For the sub-theme number 2 which is motivation; the student is less motivated during distance education which reveals the serious problem of mastering the pedagogical tool adequate for online learning especially when it comes to the non-use of interactive boards.

Faced with the adopted methodological approaches which were deemed to be unattractive, the student was not motivated since the pedagogy used in face-to-face was the same that was used remotely, which did not fulfill the student's expectations.

For the third sub-theme "Benefits of DT ", we can say that students felt financially more at ease

They confirmed the lowering of the cost of their trips for face-to-face studies, a reduction in the cost of rent and a great saving in commuting.

Distance learning was an opportunity for students to train themselves independently and also a refuge for shy students who cannot easily integrate into group work.

4. Recommendations

Due to the shortcomings of distance education during the sanitary crisis; we can say that pedagogical and university staff were not prepared for DT.

The present situation compels every responsible to be prepared to move to the new era of educational technology. For this, we proposed some solutions:

- To get familiarized with the NICTs necessary for distance education (Teacher/Student)

- To planify trainings for teachers to master NICT tools

- Develop techniques to better control students remotely so that they get out of their comfort zone.

- During distance learning, it is recommended to switch to small group mode to better ensure supervision.

- As far as noise emanating from the physical environment is concerned, we find that this is a real problem that remains unmanageable at household level, except in the case where we switch to asynchronous distance learning mode.

Conclusion

Faced with digitization and health crisis that began at the end of 2019, learning methods keep changing and evolving. This evolution corresponds to a need induced by the transformation of our societies.

ICTs are not only a new tool, nor just a new medium, but rather a means of access to resources from around the world.

With the evolution of ICT, the practice of e-learning has become an almost daily practice in various global training institutions.

Given the objectives intended through this practice, the most targeted of which is the minimization of travel costs and risks, e-learning must be reviewed in other dimensions namely logistics and pedagogy, in order to ensure its efficiency similar to what is planned in face-to-face teaching.

The purpose of the study was to scrutinize the perception of different respondents groups related to the variables that influence the online learning for higher education in Morocco during the Covid -19 pandemic. It is deduced that most of students believe a positive approach towards online classes during the covid-19 pandemic. Online learning was set to be fruitful as it paves the way for the flexibility and suitability for learners and teachers as well. However; the study revealed that most of students believed that online classes were more challenging that the traditional ones because of technological constraints which are embodied in lack of devices; poor learning environment; delayed responses; poor connectivity and incapability of the teacher to deal with materials and communication technologies.

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