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A PARADIGM SWITCH IN HIGHER EDUCATION LEARNING TREND: BLENDED LEARNING

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Abstract:
Blended learning as a new paradigm in modern education offers an alternative model of learning where technology is incorporated into the educators' courses along with classroom face-to-face activities. This learning trend has gained momentum, in Morocco, during the COVID-19 pandemic lockdown. BL does not only aim to cope with the global quantum leap in the field of education, but also to insure the learners' effective involvement in the learning process. This paper aims to assess the learners' willingness to switch to BL, to identify its most appropriate models for the learners, to value their efficiency in preparing future university graduates, and to inspect the constraints that hinder the prevalence of this type of teaching on a larger scale. This study uses a quantitative method to analyse data. Hence, we resorted to a survey of 200 university students from different tertiary institutions in the region of Fez-Meknes, most of whom testified to the efficiency of BL and expressed their joy to adopt this new trend. Because of logistical deficiency, a few learners expressed their worries. Consequently, our recommendations relate to allocating significant financial help to assist students in difficulty and provide them with technical assistance, in order to engage them in BL and attain equity among learners.

Keywords: blended learning, constraints, higher education, lockdown period, technological education

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1. Introduction

The rationale behind choosing this topic was dictated by the shift that happened at the level of educational approaches and methods due to Covid-19, as all institutions, at all levels, over the world had to adapt their education tools to the pandemic situation. Among the emerging education methods, blended learning has been proven to be an effective educational solution to cope with the sanitary restrictions imposed by Covid-19. Though, this trend dates back to years before Covid-19, more specifically at the beginning of 2000, however, it has become more common in the pandemic period, and many teachers are now adopting this method in their teaching process. Though blended learning is widely adopted by teachers in other countries before, during and after Covid-19, this practice is still uncommon among Moroccan university teachers. The aim of this study is to explore blended learning practices and models experienced by students, their attitudes towards the incorporation of blended learning in Moroccan university classrooms, as well as the challenges facing the adoption of this new learning trend by Moroccan higher institutions. This research is significant as it might contribute to the field of higher education in Morocco through the evaluation of students' attitudes towards blended learning, as well as the challenges encountered. It might also help educators adopt better practices of blended learning in Moroccan university classrooms. The main research questions are the following:

Q1: What are the attitudes of university students towards blended learning?

Q2: What are the models of blended learning preferred by students?

Q3: What challenges students face via-a-vis the adoption of the blended learning method?

2. Literature Review

2.1 Definition of Concept

Blended learning has been defined in several ways: it is currently conceived as the combination of technology and traditional face-to-face instruction, (Stacey & Mackey, 2009). According to Graham, (2013), blended learning refers to the integrated learning activities where online media with "seat time" significantly reduced is mixed with chalk-and-board classroom instruction learning. In other words, it is a combination of e-learning and traditional types of learning. While face-to-face learning allows the teacher and the students to meet in a usual place for a fixed time for most commonly in-group class lessons similar to what happens in school, blended learning is a technique that associates traditional face-to-face education with online tutoring. This new learning method extends the reach of instruction also outside the classroom via digital means (Zinina et al., 2020). In a blended arrangement class, a teacher might ask students to watch an online video to reinforce learning following the introduction of a new topic in class, or prior to the introduction of a concept in a traditional face-to-face lesson. In both cases, students utilize technology and traditional instruction to improve learning.

2.2 Previous Studies

Although blended learning appeared as one of the most popular educational concepts at the beginning of 2000 (Güzer & Caner, 2014), it arose as one of the most current concepts in higher education at the beginning of 2004. The study by Garrison & Kanuka, (2004) is the most cited article on the blended learning trend. The authors explored the benefits of blended learning for students in higher education and indicated that this new trend can lead to redefining higher education institutions as being learner-centred. Donnelly, (2010) conducted also a study on blended learning and advocated technology to support interactions between students and university staff. The experiences of 17 academic staff participants in a blended problem-based learning (PBL) module were asked and their perceptions were provided (Donnelly, 2010). Yen and Lee (2011) conducted a qualitative study on blended learning, e-learning and classroom teaching and aimed to find out problem-solving patterns and their effect on learning accomplishment). Results showed that joy at the use of technological tools in learning environments varies according to gender while classroom group discussions boost students' interaction and improve high learning achievement.

