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The Moderating Effect of Social Demographics on the Relationship Between Affective Learning Outcomes and Academic Performances of Students in Private Universities in Kuwait Post-Pandemic

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Abstract
The academic performance of undergraduate and postgraduate students at universities is significantly influenced by a variety of student-related factors. One of the main problem students in private universities in Kuwait are facing that affected their academic performance is the hybrid environment during the pandemic. This study aims assess from a higher educational aspect and it examines how affective learning outcomes post pandemic are influenced by the gender of the students and their educational status (undergraduate or postgraduate students). The four main indicators used to build the research method are: satisfaction, perception of experience (perceived usefulness, ease of use, and perceived behavioral control), perception of benefits (general learning effectiveness, knowledge sharing and increasing, study skills improvement, and sense of progress), and academic performance. Gender and educational level were chosen as moderating factors to reveal differences in the measured results. The study is conducted during the fall semester of 2022. We are targeting students of undergraduate and postgraduate levels studying during the semester post pandemic in Kuwait. A total of 125 students from private universities in Kuwait will be taking part in the research. SmartPLS 3.0 and JAMOVI were used for processing data analysis. Structure equational modelling (SEM) approach is implemented to determine the differences between gender and education level in relation to students affective learning outcomes. Lastly, our study reveals how distinctive aspects of affective learning outcomes impact academic learning outcomes post pandemic using linear regression analysis. Conclusively, among the studied factors, the perceived benefit of a postgraduate student had a greater effect on academic performance, while it was the satisfaction level that showed a higher impact on undergraduate students during distance learning.
Keywords: Kuwait; university students; affective learning outcome; academic performance; post-pandemic
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1. Introduction

During the COVID-19 pandemic in the academic year 2020, many universities and professors were compelled to deal with hybrid teaching, which combined face-to-face and virtual teaching methods. The lockdown prompted a change in university teaching during the 2020 academic year, which included the use of e-learning methodology and a completely virtual format. Despite acknowledging the benefits of e-learning, forcing these changes on undergraduate and postgraduate students created some difficulties. [1] Blended learning is a form of combining online and traditional learning to change the teaching style in higher educational Universities to improve the quality of learning using modern technological resources.

Although blended learning was initially used as non-formal learning, during the pandemic, the issue of introducing blended learning as part of formal campus education was especially relevant [2]. These issues included a lack of resources adapted to the new online format, a lack of training and experience in this online teaching model, and a lack of student participation [3].

This research examines Kuwait private university students' affective learning outcomes and academic performance in the academic years 2022-2023 post-pandemic. This is a comparative study in which gender and education level were used to define differences in the measured indicators.

This study addresses the literature gap, identified by other researchers, that there are too few examples of the relationship between affective learning outcomes and academic performances of students in private universities in Kuwait post-pandemic. In addition to these limited findings, little attention has been given to factors influencing students' academic performance post-pandemic. Not many research has been conducted to examine how gender or education level affects university students' academic performance and learning outcomes post-pandemic.

This study aims assess from a higher educational aspect and it examines how affective learning outcomes

post pandemic are influenced by the gender of the students and their educational status (undergraduate or postgraduate students). The study will demonstrate that graduate students have a substantially more favorable perception of post-pandemic learning than do undergraduates. In practically every assessed variable, including perceived usefulness, perceived behavioral control, general learning effectiveness, knowledge sharing and increasing, sense of progress, contentment, and academic accomplishment, postgraduate students will exhibit substantial variances. This may be explained by the fact that postgraduate students have had a more extensive educational route, have more knowledge acquisition experience, and can thus study more well in a mixed atmosphere. Therefore, when incorporating students in post pandemic learning, it is worthwhile to give them additional consideration.

