Students' Satisfaction with Blended Learning in the Lebanese Higher Education at the Collapse Time

Iman Freij[1]

[1]University of Sciences and Arts in Lebanon (USAL)
Correspondence: Iman Freij, University of Sciences and Arts in Lebanon (USAL)
Email: i.freij@usal.edu.lb

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Abstract: This study investigated the undergraduates' satisfaction with blended learning in a private Higher education institute in Lebanon amid what is undoubtedly described as a ghastly era that resulted in a financial meltdown with a lack of liquidity. The survey, compiling the major features of blended learning integral to students' satisfaction, was administered to 226 undergraduates at USAL (University of Sciences and Arts in Lebanon) from the majors of education, business, media, and computer sciences. The survey addressed three different dimensions of blended learning that are recognized as basics in the related literature, and they included the technology, the interactivity &engagement, and the instructor/instruction. Data were analyzed using SPSS 26.0 for windows. Results indicated a considerable satisfaction with blended learning with an alerting concern about the instructors' readiness and to how qualified they were to handle blended learning efficiently. Recommendations are shared in terms of policy and practice of blended learning in Higher education context.

Keywords: Blended Learning (BL), Student Satisfaction, the Lebanese Crisis, Higher Education

1. Introduction

1.1 The Problem

The world is swiftly changing. The ubiquitous use of technologies in our daily lives has intensely changed not only the way we live but also the flow of knowledge through its cycle of construction, distribution and reconstruction. Upon the outbreak of Covid 19, universities all around the globe have shifted to distant learning for a while implementing and investing in virtual learning environment. Currently in Lebanon, because of the remission of the widespread of Covid 19, many universities have restored its on-campus educational setting delivering on-site face-to-face teaching. Alternatively, and as a result of the compounded economic and financial crises that have strafed and besieged the Lebanese currency, several universities have adjusted their policies saving their students' financial provisions by reducing the rate of attending on-campus and turning to deliver blended learning instead. Thus, these universities have turned to profoundly activate a variety of learning management systems to become handy in higher education context.

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On the other hand, students, encountering the aforementioned unprecedented conditions, have found themselves powerless and incapable of suggesting any other more feasible alternatives. They are amid an awful lot that has restricted their opportunities for learning and eventually graduating in an attempt to seek a better future abroad.

At the University of Sciences and Arts in Lebanon (USAL), the implemented blended learning model is a deliberate fusion of the on-line (asynchronous and/or synchronous) and face-to -face contact time between teaching staff and students. Blended learning has essentially become adopted to keep up with the new financial reality represented by the plummeting rate of the Lebanese Pound (Lira) against the US dollar amid the dramatic rise of the fuel prices, and target three-fold reason of reducing the cost on the student, the staff, and the university's funds.

In light of that, little is done at USAL to investigate students' satisfaction with blended learning. Few loosely informal recordings are tracked from individual students who have expressed themselves spontaneously to some staff members. In addition, in reviewing the literature for this paper, few studies were noted on students' satisfaction in blended learning context in higher education; however, they all highlight the pivotal role of students' satisfaction in learning generally and in blended mode specifically. Rienties et al. (2015) indicates that satisfaction with blended learning represents a key concern for higher education stakeholders. Woods (2002) and Chen & Chen (2007) find a significant positive relationship between students' perceived course interaction and their satisfaction in blended courses.

Further literature on blended learning has conveyed that there are several factors that influence students' satisfaction in the blended-learning environment. Bollinger and Martindale (2004) have identified three key factors central to student satisfaction: instructor, technology, and interactivity. Other subordinate interrelated factors, such as course management issues and instruction, which also contribute to students' satisfaction, are discussed in this study.

1.2 Purpose of the Study

The purpose of this study is to develop and validate an instrument that can be used to measure students' satisfaction with blended learning and whether the degree of satisfaction differs according to the pursued major. Also, it aims at evaluating the level of students' satisfaction for the sake of identifying and confirming factors positively and negatively influencing students' satisfaction with blended learning in addition to exploring whether their satisfaction differs according to the major, age group, gender, and selected program.

1.3 Research Questions

The study is guided by the following exploratory questions:

What is the level of students' satisfaction with blended learning?

What factors contribute to the level of satisfaction?

How can blended learning contribute to a higher level of satisfaction?