Other researchers such as Stephen Ntim et al., (2021) explored higher educational institutions' perspectives on the potential of blended learning post covid 19 while Zinina et al. (2020) concluded that innovations in an educational higher institution based on blended learning are a key mechanism that enhances competition among students.

In a national survey conducted by Mohamed V Rabat University on more than 3300 Moroccan higher education students, 42% of students are in favour of mixed teaching or blended learning. This category of students believes that they are not suitable for distance learning as it is more suitable for theoretical courses only (El Marhum et al., 2020). However, for the authors, blended learning based on face-to-face and distance learning will be very useful when deployed in a well-studied sequence, where the teaching begins with present sessions, then moves to a synchronous or asynchronous remote phase and ends with face-to-face sessions to consolidate and evaluate students' acquisitions.

2.3 Blended Learning Models

Since blended learning is no longer an option in higher education and this learning method initiates individualization, flexibility, and a larger chance for learner success, educators have provided various models of blended learning (Staker & Horn, 2012). They can, therefore, apply the delivery systems that suit their gifted, average, and struggling students altogether and meet their various needs. A number of researches seem to point to the success of four basic models of blended learning summarized in the following chart:

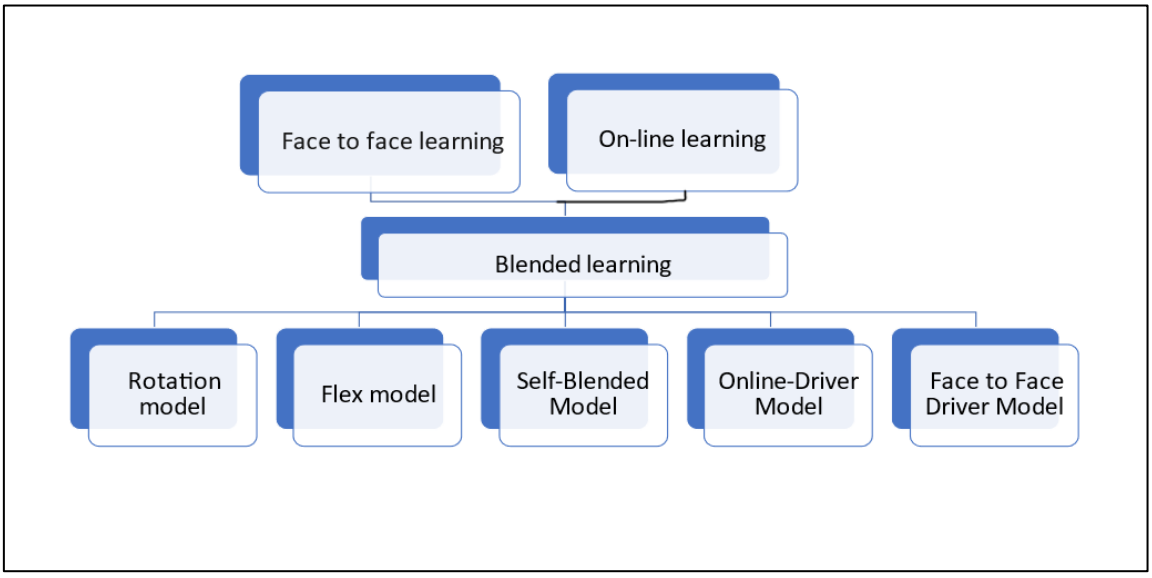

Chart 1: Blended learning models

Thanks to the rotation model students rotate among stations (classrooms) in a fixed schedule or according to the educator's directions to fulfill face-to-face activities administered (group work, class activities, projects, individual tutoring and assignments) or online assigned activities. The flex model, on the other hand, provides most learning at school (group work, group projects and individual tutoring) with a teacher, while the lessons content, instruction homework and learning support for straggling students are fully delivered online. In fact, the self-blended model differs from the preceding ones in that it allows students to enjoy a large scope of freedom to choose fully online methods to support their offline face-to-face learning whether while being at home or at school. In this case, learners involve themselves in online learning deliberately to support offline traditional learning (Staker & Horn, 2012), which isn't the case with the online driver model which is a whole school experience. Students often start with a fully online learning method and then switch to traditional face-to-face learning only when needed and when claimed by the teacher. Learners are free to complete the remaining works distantly. Finally, Face-to-Face driver model relies mostly on traditional teaching to improve the quality of education, but technology is used to enhance learning. For example, a struggling student in a face-to-face driver model classroom might be allotted online remedial projects from a classroom computer, a computer lab on campus, or a home computer (Schissel, 2020).