There are several advantages and drawbacks to discussing the relevance and benefits of learning outcomes and academic performance of students at private universities in Kuwait following the epidemic. Some advantages include the ability to educate oneself and learn under any circumstances. Because the entire world is in a state of crisis, it is highly wise and beneficial for students to study from home. Furthermore, the crisis showed us that education comes first, even if we had spent years learning and studying all knowledge in the conventional face-to-face method. However, when private institutions started to do online lectures in order to cope with the pandemic, it was quite beneficial; they did their best to give material and cover the curriculum as if we were sitting in front of them and studying in the classroom. On the other hand, you can observe that public universities in Kuwait and their learning results started much later. Nonetheless, there were some drawbacks, such as a lot of distraction at home, which might lead to laziness and pupils not completely concentrating on the online lectures. Clearly, many students have forgotten their presentation abilities and fear presenting in front of an entire in-person class environment, as they used to do prior to the epidemic. Furthermore, at-home study prompted students to rely on tutors and cheat, which violated the university's code of conduct. Furthermore, at-home learning encouraged students' minds to rely on their notes and resort to books and lectures rather than their own knowledge and studying, causing them to struggle when they returned to the classroom.

2. Literature Review

Hypothesis 1a (H1a). *Students' affective learning outcomes in blended environment is associated by gender.*

A study related to 313 in-service teachers from India belonging to various types of Educational Institutions, they discovered a relationship between gender who have or have not conducted/attended online webinars/conferences in the blended learning and online learning aspects. The findings also revealed that the interaction impact of the school's highest qualification and the students who have adopted teaching and learning through online line sessions differed in their attitudes about study management and classroom environment. Implementing blended learning for professional development of teachers following the pandemic will push the boundaries of learning by creating opportunities for collaboration of various educational societies around the world, enhance constructivist learning, and support in sticking to social norms set to fight COVID-19 (7). Moreover, there are differences in learning outcomes between students who have different learning styles, male students achieve better learning outcomes than female students, and there is an interaction between student gender and student learning styles towards learning outcomes, where further tests revealed that there is no difference in learning outcomes based on student learning styles of all students except those who have a visual learning style (8).

Hypothesis 1b (H1b)*. Students' academic performance in blended environment is associated by gender.*

Gender was suggested as a crucial aspect impacting satisfaction with blended learning systems. Thompson and Lim (1996) studied gender differences in blended learning and concluded that females were less motivated than males and had a negative attitude toward blended learning [9]. According to the study's findings, no significant difference was detected between the two groups at the end of the pre-test applied to the experiment and control groups. Furthermore, based on the averages of the final test grades, the experiment group was determined to be more effective than the control group. Female students have proven to be more successful than male students in both learning environments. It has been noticed that the student academic performance averages of students who studied in both environments have increased in a beneficial way [10].

Hypothesis 2a (H2a). *Students' affective learning outcomes in blended environment are associated by education level.*

Online learning has become widespread due to the development of technology [11]. After COVID-19 has been a change in the format of learning. It covered a lot of aspects like skill development, learning satisfaction and the use of resources. The blending environment of learning helped a lot of students view things differently and improve many skills they never knew they had [11]. In conclusion, the affective learning outcomes predict the academic performance results of the students in a significantly positive way.

Hypothesis 2b (H2b). *Students' academic performance in blended environ*ment is associated by education level.

The blended learning strategy allows students to stay engaged with their studies in their own time, at their own pace. Studies observed that for blended learning to be successful in influencing learning outcomes, the learner must be independent with a high level of motivation [12]. This also depends on the academic performance of a

student. Most likely when a student is on top of his work and knows what they should be doing it would be an advantage for him to study all the information given in his own pace. Which would allow them to benefit more and learn better.

Hypothesis 3 (H3)*. Students' affective learning outcomes significantly affects aca-demic performance in blended environment.*

Students' performance in blended and traditional versions of a collegiate course is compared in view of their prior academic achievement. The blended course used flipped and flexible educational methods, with only online lectures available, teaching time used for complementary learning activities, and no punitive attendance policy [13]. Although there is no significant difference in academic achievement between the groups, students in the blended group are more successful than those in the face-to-face group at applying their knowledge to their assignments. In conclusion, the results indicate that the blended learning strategy enhances student's learning ability [14].

