Vol. 04, Issue. 01 | January – June 2024

Academic Motivation among University Students: A Comparison between Conventional and Online Students in Pakistan

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Abstract
There have been a lot of studies about the academic motivation of the students studying through conventional and online modes of education; however, only a few have compared the academic motivation of the students studying through the two modes. Realizing this gap, this study was conducted to compare the academic motivation of students studying through the two modes of education in Pakistan. Data were collected from 243 university students through a self-reported, five-point Likert-type academic motivation scale (AMS). There were statistically significant differences in six items (items # 1, 2, 3, 4, 13, and 17); out of which four showed higher academic motivation levels for online education students. However, overall no statistically significant differences were found between the two groups, nor was there any significant difference based on age. Gender-based analysis revealed that in academic motivation, there were statistically significant differences among females (female students studying through conventional mode reported higher levels of academic motivation than the females studying through online mode); however, no such differences were found among the male students.

Keywords: *Academic motivation, Online education, Conventional education, Higher education, Comparative study, Pakistan*

1. Introduction

Academic motivation plays an important role in students' success (Hustinx et al., 2009; Malik & Akkaya, 2021). Not only does it help the students in overcoming various types of stress (Hartley, 2011) but it is also "an important construct in the academic performance and success of a student" (Malik & Akkaya, 2021, p. 342). Due to its role and significance in students' lives, it has grabbed the attention of researchers from different parts of the world (Turabik & Baskan, 2015; Noyens et al., 2019; Volk, 2020; Brower et al., 2021).

Motivation can be intrinsic, extrinsic, or a combination of the two (Stipek, 1996; Malik et al., 2020). Intrinsic motivation comes from within; while extrinsic one is based on external factors (Essam & Al-Ammary, 2013). Studies suggest that intrinsic motivation plays an important role in improved academic performance and quality of work (Soenens & Vansteenkiste, 2005; Ning & Downing, 2010; Sakineh & Ali, 2020). Extrinsic motivation, on the contrary, is reported to be limited to coping ability (Ryan & Deci, 2000). A student who is intrinsically motivated (self-motivated), and has extrinsic motivation (in the form of appreciation, reward, or promotion) is likely to perform much better than the one who lacks them (Malik & Akkaya, 2021). The level and type of academic motivation may vary for students belonging to different academic levels, socio-economic backgrounds, and learning styles (Hardré et al., 2006; Sengodan & Iksan, 2012; Isik et al., 2018). One of the biggest differences may be based on the mode of education: conventional or online.

1.1. Comparison Between Online and Conventional Education Students' Academic Motivation

Some studies have been carried out comparing the academic motivation levels between online and conventional education students; however, they show mixed results. Wighting et al. (2008) in their study about university students found a higher level of intrinsic motivation among the students studying through the online mode of education. Rovai et al. (2007) found that online university students in America reported higher levels of intrinsic motivation than their counterparts studying through conventional mode. In their study comparing the academic motivation between Lithuanian university students studying through online and conventional modes of education, Malinauskas and Pozeriene (2020) also found that "students' intrinsic motivation scores were higher in online students than in students who attend traditional face-to-face classes" (p. 590); however, they did not find any differences based on gender.

On the other hand, some studies found lower levels of academic motivation among online students. Malik and Akkaya (2021) conducted a study about a Turkish university, comparing the academic motivation level of conventional and distance education students. They found that the students studying through distance education had lower levels of academic motivation. It was mostly attributed to the lack of peers and teachers' physical presence and support as the online and distance students' stress and lack of academic motivation were "likely to remain largely undetected" (Malik & Akkaya, 2021, p. 343). This may further be evident by the higher level of drop-out rate among online education students (Meister, 2002; Park & Choi, 2009) as the lack of motivation is considered one of the more significant factors behind the students' drop-outs (Wolcott & Burnham, 1991).

Yet, some studies show similar levels (or statistically insignificant differences) of motivation between online and conventional education students. In one such study, Stewart et al. (2010) found similar levels of motivation for online and traditional degree programs students in America.