2.4 Benefits of Blended Learning

Thanks to the variety of blended learning models, learners can acquire knowledge in a flexible way that caters for all tastes and circumstances. In addition to flexibility in learning, blended learning:

- Increases interactions and engagement among students, (Shivam & Singh, 2015)
- Creates a more confident and energetic learning environment, and enhances both the quality of instruction and student learning outcomes in all fields, (Bazelais & Doleck, 2018)

- Develops critical and reflexive thinking and improves the sense of responsibility and collaboration among learners without losing individuality, (Shivam & Singh, 2015)
- Helps students to develop project and time management skills, (Shivam & Singh, 2015)
- Creates personal, relevant and engaging course experiences, (Hains-Wesson et al., 2015)
- Develops communication skills outside of the classroom, (Joutsenvirta & Myyry, 2010)
- Helps in the use of web for learning benefits any time, in any place, (Jeffrey, 2003)
- Develops stronger sense of community among students (Rovai & Jordan, 2004).

3. Method

The current research is an exploration of blended learning in Moroccan university classrooms from students' perspectives. And in order to answer research questions, the research reports the findings of a survey questionnaire completed by 137 Moroccan university students. It adopted a non-probability convenience sampling technique, where only students who were available and easy to reach were included.

Socio-demographic information on gender, age, place of residence, study level, and type of school/faculty as well as its name as demonstrated in Table 1, show that out of 137 respondents, 54,8 % (N=74) were female, while 45,2% (N=61) were male, aged between 17 and 24. Respondents were all Moroccan university students living either on campus (16,9%) or outside campus (75,7%). They belong to different study levels, and in terms of types of higher institutions, findings reported the dominance of public ones with 84,6% (N=115), while private institutions formed only 15,4% (N=21).

3.1 Participants

Participants belong to different Moroccan higher institutions situated, in the region of Fez-Meknes (Public: Faculty of Letters and Human Sciences-Sais, Faculty of letters and Human Sciences Dhar Mehraz, Faculty of Law, Economics and Social Sciences-Dhar Mehraz, FST, ENSA, ENCG; EST-Fes, EST-Meknes, ENSAM; private: ISGA, UPF, Euromed).

Table 1: Distribution of Percentages and Demographics

Demographics	Percentage
Gender	
• Male	45,2%
• Female	54,8 %
Age	
• 17-20	45,6%
• 21-24	46,7%
• Above 24	8,1%

Place of Residence	
• At home	75,7%
• Campus Residency	16,9%
• Community far from Campus	7,4%
Study Level	
• First Year University Student	18,4%
• Second Year	19,1%
• Third Year	27,2 %
• Fourth Year	13,2%
• Fifth Year	12,5%
• Graduate	9,6%
Type of School/ Faculty	
• Public	84,6%
• Private	15,4%

3.2 Instruments

The survey was internet-based with the aim to reach a large sample size in a short period of time. The questions were related to respondents' demographics, blended learning practices and models, their attitudes towards the incorporation of blended learning in Moroccan university classrooms, its benefits, as well as the challenges facing the adoption of this new learning trend by Moroccan university students.

3.3 Procedures

Data were collected online using Google Forms platform. Findings were statistically analysed using frequencies and percentages via the Excel programme, and presented in tabular as well as graphical forms.

4. Results

This section of research outlines the main objectives of this research, which are the exploration of blended learning practices and models experienced by students, their attitudes towards the incorporation of blended learning in Moroccan university classrooms, as well as the challenges facing the adoption of this new learning trend by Moroccan higher institutions.

As Figure 1 shows, the majority of respondents, forming 82,6% (N=110), claimed that they were first introduced to blended learning during the covid-19 period when teachers had to use both online and face-to-face tools to cope with restrictions imposed by the pandemic situation the whole world was undergoing. While a small category forming 15,8% (N= 21) reported their exposure to blended learning before Covid-19 period. However, according to reported answers, only a few respondents represented 6,1% (N=8) confirmed that they are still attending blended courses even in post-Covid era.