Hypothesis 4 (H4). *Gender significantly influences the relationship between affective learning outcomes and academic performance.*

By most criteria, women outperform men in the classroom. females are recognized as having higher social and behavioural abilities than men beginning in kindergarten, which supports their early academic progress [15].

Hypothesis 5 (H5). *Education level significantly influences the relationship be-tween affective learning outcomes and academic performance.*

3. Methodology

Table 1. *Demographic data (N = 125)*

Demographic Variables		Number/percentage
Gender	Female	68 (54.4%)
	Male	57 (45.6%)
Age	18-21	42 (33.6%)
	22-25	72 (57.6%)
	26-30	11 (8.8%)
Educational level	Postgraduate	32 (25.6%)
	Undergraduate	93 (74.4%)
University	ACK/AU	17 (13.6%)
	AOU	15 (12.0%)
	AUK	44 (35.2%)
	AUM/ACM	16 (12.8%)
	AlGonquin College	2 (1.6%)
	GUST	24 (19.2%)
	KCST	1 (0.8%)
	KILAW	1 (0.8%)
	KTECH	5 (4.0%)
College	College of Business	78 (62.4%)
	College of Engineering	28 (22.4%)
	College of Law	1 (0.8%)
	College of Literature, Art and science	16 (12.8%)
	Technology	2 (1.6%)

A Pilot testing of 35 students was conducted in the beginning. The purposes of a pilot testing are firstly, to make sure that the questions are easy to understand by the students. Second, to ask the students for their feedback on their use of e-learning and how this affects their academic performance and satisfaction

The main tool of data collected used in this study was a survey questionnaire using Google forms. The questionnaires were randomly distributed among 125 private university students in Kuwait. Students were asked to fill in the questionnaire about their experiences using e-learning and its influence on their academic performance and satisfaction. Based on the study aims and objectives, the different factors of this study were developed. The questions in the questionnaire were made easy for students to understand and they were also divided into five categories for organizational purposes. Responses to Likert scale questions were based on scores from 1 to 5, with 1 representing a positive response, up to 5 representing a negative response. For the analysis of data, "strongly agree" was given code 1 and "agree" was given code 2, neutral response code 3, and "disagree" and response code 4 "strongly disagree" response was given code 5.

The basic sample demographic was the base on which distribution of respondent was conducted and the data obtained on the respondents‟ backgrounds came from the questionnaire. Firstly, Participants in the final phase were 125 students (57 male, 68 female) enrolled in one of Kuwait private universities. Second, the participants were classified into four groups based on age: between 18-21, 22-25, 26-30 and 31 years old and above. These percentages of these respondents were 33.6%, 57.6%, 8.8% and 0% respectively. The majority were ages between 22-25. Regarding the participants Education level of study, 74.4% of them were undergraduates while 25.6% were postgraduates. As for their study programs, 62.4% were from college of Business, 22.4% were from college of Engineering, 0.8% were from college of law and lastly 12.8% were from college of Literature, art and science.

The survey comprised of 22 questions excluding the demographics questions. These 22 items were adopted and adapted from different sources, and they were used to measure different constructs. The basis for the items measuring “perceived usefulness”, “ease of use”, and “perceived behavioral control” were the scales from Bhattacherjee [13], Ifinedo [14], and Yeap et al. [15]. To evaluate general learning effectiveness; knowledge sharing and increasing; study skills improvement; and sense of progress, we used eight items, each adopted from Valdivia Vázquez et al. [16] and Y. Jung & Lee [17]. Another four items were adopted from [18,19] and they were used in this study to assess Academic performance. The constructs of the survey were perceived usefulness (PU), ease of use (UE), perceived behavioral control (PBC), general learning effectiveness (GLE), knowledge sharing and increasing (KSI), study skill improvement (SSI), sense of progress (SP), satisfaction (SAT) and Academic performance (AP). Table 2 illustrated the items used in the current study and the resources they were adapted from.