1.2. Students' Academic Motivation in Pakistan

Academic motivation has also grabbed the attention of researchers in Pakistan. There have been a lot of studies about the academic motivation among students studying through conventional mode of education. Most of them focused on the level of academic motivation (Javaeed et al., 2019), the factors behind it (Ali & Pathan, 2017), and its impact on students' academic performance (Afzal et al., 2010; Buzdar et al., 2017).

In the recent decade, there has also been considerable research on academic motivation among online students in Pakistan (Tufail, 2018; Muzaffar & Yamin, 2021), or through online media (Waheed et al., 2016; Sulaiman & Shahid, 2022); yet studies comparing academic motivation between conventional and online education students in Pakistan are almost non-existent. In their study, Adnan and Anwar (2020) also pointed out this gap and highlighted the need and importance of carrying out such studies. As a result, this study has been carried out to reduce some of this research gap.

1.3. Research Objective and Hypotheses

The primary objective of this study is to compare the academic motivation level between conventional and online university students in Pakistan. Keeping that in mind, one main hypothesis (about the research objective), and two secondary hypotheses (about the demographic) have been developed.

H_1: There is no statistically significant difference in the academic motivation level between online and conventional education students.

H_2: In academic motivation, there is no statistically significant difference based on gender among online and conventional students.

H_3: In academic motivation, there is no statistically significant difference based on age among online and conventional students.

2. Methodology

2.1. Research Method and Tool

As the researchers intended to test pre-defined hypotheses, quantitative research was employed. Many studies in this area have also used the same research method (Wighting et al., 2008; Stewart et al., 2010; Malik & Akkaya, 2021). This study adapted a five-point Likert-type academic motivation scale (AMS) originally developed by Bozanoğlu (Bozanoğlu, 2004). The adapted scale has 20 items. Five questions about demographic and educational information were also added for the current study.

2.2. Research Population and Sample

The research population consisted of university students in Pakistan studying through online and conventional modes of education. The sample for this study consisted of 243 students (110 studying through the conventional, and 133 through the online mode of education).

2.3. Data Collection and Analysis Techniques

Data were collected from conventional education students through questionnaires that were distributed at the end of their lectures. Permission was sought from the head of the department and the subject teacher for this purpose. The objectives of the study and the students' rights as participants were first explained in the class. They were asked to sign an informed consent form to ensure research ethics. Data from online students was gathered through online questionnaires which were sent to them through their official email addresses. The first page of the online questionnaires (shared through Google Forms) was about informed consent. The students could proceed to the next page only after agreeing to it. To decide the type of data analysis, a Shapiro-Wilk test among normality tests was run. As a result of the analysis (Table 1), the data was found in a normal distribution (p=.138). Therefore, parametric tests were used to analyze the data. An independent t-test was used to compare the groups with different modes of education, age, and gender.

TABLE 1**:** Shapiro-Wilk Test

	Statistic	**df**	**Sig.**	**Skewness**	**Kurtosis**
Overall	.991	243	.138	-0.011	-0.201

3. Results

3.1. Comparing Academic Motivation of Online and Conventional Education Students

To test the first hypothesis (There was no statistically significant difference in the academic motivation between online and conventional education students), an independent t-test was run. The results of the t-test are given in Table 2.

As seen in Table 2, item number 3 has the highest mean (m=3.95) while item 11 has the lowest mean (m=2.56) for conventional education students. On the other hand, for online education students, item number 1 has the highest mean score whereas item 11 has the lowest mean score.

TABLE 2: Comparison of Academic Motivation between Online and Conventional Education Students