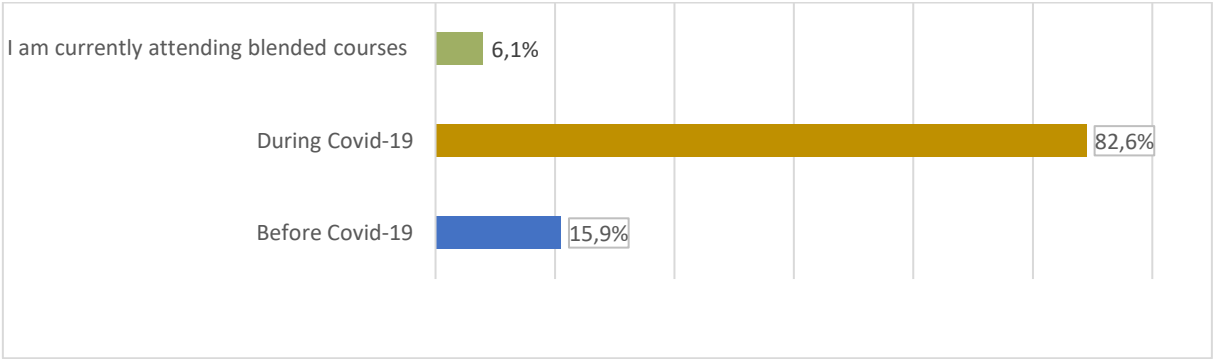

Figure 1: Usage of Blended Learning by University Students

4.1 Students' Attitudes towards Blended Learning

The second objective of this study is to explore students' attitudes towards the use of blended learning. First, they were asked about their favourite mode of learning, as displayed in Figure 2, the majority of students preferred both face-to-face with a percentage of 45,3% (N=62) and blended learning modes 46,7% (N=64), whereas online learning was the least favourite mode among respondents forming 8% (N= 11).

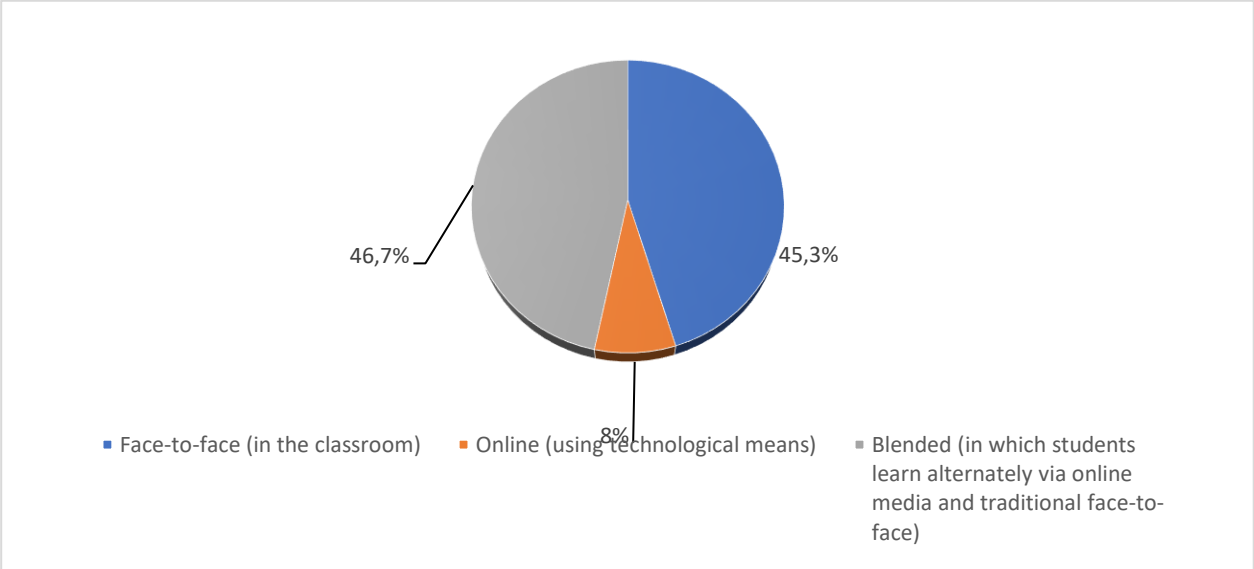

Figure 2: Attitudes of Students towards the Different Modes of Learning

The majority of students expressed their positive attitudes towards blended learning as an effective mode of education, as 38,7% (N=53) showed their agreement and 28,5% (N=39) expressed their strong agreement. While 16,8% (N=23) remained neutral, 13,1% (N=18) disagreed and only 2,9% (N=4) totally disagreed.