1.4 Significance of the Study

Most undergraduates in Higher education in Lebanon, along with their parents, are absorbed in the challenges of organizing everyday life amid constantly worsening shortages and failing services; thus, wedging their entire lives and impacting their education profoundly. This study earned its significance from the unprecedented conditions that imposed a hard-to-believe reality and a dire need for confining transportation to-and-fro campus. The study constituted an attempt to have the undergraduates' perspectives of the deliberately effectuated blended learning recognizable. This was done with an aim of using the preliminary data to ameliorate the undergraduates' status quo hoping that it would inspire policy makers in Higher education to prescribe educational alternatives or amended versions of blended learning and to ensure high quality learning to those who are pursuing their higher education amid Lebanon's trifecta of economic, social and educational crises.

2. Review of Relevant Literature

This study arises out of the consideration that blended learning is a convenient haven in Higher education due to the critical state Lebanon has been suffering from that has started with the outbreak of Covid-19 pandemic and prevailed with the economic collapse and the meltdown of the Lebanese currency against the US dollar. The following review of literature tackles three dimensions of the research, the Lebanese economic status quo and its direct implications on the Higher education sector, the blended learning modality adopted, and the factors that contribute to the students' satisfaction in a blended learning environment.

2.1 Lebanon's Status Quo

Lebanon's education system has been a bulwark of resilience offering an ad-hoc multifaceted support to empower underprivileged communities, to develop the country's workforce, and to supply Arab countries with skillful workforce for all walks of life (Bahous et.al, 2022). As a result of the drastic economic collapse, the education sector was hard-hit; instructors and professors in Higher education have been suffering a dearth in logistics and adequate financial supplies since as their revenues have decreased, the universities have reduced their budgets and some quality requirements to attract Lebanese diaspora students whose enrolment will create infusion of funds (Sarkis, 2020). However, on the government level, nothing was done to alleviate the horrendous impact on the varied components of the educational system, but there was a great denial orchestrated by the country's political leaders who have been capturing Lebanon and living off its economic rents (World Bank, 2022). In addition, the minimum wage of 675,000 Lebanese Lira is worth little more than $20, which exactly pays for a full tank of gasoline! This fact has left Higher education students washed up since the transportation has become much more expensive than the semester's tuition fees for those living in a geographical area close to the campus; while distant transportation would cost a fortune for other students. Subsequently, private Higher education has tried to convert to blended learning, which has been an ad hoc model with neither feasible planning nor adequate infrastructure facility for it. BL has been considered as a cost-cutting solution that might endure the sustainability of the university's enrolment and operating abilities, yet its repercussions will undoubtedly be visible in the questionable acquired graduates' qualifications and competencies that may thus lead to

negative impacts in the socio-economic structure for decades and will require an urgent intervention for appropriately instrumental solutions.

2.2 Blended Learning

Blended learning, identified with the acronym (BL), implies the combination of traditional physical in-class learning and the online learning empowered with a digital platform or a learning management system (LMS), as Moodle for example (Drysdale et al., 2013; Huang, 2016)

Universities, worldwide, have adopted blended learning in one or a variety of courses to cope with the new demands and provocations facing Higher Education (Zeqiri et al., 2020); these challenges are portrayed by transformational changes and technological developments (Garrison & Kanuka, 2004).

Successful BL contributes to several factors such as; a better student motivation and engagement, the flexibility of learning that addresses the diversity of students' needs, interests and styles of learning, a well-planned instruction, a highly qualified and continuously developed instructor, and a well-designed learner support system (Whitelock & Jefts, 2003; Dziuban et al., 2004; Dias & Diniz, 2014).

In addition, BL also requires the adequate delivery of the material explained, a remarkable collaboration rate in the class, and an actively proficient role of the instructor featuring timely feedback and proper support (Osgerby, 2013; Sockalingam, 2012).

2.3 Student Satisfaction

Student satisfaction is one of the major items used for measuring learning results. Instructors' qualities and strategies, curriculum, and learning environment are all major factors that contribute to the students' satisfaction (Abou Naaj et.al, 2012).

Studies have explained a varied of factors that contribute to the students' satisfaction. Wang (2019 as cited in Lee 2020) suggests that students' learning satisfaction refers to the degree to which learners are satisfied with the course of learning activities. Corts, Lounsbury, Saudargas & Tatum (2000) find out that factors as career preparation and course offerings have the biggest impact on student satisfaction; while advising, as an examined factor, also has a positive effect on student satisfaction. In addition, Teng (2006) suggested the existence of curriculum, equipment and environment, teaching and achievement, internship planning, internship employers and career guidance as six factors that contribute to the students' learning satisfaction. Similarly, Shen (2010 as cited in Lee 2020) pointed out that satisfaction is also a measure of the student's attitude and feelings towards the overall learning situation. When students are satisfied with the learning process, and their own needs are met, the learning satisfaction is high; otherwise, the degree of satisfaction is low.