Items	Mode of Education	N	Mean	*t*	df	Sig. (2-tailed)	Sig. Level
1. I try to apply my academic knowledge in the outside world.	Online	133	4.03	3.522	241	.001	***p< .05***
	Conventional	110	3.65	3.480			
2. Learning only excites me for more.	Online	133	3.12	-3.733	241	.000	***p< .05***
	Conventional	110	3.62	-3.769			
3. I concentrate fully during the lecture.	Online	133	2.74	-9.826	241	.000	***p< .05***
	Conventional	110	3.95	-10.027			
4. I do not like school learning and tasks.	Online	133	3.09	2.729	241	.007	***p< .05***
	Conventional	110	2.65	2.758			
5. My learning excites me.	Online	133	3.14	.041	241	.967	*p>.05*
	Conventional	110	3.14	.041			
6. As compared to other students, I consider myself keener to work.	Online	133	2.92	-.006	241	.995	*p>.05*
	Conventional	110	2.92	-.006			
7. I prefer tasks that require hard work.	Online	133	2.47	-.827	241	.409	*p>.05*
	Conventional	110	2.58	-.829			
8. I love tasks that challenge me mentally and intellectually.	Online	133	2.83	-1.633	241	.104	*p>.05*
	Conventional	110	3.08	-1.637			
9. I set high and difficult goals for myself.	Online	133	2.79	-1.177	241	.241	*p>.05*
	Conventional	110	2.96	-1.181			
10. I like difficult and challenging tasks.	Online	133	2.85	1.379	241	.169	*p>.05*
	Conventional	110	2.65	1.391			
11. When I am focused on my work, I do not realize the lesson is over.	Online	133	2.60	.289	241	.773	*p>.05*
	Conventional	110	2.56	.279			
12. Learning new ideas and topics fascinates me.	Online	133	3.38	.569	241	.570	*p>.05*
	Conventional	110	3.30	.568			
13. I put in extra effort and do more work than what the teachers ask for.	Online	133	3.06	2.526	241	.012	***p< .05***
	Conventional	110	2.71	2.540			
14. Learning new things fascinates me.	Online	133	3.13	-1.013	241	.312	*p>.05*
	Conventional	110	3.27	-1.019			

15. I share my knowledge with other students.	Online	133	3.65	.661	241	.509	*p>.05*
	Conventional	110	3.55	.659			
16. I love to learn different subject(s).	Online	133	3.03	-.042	241	.966	*p>.05*
	Conventional	110	3.04	-.043			
17. I love learning even if it is not graded.	Online	133	3.12	2.183	241	.030	***p< .05***
	Conventional	110	2.79	2.180			
18. When I am engaged in learning, time flies away unnoticeably.	Online	133	2.84	-1.591	241	.113	*p>.05*
	Conventional	110	3.09	-1.587			
19. I look for other sources if the information is not available in textbooks.	Online	133	2.59	-1.764	241	.079	*p>.05*
	Conventional	110	2.84	-1.742			
20. I enjoy the questions in the examination.	Online	133	2.64	-.586	241	.558	*p>.05*
	Conventional	110	2.73	-.585			
Overall	**Online**	**133**	**3.0008**	**-1.858**	**241**	**.064**	***p>.05***
	Conventional	**110**	**3.0541**	**-1.864**			

There is a significant difference in items 1, 2, 3, 4, 13, and 17. When compared to students in conventional education, students studying through online mode have significantly higher mean scores in items 1, 4, 13, and 17. Conversely, there is a significant difference in the favor of the students with conventional education mode in items 2 and 3. Except for these items, the academic motivation of the students does not differ significantly between the two modes of education. Additionally, there is no significant difference in the overall mean scores of the students based on the mode of education. Thus, H_1 is accepted.

3.2. Gender-based Analysis of Academic Motivation of Online and Conventional Education Students

To test the second hypothesis which tries to find whether the academic motivation of the students differs between the two education modes based on gender, a t-test was utilized. The results of the t-test are given in Table 3.

TABLE 3: Gender-based Analysis of the Academic Motivation of Online and Conventional Education Students

Gender		Mode of Education	N	Mean	*t*	df	Sig. (2-tailed)	Sig. Level
Female	Overall	Online	67	2.983	-2.305	140	.023	**p< .05**
		Conventional	75	3.069				
Male	Overall	Online	66	3.019	-.054	99	.287	p>.05
		Conventional	35	3.021				

As seen in Table 3, there is a significant difference (p<.05) between the mean score of female online education students (m=2.983) and female conventional education students (m=3.069) although there is a slight difference between the groups among female students. It can be inferred from this result that female students are more motivated in face-to-face lessons than online ones.

On the other hand, when the academic motivation of male students is compared according to the education mode, male students who attended online education (m=3.019) and the ones who attended conventional education (m=3.021) have nearly the same score, and the difference is not statistically significant (p>.05). This shows that the academic motivation of male students does not differ according to the education mode they are in. Thus, H_2 is accepted.