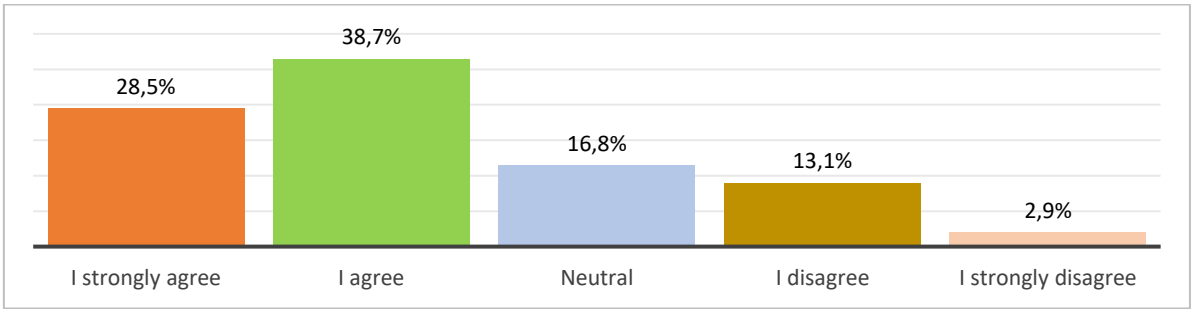

Figure 3: Students' Attitudes towards Blended Learning

Students were also asked about the effectiveness of online courses and activities in the blended learning process. Findings showed that more than half of respondents 55,1% (N= 75) stated that online course/activities allow them to learn at ease and at their pace and time. 36% (N=50) confirmed that the incorporation of online courses in the learning process besides face-to-face ones helps them improve their learning skills. 35,3% (N=48) claimed that through online materials they could have a detailed explanation of the face-to-face lesson. Other respondents forming 29,4% (N=40) believe that the integration of online courses makes the learning process more enjoyable; and finally, 21,3% (N=29) reported that through this method their learning skills are better improved.

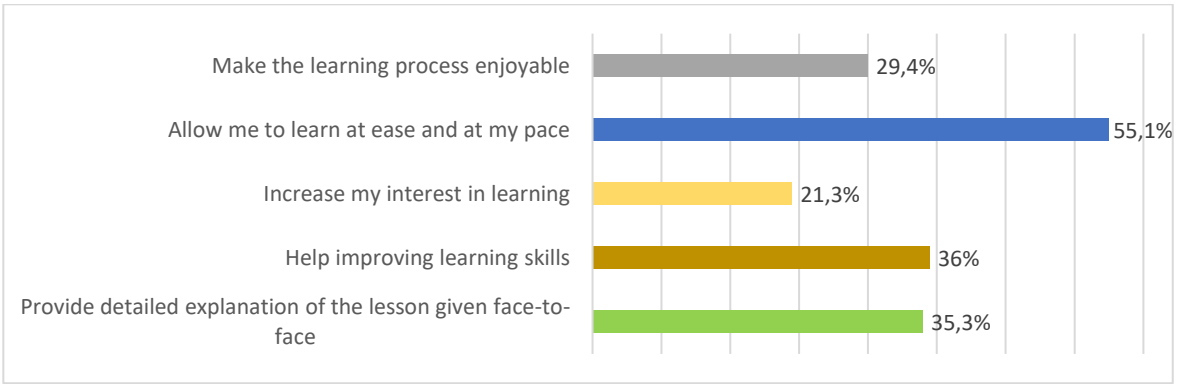

Figure 4: The Usefulness of Online Courses and Activities in the Blended Learning Process

4.2 Common Dimensions of BL According to Students

Among the other objectives of this study is to outline the most common dimensions of BL within university classrooms, as well as the models of BL preferred by students. Figure 5 displays the benefits of BL from students' perspectives. According to the displayed findings, the most common dimension, selected by 61,4% (N=81), is that thanks to BL, students enjoy a large margin of freedom, as they can learn at their pace and time, followed by the second dimension, representing 38,6% (N=51) of respondents, which is that BL develops a sense of responsibility among students towards a common goal. The third selected dimension, representing 35,6% (N=47) of the sample, is that BL develops a feeling of cooperation and team spirit without losing individuality. Finally, 20,5% (N=27) believe that BL boosts interaction, communication and self-confidence among students.