Students' satisfaction featured in this study can be explained as the students' degree of satisfaction with the three dimensions of blended learning that include technology, interactivity & engagement, and instructor & instruction. In a nutshell, students' satisfaction is considered an important factor in examining the quality of blended learning.

3. Methodology

This study adopted a quantitative approach with little qualitative data. It utilized quantitative and qualitative surveying to arrive at the findings, conclusions and recommendations.

3.1 Instrument

To answer the research questions, a survey was developed by the researcher on Google Forms. The survey was conducted online via Google Forms, and a link was sent to the students. The researcher developed this survey making use of the work of Wang (2019 as cited in Lee 2020), Teng (2006) and Bollinger& Martindale (2004). The survey consisted of three sections: the first section collected demographic data about the participants; their major, age group, gender, and selected program. The second section included items requesting undergraduates to rate their level of satisfaction on a 4-point Likert scale (1=strongly dissatisfied till 4=strongly satisfied) in 3 different dimensions that contribute to blended learning; technology, interaction & engagement, and instructor & instruction. The third section in the instrument included 3 open-ended questions that enquire the students' perspectives on how to enhance the blended learning encounter. The research instrument was constructed by the researcher based on the outcome of the literature review, addressing elements integral to student satisfaction in blended learning environments. Out of these, 23 items were the total; 5 items for the technology, 8 items make the interaction/engagement, and 10 items for the instructor/instruction dimension. The first version was initially subjected to a critical expert review before it was piloted on 72 undergraduates who have previously encountered blended learning in other universities. Reliability checks using the Cronbach alpha statistics were conducted for the internal consistency and was determined to be α=0.875 which is considered to be a very good indicator of internal reliability (Creswell, 2014). The dimension reliability is indicated in the below table.

Table 1: Reliability statistics of piloting phase

Dimension	Number of Items	Mean	Variance	Standard Deviation	Cronbach's Alpha α
Technology	5	14.63	11.280	3.359	.908
Interaction & Engagement	8	22.04	32.491	5.700	.946
Instructor & Instruction	10	29.60	51.878	7.203	.957

3.2 Participants

This study was conducted in the University of Sciences and Arts in Lebanon (USAL). It is a private developing university that has been founded since 2013 with one campus in Beirut. It hosts 3 different schools; the faculties of arts & sciences, education, and management, finance & economics. USAL caters two study programs; the weekday program wherein the students receive their courses on Monday through Friday, and Saturday study program wherein undergraduates receive their courses on Saturdays exclusively. The survey was originally administered to all USAL's 780 undergraduates; 641 of them are English educated and had pursued a blended learning program throughout the academic year 2021-2022.

BL mode administered at USAL provides a chance of having asynchronous learning for the students who could not exist in the online session; thus, a recording of the session was sent to all absentees to watch at ease and similarly to existing students who might need extra reiteration seeking for more clarity or emphasis of the knowledge. Worth mentioning that BL mode at USAL is a combination of on-campus learning on Mondays/ Tuesdays and online learning on Wednesdays/Thursdays/Fridays. While students who study on Saturdays only, will exist on-campus every other Saturday; and consequently, will have on-line learning every other Saturday. Only English educated undergraduates were asked to fill out the survey. Eventually, 226 undergraduates from the three faculties completed the survey.

3.3 Data Analysis

Quantitative data was analyzed using SPSS 26.0 for windows. Descriptive statistics were used to describe and summarize the properties of the mass of data collected from the respondents. Means scores, standard deviations and percentages were calculated per each item of the survey instrument. On the other hand, theme-based analysis was utilized in order to synthesize undergraduates' views on how blended learning opportunities may be enhanced.

4. Results

4.1 Demographic Data

Table 2: Demographic characteristics of participants

Demographics of Participants	Age Group	Major	Gender	Study Program								
	19-22	23-30	31-40	>40	Education	Business	Media	Computer	Female	Male	Week day	Saturday
Frequency	146	43	32	5	153	19	9	45	175	51	185	41
Percentage	64.6	19	14.2	2.2	67.7	8.4	4	19.9	77.4	22.6	81.9	18.1
Total	226	226	226	226								

The participants in this study were 226 undergraduates from different majors at the University Sciences and Arts in Lebanon (USAL). As Table 2 reveals, the sample was 77.4%females while 22.6% males. More than half the participants (64.6%) involved in this study belonged to the age bracket [19-22] that is the ordinary age of undergraduates according to the Lebanese Higher educational system. In addition, the majority of the participants involved (67.7%) were studying education, while 81.9% of the participants chose the weekdays as a study program.