3.3. Age-based Analysis of Academic Motivation of Online and Conventional Education Students

To test the third hypothesis, a t-test was utilized to find whether the academic motivation of the students differentiates according to education mode based on age. In it, online and conventional education students from the same age group are compared using a t-test. The results are given in Table 4.

TABLE 4: Age-based Analysis of Academic Motivation of Online and Conventional Education Students

Age of the Students		Mode of Education	N	Mean	t	df	Sig. (2-tailed)	Sig. Level
18-20	Overall	Online	3	2.800	-1.951	83	.054	p>.05
		Conventional	82	3.063				
21-23	Overall	Online	107	2.998	-0.349	131	.728	p>.05
		Conventional	26	3.014				
24-26	Overall	Online	23	3.041	-0.915	23	.370	p>.05
		Conventional	2	3.225				

Table 4 shows that although the academic motivation levels of conventional education students were slightly higher than those of online education students, the differences were not statistically significant. Thus, H_3 is accepted.

4. Discussion and Conclusion

Academic motivation is one of the most important factors in determining students' academic performance, quality of work, mental and emotional well-being, and overall success (Soenens & Vansteenkiste, 2005; Hustinx et al., 2009; Ning & Downing, 2010; Sakineh & Ali, 2020; Malik & Akkaya, 2021). Academic motivation of the students may vary depending on the socioeconomic background, academic level, and mode of education (Hardré et al., 2006; Sengodan & Iksan, 2012; Isik et al., 2018; Malinauskas & Pozeriene, 2020; Malik & Akkaya, 2021). There have been some studies comparing the academic motivation level between conventional and online students; however, they show mixed results, suggesting a need for further research in different contexts and settings.

This study compared the academic motivation of the university students who studied through conventional and online education modes in Pakistan. The findings show that when it came to the overall mean score for academic motivation, there were no statistically significant differences between conventional and online education students. While conducting a study about academic motivation, Stewart et al. (2010) also found that the differences between the two modes of education were not statistically significant.

A closer inspection reveals a more complicated and interesting picture. Out of the six items in which significant differences were found (1, 2, 3, 4, 13, and 17), four showed higher academic motivation levels for online education students. Something that the literature has been saying repeatedly (Rovai et al., 2007; Wighting et al., 2008; Malinauskas & Pozeriene, 2020). However, though not statistically significant, the overall mean was slightly higher for conventional students. It suggests that there is no clear tilt toward any group.

When it came to gender and age-based differences, the results were different. Gender-based analysis revealed that the differences were more prominent with female students studying through a conventional mode reporting higher academic motivation levels than the females studying through an online mode of education. These differences were also statistically significant. Multiple studies have found female students with higher levels of academic motivation (Brouse et al., 2010; Bugler et al., 2015). However, some other studies did not find any significant gender-based differences in academic motivation (Malinauskas & Pozeriene, 2020; Malik & Akkaya, 2021). When it came to age, the differences were statistically insignificant.

It is important to note that when it comes to gender and mode of education (conventional and online)-based differences in academic motivation, literature shows mixed results. It may have something to do with the fact that academic motivation is a highly complex phenomenon. Many other variables and factors can influence it such as the school and classroom environment, academic support, the infrastructure available at home and school, attitude of the teachers and fellow students, students' socioeconomic background, emotional and psychological conditions, interest in the

particular subject(s) and physical well-being. Many of the studies focus on a few of those variables and overlook others. It may be one of the reasons behind mixed findings for academic motivation.

Similarly, when it comes to online education, there are so many variables that can make a difference such as type (synchronous or asynchronous), availability and quality of online resources and systems, the expertise of the teachers, the quality of materials, basic infrastructure required for online education (electricity, internet connection, etc.) and many others. Many studies investigating online education (especially in the context of academic motivation) tend to ignore those factors. As a result, it appears that the students studying through online education in one institution are highly motivated, but others studying in the other one are not. The studies then tend to link it to the mode of education, overlooking context and other contributing variables.

Despite all the mixed results that the literature has shown over the years, one theme is dominant: academic motivation plays a vital role in not only students' academic success but also their overall well-being. Consequently, both the teachers and the institutions should develop students' interest, and try to cultivate a culture where they are motivated for their studies so that they can not only perform well academically but may also become stress-free, motivated, and productive human beings.

5. References

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