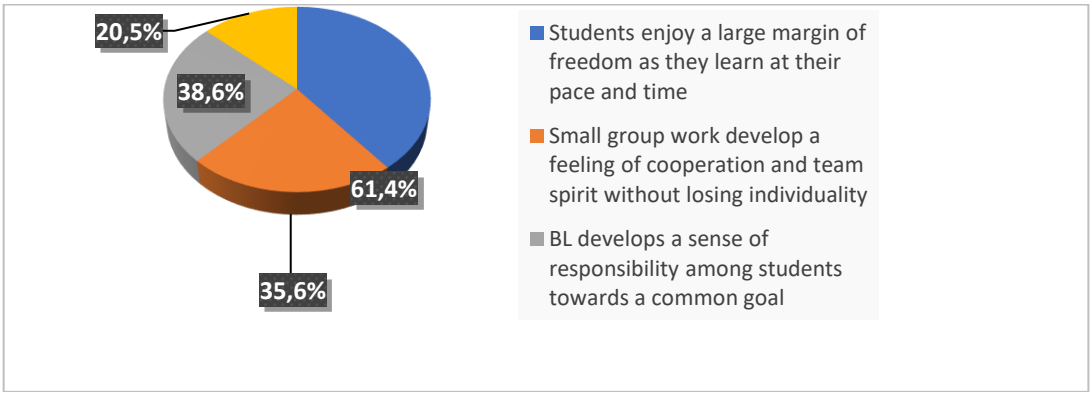

Figure 5: The Benefits of Blended Learning to Students

4.3 Preferred Models of BL by Students

This section also sought to shed light on the preferred BL models according to students, wherein findings displayed in Figure 6 showed that the most favourable model is (Self-Blended Model) selected by 47,1% (N=64), through which students take extra courses online, as a kind of reinforcement lessons, after attending face-to-face courses, followed by 37,5% (N=51) who opted for (Face-to-Face Driver Model) as it allows students to attend face-to-face courses and does assigned activities online once at home. 23,5% (N=33) preferred the Flex Model, as they can learn primarily online while the classroom is used for additional support. 17,6% (N=25) selected the Online Lab Model, wherein students take lessons fully online inside their institution's computer lab but are supervised by a teacher/ course facilitator/monitor who is available on site to monitor and provide classroom management. 16,2% (N=22) opted for Rotation Model, as they prefer to rotate between online and face-to-face activities on a set schedule or schedule determined by the teacher.