4.2 Results Per Dimensions Addressed in the Survey

Table 3 presents the results obtained through the survey sent to the undergraduates at USAL.

Table3: Students' satisfaction with blended learning

#	Dimension/Item	N	Mean	SD
	Technology	226	3.04	.625
1	On-campus and on-line services are combined into holistic experiences to support students.	226	2.96	.796
2	Assistance on how to use Moodle & UMS.	226	3.15	.778
3	Availability of information about technical skills required for blended learning.	226	3.03	.699
4	Access to other resources such as course textbooks, library, technical support, and a toll-free number to reach the university.	226	3.04	.747
5	Flexible access to learning materials that are current, aligned and engaging.	226	3.04	.726
	Interactivity& Engagement	226	2.87	.673
6	There are opportunities to reflect on what I have learned in blended courses.	226	2.95	.694
7	Blended learning helps me understand course material.	226	2.92	.813
8	There are more opportunities to collaborate with other students in blended courses.	226	2.81	.780
9	Blended learning has increased my opportunity to access and use information.	226	2.97	.797
10	Blended courses keep me alert and well-focused.	226	2.73	.886
11	Blended learning contributes to immediate feedback from my instructor and peers.	226	2.86	.804
12	The interactivity in blended courses leads to positive learning outcomes.	226	2.87	.800
13	In blended courses, students gain insights and perspectives as they share and discuss their viewpoints.	226	2.89	.784
	Instructor & Instruction	226	3.04	.653

14	Blended learning has encouraged me to learn independently.	226	3.09	.803
15	Navigating within the course content on Moodle is done easily.	226	3.09	.801
16	The instructor is regularly available to respond to my queries.	226	3.00	.792
17	The instructor facilitates blended learning.	226	3.08	.768
18	The instructor motivates the students in blended courses.	226	2.96	.827
19	The instructor provides students with feedback in a timely manner.	226	3.00	.797
20	The instructor gives students the opportunity to revise assignments.	226	3.07	.745
21	The instructor gives assignment that acts as reinforcement of concepts introduced in the course.	226	3.08	.717
22	The instructor uses blended learning technology purposefully.	226	3.04	.750
23	Blended learning has encouraged me to develop contemporary skills for life and work.	226	3.06	.833

In terms of the level of students' satisfaction, Table 3 reveals that USAL students are generally satisfied with the blended learning adopted by the university scoring (M=3.04, SD=0.625) for the technology dimension, (M=2.87, SD=0.673) for the interactivity & engagement dimension, and (M=3.04, SD=0.653) for the instructor & instruction dimension.

Digging deeper, item #10 (belongs to the interactivity & engagement dimension has the least level of students' satisfaction with (M=2.73, SD=0.886), while items # 14 & 15(belong to the instructor & instruction dimension) have the highest level of students' satisfaction with (M= 3.09, SD=0.803 & 0.8.1 respectively).

On the other side, in terms of how the students' satisfaction level varies over age, Table 4 displays that students above 40 have attained the highest satisfaction level in all the dimensions of BL; the technology dimension (M= 3.20, SD=1.272), the interactivity & engagement dimension (M=3.65, SD=0.782), the instructor & instruction dimension (M=3.72, SD=0.626). Similar results are also seen with the age group 31-40 with all three dimensions of BL. However, the age group [23-30] has attained the least level of satisfaction in all BL dimensions; the technology dimension (M=2.92, SD=0.832), the interactivity & engagement dimension (M=2.79, SD=0.745), the instructor & instruction dimension (M=2.86, SD=0.737).

Table 4: Students' satisfaction level in terms of age

Blended Learning Dimensions and Age Group		N	Mean	Std. Deviation	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Technology	19-22	146	3.05	.504	2.969	3.134
	23-30	43	2.92	.832	2.664	3.177
	31-40	32	3.13	.680	2.885	3.376
	above 40	5	3.20	1.272	1.619	4.780
	Total	226	3.04	.625	2.959	3.123
Interactivity & Engagement	19-22	146	2.83	.622	2.732	2.935
	23-30	43	2.79	.745	2.561	3.020
	31-40	32	3.05	.706	2.796	3.305
	above 40	5	3.65	.782	2.678	4.621
	Total	226	2.87	.673	2.786	2.962
Instructor & Instruction	19-22	146	3.04	.600	2.946	3.142
	23-30	43	2.86	.737	2.642	3.096
	31-40	32	3.19	.699	2.938	3.442
	above 40	5	3.72	.626	2.942	4.497
	Total	226	3.04	.653	2.961	3.132

Furthermore, the means of BL (as a dependent variable) on one side and the age group, the gender, and the major on the other side were compared (as independent variables) to see whether they are statistically significant. Apparently, only the age group (independent variable) relates to BL (a dependent variable). As can be seen, Table 5 reveals that the relation between the age group and BL is statistically significant with (p-value=0.047<0.05).