For our statistical analysis, Partial least squares structural equation modeling (PLS-SEM) was employed to analyze the collected data. The main tool of analysis used to analyze the data obtained SmartPLS 3.2.9 and JAMOVI 1.0 software packages. We used Cronbach’s alpha coefficients, corrected item-total correlation, and inter-item correlation matrix analysis to test its reliability and validly and the result was positive for all dimensions. A Cronbach’s alpha of ≥0.7 and item-total correlation of >0.2 were considered statistically acceptable [20].

Table 2. *Measurement model.*

Indicator	Items	Factor Loading	A	C.R.	AVE
PU	PU1	0.947	0.908	0.942	0.845
	PU2	0.865			
	PU3	0.944			
EU	EU1	0.949	0.880	0.943	0.893
	EU2	0.941			
PBC	PBC1	0.927	0.934	0.958	0.884
	PBC2	0.957			
	PBC3	0.936			
GLE	GLE1	0.943	0.862	0.935	0.879
	GLE2	0.932			
KSI	KSI1	0.954	0.884	0.945	0.896
	KSI2	0.939			
SSI	SSI1	0.953	0.904	0.954	0.913
	SSI2	0.957			
SP	SP1	0.977	0.950	0.976	0.952
	SP2	0.975			
SAT	SAT1	0.976	0.951	0.976	0.953
	SAT2	0.977			
AP	AP1	0.733	0.889	0.923	0.752
	AP2	0.931			
	AP3	0.875			
	AP4	0.915			

Table 3. *Cross-loading criterion.*

Constructs	PU	EU	PBC	GLE	KSI	SSI	SP	SAT	AP
PU1	**0.947**	0.726	0.667	0.725	0.711	0.612	0.787	0.707	0.671
PU2	**0.865**	0.531	0.542	0.635	0.592	0.566	0.631	0.582	0.577
PU3	**0.944**	0.732	0.697	0.723	0.701	0.612	0.741	0.715	0.702
EU1	0.710	**0.949**	0.624	0.657	0.658	0.597	0.661	0.682	0.604
EU2	0.664	**0.941**	0.563	0.694	0.663	0.601	0.612	0.640	0.561
PBC1	0.688	0.593	**0.927**	0.584	0.738	0.524	0.655	0.578	0.608
PBC2	0.667	0.610	**0.957**	0.555	0.694	0.476	0.623	0.608	0.639
PBC3	0.604	0.572	**0.936**	0.501	0.699	0.523	0.552	0.517	0.596
GLE1	0.730	0.667	0.586	**0.943**	0.695	0.660	0.672	0.690	0.684
GLE2	0.688	0.673	0.501	**0.932**	0.624	0.559	0.675	0.672	0.631
KSI1	0.758	0.698	0.720	0.734	**0.954**	0.693	0.782	0.676	0.666
KSI2	0.614	0.621	0.709	0.592	**0.939**	0.660	0.606	0.578	0.584
SSI1	0.627	0.601	0.503	0.635	0.657	**0.953**	0.639	0.623	0.606
SSI2	0.614	0.610	0.527	0.612	0.709	**0.957**	0.659	0.697	0.632
SP1	0.784	0.646	0.656	0.713	0.748	0.676	**0.977**	0.755	0.740
SP2	0.749	0.671	0.611	0.689	0.694	0.650	**0.975**	0.767	0.715
SAT1	0.706	0.690	0.594	0.709	0.665	0.678	0.754	**0.976**	0.795
SAT2	0.721	0.677	0.587	0.710	0.635	0.673	0.769	**0.977**	0.811
AP1	0.440	0.372	0.546	0.467	0.467	0.387	0.455	0.486	**0.733**
AP2	0.712	0.625	0.604	0.689	0.643	0.651	0.761	0.838	**0.931**
AP3	0.585	0.496	0.528	0.591	0.537	0.522	0.566	0.651	**0.875**
AP4	0.680	0.601	0.595	0.658	0.627	0.640	0.745	0.813	**0.915**

Table 4. *Gender differences in students' affective learning outcomes and academic performance.*