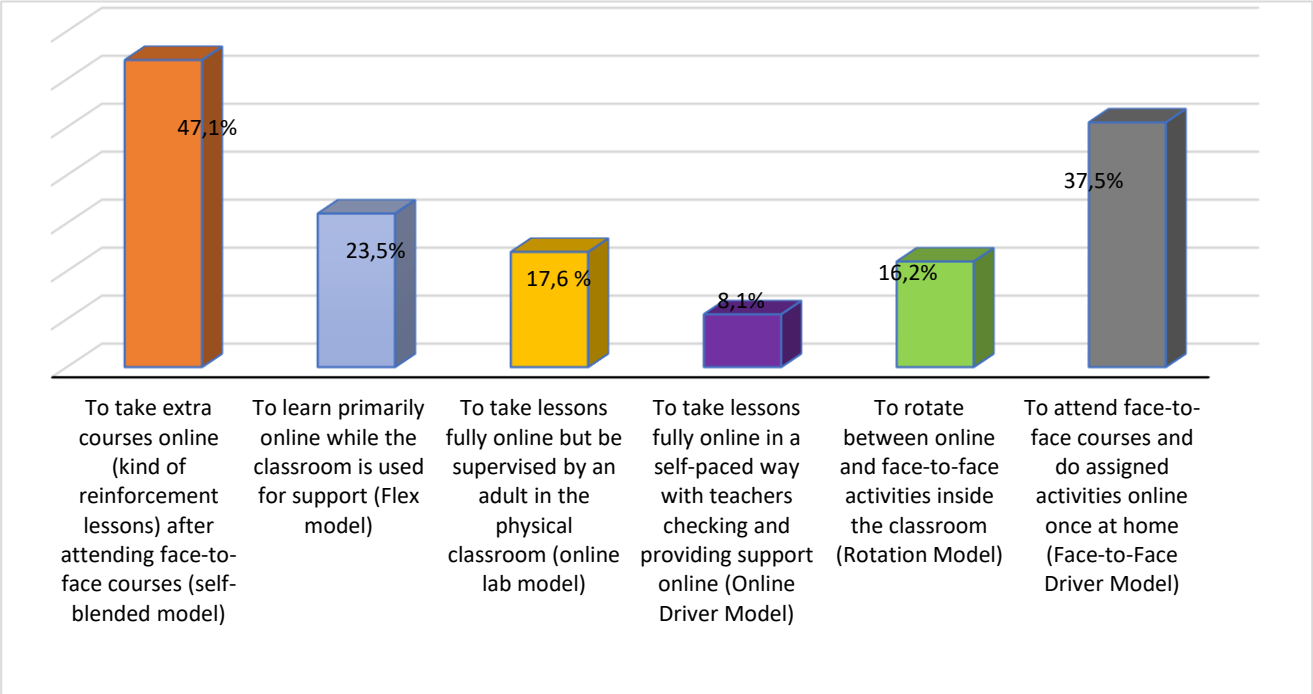

Figure 6: Preferred Models of BL by Students

Finally, a small number of respondents forming 8,1% (N=11) preferred (Online Driver Model), which is similar to the online lab model as teaching in both models is delivered via digital means, through which they take lessons fully online in a self-paced way with teachers checking and providing support online.

4.4 Challenges Facing the Adoption of Blended Learning

The last section of the survey aimed at defining the main challenges facing the adoption of blended learning within university classrooms. Figure 7 demonstrates some of these challenges according to students, ranging from lack of Internet coverage in the campus classroom as stated by 38,7% (N= 53) of respondents, to the need for additional technological and technical support in the campus classrooms as confirmed by 35,8% (N=49) of respondents. Other challenges, such as the need for personal computers and WIFI coverage outside the campus also appeared among 32,1% (N= 44). Finally, 25,5% (N=35) claimed that the lack of good internet coverage among campus residents prevent them from adopting the blended learning mode.