Table 5: Comparison of means- blended learning & age group

	Sum of Squares	df	Mean Square	F	Sig.
Students' Satisfaction with Blended Learning and Age Group	2.744	3	.915	2.690	.047

Further comparison of means was done on the level of the three dimensions of BL and the age group. Obviously, Table 6 reveals that the relation between the age group and the three dimensions of BL is statistically significant in two dimensions only; interactivity & engagement and instructor & instruction with (p-value=0.017<0.05) each. Relating these findings to the results in Table 4, a conclusion is done that the older the students are, the more satisfied with blended learning they seem.

Table 6: Comparison of means- three dimensions of BL & age group

Students' Satisfaction with Blended Learning Dimensions and Age Group	Sum of Squares	df	Mean Square	F	Sig.
Technology	1.025	3	.342	.872	.456
Interactivity & Engagement	4.544	3	1.515	3.450	.017
Instructor & Instruction	4.276	3	1.425	3.447	.017

To further qualitatively analyze the data, textual analysis was used for the open-ended questions addressed to the undergraduates in the end of the survey disseminated to express their insights on what they like about BL, what they dislike about BL, and what can be done to make BL a better encounter. Table 7 shows the comprehensive descriptive statistics of the participants' responses on the three open-ended questions. Undergraduates have sometimes responded to each of the three qualitative questions with more than one answer; thus, "N" stands for the number of times each response is repeated; accordingly, the total could not be 226.

In terms of the first question about what the undergraduates like the most about BL, USAL's undergraduates have apparently perceived blended learning as an appropriately tentative soothing solution to the multi-faceted predicament of Lebanon. 86.7% of the students' responses considered that the version of blended learning enforced at USAL, with equal 50% to each of the online and on-campus learning, contributes highly to low-cost education they can relatively afford. Similarly, 77.8% of the students' responses pay tribute to BL's contribution to the flexibility in learning screening both online platforms and digital or printed modules with a margin of freedom from the limitations of place (on-campus vs. online) and time (synchronous vs asynchronous). Nonetheless, 40%-20% of the undergraduates' responses pertain to other favorite components as saving time & effort, facilitating learning, contributing to digital learning, and promoting student/instructor interaction. Little contribution (4.8% of the responses) is given to BL as a main factor for developing an independent learner.

As for the second question, the majority of responses (85.3%) acknowledged the lack of essential logistics as the least thing undergraduates like about BL. Ranging between 33% and 20% were the response rates for BL's least liked elements of online classes, attending on-camps, poor instruction, and absence of positive interaction. Few responses (7.9%) admitted that nothing is to be mentioned about least liked elements of BL.

In reporting on the third qualitative question that inquires ways to make BL more efficient, 67.6% of the responses reflected the students' satisfaction with BL mode applied at USAL without any need to adjust it. Nonetheless, it is particularly substantial to inspect that 38.4% of the responses suggested training the instructors on online strategies, whereas, 20%-30% of the responses proposed to turn to 100% either on-campus learning or online learning. However, few responses (12.3%) brought up the need to promote student/instructor interaction attempting to make BL a more efficient encounter.

Table 7: Thematic analysis of the three qualitative items

Item	Participants' Responses	N	Percentage %
What do you like the most about blended learning?	Contribute to low-cost education	196	86.7%
	Contribute to flexible study schedules	176	77.8%
	Save time and effort	89	39.3%
	Facilitate learning through tutorials & asynchronous learning	87	38.4%
	Contribute to digital learning	54	23.8%
	Promote student/instructor interaction	51	22.5%
	Develop independent learner	11	4.8%
What do you like the least about blended learning?	Lack of essential logistics(electricity, internet, suitable digital device)	193	85.3%
	Online classes	76	33.6%
	Attending on campus	74	32.7%
	Poor Quality of instruction	56	24.7%
	Absence of positive interaction	43	19%
	Nothing	18	7.9%
How can blended learning become a more efficient encounter to you?	Nothing- It's ok this way	153	67.6%
	Train the instructors on online strategies	87	38.4%
	Turn to on-campus learning exclusively	67	29.6%
	Deliver online learning exclusively	54	23.8%
	Provide households with electricity more often	49	21.6%
	Promote student/instructor interaction	28	12.3%