Factors			**Gender**		**p-Value**
			Male (SD)	**Female (SD)**	
Affective learning outcomes	**Perceived experience (PE)**	PU	3.5 (1.1)	3.7 (1.1)	0.2821
		EU	3.3 (1.2)	3.4 (1.1)	0.6831
		PBC	3.6 (1.0)	4.0 (1.1)	0.0501
	Perceived benefit (PB)	GLE	3.3 (1.1)	3.7 (1.1)	0.0591
		KSI	3.4 (1.1)	3.7 (1.1)	0.1131
		SSI	3.4 (1.2)	3.7 (1.2)	0.1061
		SP	3.3 (1.1)	3.7 (1.2)	0.0541
	Satisfaction (SAT)		3.5 (1.2)	3.8 (1.2)	0.1201
Academic performance (AP)			3.5 (1.0)	4.0 (1.0)	0.0131

Table 5. *The education level differences in students' affective learning outcomes and academic performance*

Factors			Education Level		p-Value
			Undergraduate (SD)	Postgraduate (SD)	
Affective learning outcomes	Perceived experience (PE)	PU	3.5 (1.3)	3.6 (1.1)	0.5831
		EU	3.3 (1.1)	3.4 (1.2)	0.6721
		PBC	3.6 (1.2)	3.8 (1.0)	0.3781
	Perceived benefit (PB)	GLE	3.5 (1.2)	3.5 (1.1)	0.9831
		KSI	3.6 (1.3)	3.6 (1.0)	0.9701
		SSI	3.7 (1.2)	3.5 (1.2)	0.4791
		SP	3.5 (1.3)	3.6 (1.1)	0.6731
	Satisfaction (SAT)		3.5 (1.4)	3.7 (1.2)	0.5241
Academic performance (AP)			3.5 (1.3)	3.8 (0.9)	0.1351

4. Discussion

This study aimed to assess and examine how academic performance and affective learning outcomes are influenced by a students' gender and their educational status. To explore the impact of social demographics on the student's response to e-learning, nine measurement items were used for the study. The differences between gender and the educational status of a student were also investigated to see if it had any influence on the relationship between affective learning outcomes and academic performance during and/or after the pandemic.

According to the results that were accumulated, the perceived benefit of a postgraduate student had a greater effect on academic performance, while it was the satisfaction level that showed a higher impact on undergraduate students during distance learning. A student's perceived academic control is another influential factor that could affect academic performance and psychological well-being (25). Despite acknowledging those benefits, forcing these changes on undergraduate and postgraduate students could also create some difficulties (26). A hypothesis test was used to test the sample data of our population and to indicate the superiority of our proposed method in terms of statistical significance (27). By determining each P value and rejecting the null hypotheses, we were capable of detecting two statistically significant hypotheses (the relationship between perceived behavioral control & academic performance and the relationship between satisfaction & academic performance).

	P values	Remark
PU -> AP	**0.760**	Not supported
EU -> AP	**0.912**	Not supported
PBC -> AP	**0.033**	Supported
GLE -> AP	**0.503**	Not supported
KSI -> AP	**0.934**	Not supported
SSI -> AP	**0.746**	Not supported
SP -> AP	**0.298**	Not supported
SAT -> AP	**0.000**	Supported
Gender -> AP	**0.195**	Not supported
Gender x PU -> AP	**0.433**	Not supported
Gender x EU -> AP	**0.154**	Not supported
Gender x PBC -> AP	**0.444**	Not supported
Gender x SSI -> AP	**0.224**	Not supported

The satisfaction of students can be recognized from their level of pleasure as well as the effectiveness of the education that they experienced. In this regard, satisfaction can be considered as the act of satisfying a need or desire in achieving a planned goal (28). Our findings also showed no type I errors and the interventions that enhanced the students' satisfaction with distance learning improved their overall achievements. When it came to interpreting how our participants perceived e-learning during the pandemic, our studies determined that postgraduate students showed significant differences in the considered indicators because they had more experience in obtaining knowledge from newer surroundings and they were already enrolled in university prior to the pandemic. The results also suggested that in order for a high-level perceived control to enhance a student's

academic achievement and inhibit attrition, adaptive levels of emotions (lower boredom, lower anxiety, or higher enjoyment) are required (29).