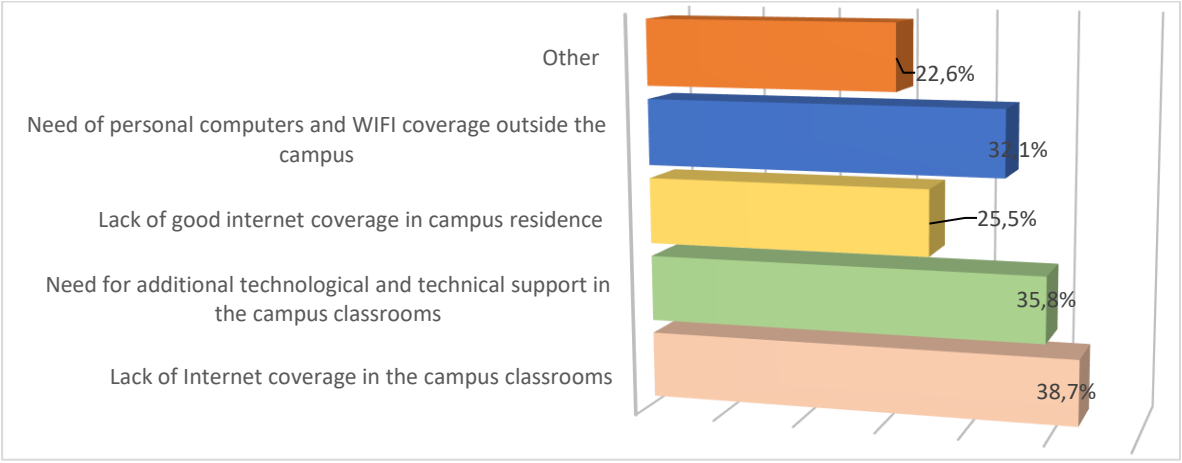

Figure 7: Challenges Facing the Adoption of BL in Students' Learning Process

5. Discussion

The overall results achieved through the descriptive analysis of the questionnaire's answers sought to first trace the attitudes of university students towards blended learning, wherein findings revealed that university students, represented through the studied sample, hold positive attitudes towards blended learning, though the majority of them claimed that they were first introduced to this mode of learning only during Covid-19, where teachers employed all the available resources, mainly online and face-to-face tools to cope with restrictions imposed by the pandemic situation the whole world was undergoing. Though this method proved to be effective and useful according to many studies (Garrison & Kanuka, 2004; Kapsargina et al., 2020; Tong & Wei, 2020) it is still uncommon inside Moroccan university institutions, and teachers are still hesitating at this level, as shown through the results achieved from statistical analysis of findings.

Though Blended learning is considered a new trend in Moroccan higher education, it actually dates back to before the Covid-19 era, more specifically at the beginning of 2000, where many studies, such as Donnelly, (2010) and Yen & Lee, (2011) have demonstrated the benefits of this new learning trend for students in higher education and indicated that it can lead to reconceptualizing higher education institutions as being learner-centred and enhancing higher learning experience (Garrison & Kanuka, 2004). In multiple studies and different contexts, blended learning appeared to be more effective than face-to-face or online instruction (Bernard et al., 2014; Brodersen & Melluzzo, 2017; Means et al., 2013.

Second, this research also aimed to trace the common advantages of blended learning according to students, wherein results showed that blended learning has many benefits for them, mainly that they can enjoy a large margin of freedom, as they can learn at their pace and time. This finding aligns with a study conducted by Glazer, (2012), which found that blended learning is considered an important tool for self-development. Findings also showed that blended learning also develops a sense of responsibility and a feeling of cooperation among students towards a common goal, without losing individuality, in the same vein, Shivam & al. (2015) stated that among the important benefits of BL is that it engages and motivates students through interactivity and collaboration. Finally, students believe that BL boosts interaction, communication and self-confidence among them, creates a more confident and energetic learning environment, develops critical and reflexive thinking and improves the sense of responsibility and collaboration among learners (Shivam & al. 2015).

The third objective of this paper sought to investigate students' most favourable models of blended learning. Findings showed that the most favourable model, among students, is Self-Blended Model, through which students take extra courses online, as a kind of reinforcement lessons, after attending face-to-face courses. Many studies reported on the efficacy of self-blended model. According to (Greener, 2008) the success of blended learning depends on the awareness and need for self-directed learning in blended environments. Woltering et al., (2009) found that a self-directed blend helps learners to stay motivated and take full responsibility for their own learning.

Finally, this research aimed at defining the main challenges preventing the implementation of blended learning within Moroccan universities. According to students, the main challenges are represented by the lack of Internet coverage in the campus classroom, the need for additional technological and technical support in the campus classrooms as well as the need for personal computers and Wi-Fi coverage outside the campus. Similar challenges were traced in a study conducted by Tshabalala et al., (2014), such as a lack of technological and computer skills, and inadequate technological resources.

6. Conclusion

Even though this study has reached its objective and the three research questions were answered; some limitations were faced during the research process. First, this study has

mainly focused on students' attitudes, without trying to understand the motivations behind such attitudes. Another limitation was faced during the sampling phase since respondents were non-randomly selected and only participants who were available and accepted to participate in the survey were included. Therefore, the findings achieved from this study may have low external validity and non-generalizability, and cannot represent all university students in Morocco, except the ones who took part in this study. Furthermore, this research was mainly quantitative. Future studies should also build on qualitative research, such as interviews.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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Asmae Achahbar is an Assistant professor of English at ENSA Fez (National School of Applied Sciences) since 2020, got her PhD in the Faculty of Letters and Human Sciences in Sais-Fez Morocco in 2013, has several publications and delivered communications in national and international conferences in different fields main of which are ESP, communication, education, culture, and travel accounts, an active member in various school's workshops.

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