5. Discussion

In USAL's educational context, BL was adopted based on one rationale summarized in the dire need to reduce the cost for both the university and the students. On one side, the university's operational capacity will be spared with less diesel-consumption to run power generators on campus amid a drastic shortage of the power supply. In addition, students will save the overpriced transportation cost. This only rationale is definitely an inadequate reason leading to the implementation of the BL program. However, before such a decision, the launching of any BL program should be promptly supported by a plan that has deliberated a need analysis with a precise identification of the potential benefits, the risks, and the capabilities within (Medina, 2018).

The considerable level of general students' satisfaction is apparent in the findings, and it resonates with Roff (2018) who mentioned a variety of factors that contribute to this satisfaction such as the flexibility, the digital learning, and the interaction. However, the low-cost factor is a novel factor that can be easily claimed and perceived in the current Lebanese Higher education context.

On the other hand, tutorials integrated in BL program are an impactful asset that positively influence the undergraduates' learning and contribute to the productive alignment of the key elements of BL program

(Moor & Gilmartin, 2010). This resonates with the findings in the current study wherein the undergraduates expressed how significant the tutorials are to blended learning.

In fact, the lack of essential logistics expressed by 85.3% of the participants is alerting to the findings in Medina (2018) which suggested that varied digital devices are handy and easily accessible by the current generation of Higher education since this 21-century generation views information technologies as indispensable key components of their daily lives.

Low satisfaction with other BL aspects were seen in the results; such as developing independent learners, promoting learning and the availability of positive interaction. These are practically assumed evident in further research that focused on effectively planned, fine-tuned and maintained practices in BL that simultaneously foster independent and life-long learners targeting learning outcomes and equipping them with necessary potentials for promoting student-instructor interaction (Mbati & Minnaar, 2015).

Likewise, in relation to the factors that contribute to BL, research findings argued and agreed that blended learning courses, being integrated with proper technology, will stimulate autonomous learning, and thus will bring up frequent students' engagement and a more genuine interaction with the instructor (Armellini et.al, 2021).

The variation and most often the lagging in the internet connection and in the strength of the aerial signal hamper the flow of the online session and accordingly affect BL's effectiveness. This is one of the major factors that tremendously needs amendment and reconsideration once blended learning is being enforced (Roff, 2018).

6. Conclusion

The study findings indicated a considerable satisfaction of USAL's students with blended learning; the data collected through the sample that participated in the study reveals a bright image of USAL's skilful maneuver throughout a two-semester academic year bringing blended learning into action in no time. However, black sides of this brightness can be evidently concluded through the participants' low satisfaction rate with the interactivity and engagement dimension in general and the opportunities given to them to collaborate, reflect & express their viewpoints, and access information in particular. Besides, low satisfaction rates are indicated in two aspects: the offering of immediate feedback and the interactivity's influence over leading to positive learning outcomes. In addition, although the participants of age bracket above 40 are just five, it can be concluded that the elder the undergraduates were the more satisfied with BL they expressed.

Consequently, the findings have also shown quite alerting yet essential feature of BL which is apparently portrayed by how proficient the instructors' digital skills displayed in the online classes are, and what digital tools the instructors rely on to deliver the online sessions effectively.

These findings opened a new horizon about how BL should always be based on a rationale that does not only rely on the needs, but also on what the institution could afford in terms of the technology and its cost and accessibility in addition to the basic challenge of providing a well-trained faculty.

7. Recommendations

Based on the discussed and highlighted findings, a batch of recommendations can be addressed to a variety of specialists, such as the curriculum designers in USAL and in Higher education in general, the various stakeholders in-charge of professional development program and the instructors in Higher education. To begin with, curriculum designers should widen their scopes on strategies pertinent to BL, create them accordingly, and evaluate their implementation to figure out which needs amendment and thereby securing BL's effectiveness. Furthermore, appears the role of the professional development program that Higher education instructors should pursue to ensure a considerable reform in designing feasible digital tools and thus engaging the undergraduates and keeping up an interactive atmosphere within. Nonetheless, instructors teaching in the Lebanese local community know the best about the undergraduates' dire need for electricity and unfortunately about its frequent cut-offs hindering these students' ability to run vital electric supplies, such as the laptop, the mobile, and the internet router. Consequently, USAL's prestigious decision-makers should make some financial statements to alleviate the drastic impact on their students; whereas the instructors have to spare no effort to record the session and make it available and spare some time on-campus to answer their queries if found before moving to new encounters. Subsequently, students can watch the recorded session and learn asynchronously with the readiness of the instructor for any further needed explanation and clarification.