Based on the study, it can be concluded that, as in previous studies [17,18,19,20,21], some of our selected factors did indeed have an impact on affecting learning outcomes. Most of the male participants in the survey experienced less difficulty with distance learning, while the average academic achievement scale was slightly higher for female participants. Our calculations also determined that, although male students were more sympathetic towards studying from home, e-learning didn't really help them with obtaining higher grades. The female students on the other hand were able to learn the material faster and their learning process became more labor-intensive. A distinguishing feature of our current study is the use of moderating factors (gender and educational level) and the practical application of our results could be extended to the category of students in the implementation of distance learning.

5. Conclusion

Our research is limited in its access to free articles that can be evaluated to understand the theoretical relationship between affective learning outcomes and academic performance. It was important for us to discover those limitations and to identify the literature gaps that presented the need for further development. Most of the research that was conducted in the past paid no attention to the factors that influenced a student's academic performance in a new environment. Researchers are also reluctant to discuss the limitations of their study in their papers because it may undermine the value of the research in the eyes of a reader. As the scientific complexity facing research in instructional design, educational technology, and online learning is expanding, it is necessary to better prepare students and scholars in our field to engage with emerging research methodologies (30). There were sampling errors that could've occurred when a probability sampling method was used to select our sample. Fortunately, research limitations have important ramifications (31) and we were capable of collecting an unbiased response from a population of students from multiple universities.

The current study's findings have numerous key implications for educators who want to implement e-learning in the future. It can be used by university professors and graduate students to focus their efforts on increasing student satisfaction with a blended style of teaching methods. Furthermore, educational institutions and instructors will provide new perspectives on satisfaction and perceived learning outcomes when a student's self-control skill is supported (32). Future studies can also address the effects of the emergence of a new theory or evidence to support the relationship between academic performance and affective learning outcomes. It would be helpful to qualitatively capture the experiences of research partners who had mixed or negative experiences because their insights can enhance the adoption of online learning by making it more meaningful, organized, and a productive medium for future learning (33).

Role	Dimension	Code	Item (English)
Independent	Perceived usefulness	PU 1	I believe that using hybrid learning technologies would improve my ability to learn
		PU 2	I believe that hybrid learning technologies would allow me to get my work done more quickly
		PU 3	I believe that hybrid format would be useful for my learning
Independent	Ease of use	EU 1	It was easy for me to learn in hybrid environment
		EU 2	I do not notice any inconsistencies as I learn in hybrid environment
Independent	Perceived behavioral control	PBC 1	I have sufficient extent of knowledge to use blended learning
		PBC 2	I have sufficient extent of control to make a decision to adopt to e-learning
		PBC 3	I have sufficient extent of self-confidence to make a decision to adopt hybrid learning
Independent	General Learning Effectiveness	GLE 1	I achieved the objectives of the learning program in a hybrid environment
		GLE 2	The quality of the learning course in hybrid environment was high.
Independent	Knowledge Sharing and Increasing	KSI 1	My overall professional knowledge increased after the hybrid learning course
		KSI 2	I was able to share my knowledge with peers during the hybrid learning course
Independent	Study Skill Improvement	SSI 1	Due to the hybrid learning course I improved my time management skills

Role	Dimension	Code	Item (English)
		SSI 2	Due to the hybrid learning course I improved my problem-solving skills
Independent	Sense of progress	SP 1	I feel the general improvement in my knowledge and skills after the hybrid learning course
		SP 2	I feel a progress of my professional development after the hybrid learning course
Independent	Satisfaction	SAT 1	My overall experience with the hybrid learning was very satisfying
		SAT 2	My overall experience with the hybrid learning was very pleasing
Dependent	Academic Performance	AP 1	Since the starting of the hybrid learning, I have never failed an examination.
		AP 2	I agree that using the e-learning system can effectively help me to understand
		AP 3	I agree that my grade has progressed due to using e-learning system
		AP 4	I feel that e-learning system promoted my learning confidence.

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