8. Contributions of this Study, Limitations and Further Research

This paper at hand offers handful insights to stakeholders at USAL in particular and in Higher education generally on BL's status quo amid the horrific collapse of all economic features in Lebanon; thus, providing them with valid data to plan ahead for how to reshape this encounter for the ultimate benefit of the undergraduates. The paper sheds lights on a currently novel learning system envisaged by a customized version of blended learning attempting to alleviate the impact of the unprecedented conditions suffered by all universities in Lebanon. Thus, readers are widely opened to the major components of blended learning raising their awareness on how to perceive BL as an appropriate solution to the hindrances impeding Higher education.

This study investigated BL in one private university in Lebanon. This is the main limitation of this study since in Lebanon there are 48 working universities in all; one of them belongs to the public sector (The Lebanese University) while the other 47 make the Higher education private sector. Thus, it is fundamental to survey a larger sample in future studies attempting to compare the conditions in different universities or to reflect the diverse aspects of the studied topic in both private and public sectors of Higher education. Equally important, the instructors' standpoints, along with the students' perspectives, is of crucial significance to address the topic of this study. Equally momentous, in-depth qualitative data through interviewing would better enlighten scholars taking part of Higher education reform.

Additionally, it would be valuable to investigate the impact of blended learning (BL) on the students' academic achievement, if there is any. Another area of research would be investigating what kind of professional development the instructors at USAL would undergo, and what kind of relevant yet impactful practices would be implemented for better achievement, students' satisfaction and the whole encounter of blended learning (BL). A further area of examination would be on how USAL's board might perceive

BL's requirements and decide the scope and the quality of the needed training and exploit more advanced technology within.

References

Abou Naaj, M., Nachouki, M. & Anket, A. (2012). Evaluating student satisfaction with blended learning in a gender-segregated environment. *Journal of Information Technology Education: Research;* 11: 185-200. http://www.jite.org/documents/Vol11/JITEv11p185-200AbouNaaj0979.pdf

Armellini, A., Antunes, V. T., & Howe, R. (2021). Student perspectives on learning experiences in a higher education active blended learning context. *Tech Trends, Springer,* 65, 433-443 https://doi.org/10.1007/s11528-021-00593-w

Bahous, R., Nassar, F.N. & Ouaiss, M. (2022). On the brink: The critical state of Lebanon's Education System. *The Lebanese Center for Policy Studies (LCPS).* https://www.lcps-lebanon.org/articles/details/4664/article-%7C-on-the-brink-the-critical-state-of-lebanon%E2%80%99s-education-system

Bollinger, D. U. & Martindale, T. (2004). Key factors for determining student satisfaction in online courses. *International Journal of E-Learning,* (3)1, 61-67. https://www.learntechlib.org/primary/p/2226/

Chen Y-J, Chen P-C (2007). Effects of online interaction on adult students' satisfaction and learning. The *Journal of Human Resource and Adult Learn*ing; 3(2), 78-89. *https://www.semanticscholar.org/paper/Effects-of-Online-Interaction-on-Adult-Students%27-Chen-Chen/9ab08cba740c5208d47c7094fa329306356df8af*

Corts, D.P., Lounsbury, J.W., Saudargas, R.A., & Tatum, H.E. (2000). Assessing undergraduate satisfaction with an academic department: A method and case study. *College Student Journal,* 34(3), 399-408. https://www.semanticscholar.org/paper/Assessing-Undergraduate-Satisfaction-with-an-A-and-Corts-Lounsbury/a711774a43140bbae2e8ec6dcb1870d1960d4d83

Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches (4th Ed.).* Thousand Oaks, CA: Sage.

Dias, S.B. and Diniz, J.A. (2014). Towards an enhanced learning management system for blended learning in higher education incorporating distinct learners' profiles. *Journal of Educational Technology & Society*, 17(1). https://www.researchgate.net/profile/Hussin-Hejase/post/Anyone-has-a-tool-to-evaluate-learners-in-blended-learning environment/attachment/59d63aa6c49f478072ea6c0f/AS%3A273733011345416%401442274443274/download/Enhanced+Blended+Learning.pdf

Drysdale, J. S., Graham, C. R, Spring, K. J., Halverson, L. R. (2013). An analysis of research trends in dissertations and theses studying blended learning. *Internet and Higher Education,* 17, 90-100. https://www.academia.edu/49394569/An_Analysis_of_Research_Trends_in_Dissertations_and_Theses_Studying_Blended_Learning

Dziuban, C. D., Hartman, J. L., & Moskal, P. D. (2004). Blended learning. *Educause Center for Applied Research Research Bulletin,* 7, 1–12. https://net.educause.edu/ir/library/pdf/ERB0407.pdf

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*, 7(2), 95-105. https://doi.org/10.1016/j.iheduc.2004.02.001

Huang, Q. (2016). Learners' perceptions of blended learning and the roles and interaction of f2f and online learning. *ORTESOL Journal*, Vol. 33, pp. 14-33. *https://files.eric.ed.gov/fulltext/EJ1152429.pdf*

Lee, I-Ch. (2020). Effects of flipped teaching and MOOCs on learning effectiveness: Using learning satisfaction as a dual mediator? *The Journal of Human Resource and Adult Learning*, 16(1): 41-56 http://www.hraljournal.com/Page/previous_V16-1.htm

Mbati, L., & Minnaar, A. (2015). Guidelines towards the facilitation of interactive online learning programmes in higher education. *The International Review of Research in Open and Distributed Learning*, 16(2), 272-287. https://doi.org/10.19173/irrodl.v16i2.2019

Medina, L. C. (2018). Blended learning: Deficits and prospects in higher education. *Australasian Journal of Educational Technology*, 34(1), 42-56. https://doi.org/10.14742/ajet.3100

Moore, N., & Gilmartin, M. (2010). Teaching for better learning: A blended learning pilot project with first-year geography undergraduates. *Journal of Geography in Higher Education*, 34(3), 327–344. https://doi.org/10.1080/03098265.2010.501552

Osgerby, J. (2013). Students' perceptions of the introduction of a blended learning environment: An exploratory case study. *Accounting Education*, 22(1), 85-99. https://doi.org/10.1080/09639284.2012.729341

Rienties, B., Li, N. and Marsh, V. (2015). Modeling and managing student satisfaction: use of student feedback to enhance learning experience. *Gloucester: Quality Assurance Agency*; https://dera.ioe.ac.uk/24826/1/Subscriber-Research-Modelling-and-Managing-Student-Satisfaction-15.pdf

Roff, K. A. (2018). Student satisfaction and/or dissatisfaction in blended learning environments. *Frontiers in Education Technology*, 1(2), 149-163. http://dx.doi.org/10.22158/fet.v1n2p149

Salmon, G. (2001). *E-moderating: The key to teaching and learning online*. London: Kogan Page.

Sarkis, F. (2020). The higher education crisis poses the most risk to the socio-economic situation for decades to come. *Institute for Educational Development- Lebanon (IED)*; ahttps://www.academia.edu/46927646/Higher_Education_Crisis_In_Lebanon

Sockalingam, N. (2012). The relation between student satisfaction and student performance in blended learning curricula. *International Journal of Learning*, 18(12), 121-134. https://doi.org/10.18848/1447-9494/CGP/v18i12/47842

Teng, C. C. (2006). What do they really think? A study of hospitality students' learning satisfaction in Taiwan. Taiwan: *Journal of Hospitality and Home Economics*, 3(2), 158-167.

Whitelock, D. & Jefts, A. (2003). Special issue on blended learning. *Journal of Educational Media*, 28(2-3), 99-100. https://www.researchgate.net/publication/285486324_Editorial_Journal_of_educational_media_special_issue_on_blended_learning

Woods, R. H. (2002). How much communication is enough in online courses? Exploring the relationship between frequency of instructor-initiated personal email and learners' perceptions of and

participation in online learning. *International Journal of Instructional Media*, 29, 377- 394. https://eric.ed.gov/?id=EJ671759

World Bank (2022). Lebanon's crisis: Great denial in the deliberate depression. *The World Bank Forum*. https://www.worldbank.org/en/news/press-release/2022/01/24/lebanon-s-crisis-great-denial-in-the-deliberate-depression

Yang, C. X. (2015). *Taiwan and Hong Kong University presidents: A talk on flip education.* Taiwan: Merit Times, 9th Edition.

Zeqiri, J., Alserhan B. A. (2020). University student satisfaction with blended learning: a cross-national study between North Macedonia and Jordan. *International Journal of Technology Enhanced Learning*, Vol. 13 No.3, pp. 325-337. https://www.inderscience.com/info/inarticle.php?artid=115982