STUDENTS' PERCEIVED QUALITY OF ACADEMIC PROGRAMS IN HIGHER EDUCATION INSTITUTIONS: AN EMPIRICAL STUDY

Shahzaf Iqbal
Ph.D. Scholar,
School of Technology Management and Logistics, University Utara Malaysia,
Malaysia
Email: shahzafiqbal@yahoo.com

Tahir Ashfaq
Ph.D. Scholar,
School of Business Management, Universiti Utara Malaysia,
Malaysia
Email: metahir336@yahoo.com

Kamran Moosa
CEO,
PIQC Institute of Quality,
Lahore, Pakistan
Email: kamranmoosa@piqc.edu.pk

ABSTRACT

This study aims to examine the quality of academic programs based on student perceptions and determine the significant differences in the quality of academic programs taught in the public and private sectors of higher education institutions in Pakistan. This is a survey-based study that collects data from students using convenience sampling techniques and then analyzes the data using descriptive and inferential statistical techniques through SPSS-25 software. The results show that most of the students believe that the quality of the academic programs is not up to par as a whole; however, the quality of academic programs in private universities is comparatively better than in public sector universities in Pakistan. This study has implications for university leaders, administrative managers, and QEC staff to emphasize quality in Pakistani universities to enhance student satisfaction. This study adds to current knowledge by providing empirical evidence of the prevailing quality of academic programs at public and private sector universities in Pakistan.

KEYWORDS
Quality, Academic programs, Quality assurance, Higher education institutions

INTRODUCTION

Since the early 21st century, there has been intense competition among universities, largely due to rapid technological advancements and emerging concerns among academics and practitioners about academic quality (Trivellas & Dargenidou, 2009). The situation is even worse in developing countries like Pakistan, where higher education institutions (hereinafter HEIs) have little or no government funding and face financial crises due to limited resources. Researchers have also argued that the issue of academic quality in developing nations is affected by the scarcity of resources and government policies that do not allow universities to decide independently on academic, administrative, and financial aspects (Blanco-Ramírez & Berger, 2014). Such competition has forced HEIs to adopt innovative and aggressive ways to attract and satisfy students and staff by meeting their needs and expectations (Kanwar & Sanjeeva, 2022; Trivellas & Dargenidou, 2009). The provision of quality education through educational programs accredited by the relevant regulatory body and/or accreditation councils could be a preferred strategy for universities to compete in such a challenging environment.

The notion of quality in higher education (hereinafter HE) is controversial as there are different stakeholders involved in educational provision and each stakeholder has its own needs, preferences, and expectations of educational institutions (Srikanthan & Dalrymple, 2003). Schindler et al. (2015) have endorsed the key role of stakeholders, including regulatory bodies, funding agencies, universities, learners, and firms in defining quality. A stakeholder, also known as an interested party, is a "person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity" (ISO 21001, 2018). Numerous stakeholders can be found in the case of HE, including learners, academic and non-academic staff, employers, governments (or associated funding agencies), as well as accreditors, evaluators, or auditors (Harvey & Green, 1993). Likewise, the International Organization for Standardization (ISO) has classified stakeholders into four main categories: (1) learners (i.e., students, apprentices and/or trainees), (2) other beneficiaries (i.e., government, labor market, parents, and guardians), (3) staff (i.e., employees and volunteers) and (4) others (i.e., institutions, media and society, external providers or suppliers, shareholders, business partners and alumni) (ISO 21001, 2018). However, among all stakeholders, students are known to be the most significant stakeholder. For example, Kanwar and Sanjeeva (2022) have argued that learners are obviously the most significant stakeholder of any educational organization. While they further argued that student surveys are of great importance and are considered an important tool to assess the academic quality and performance of HEIs (Kanwar & Sanjeeva,

2022). Considering the worldwide adoption of the Quality Assurance (hereinafter QA) system, the Government of Pakistan established the "Higher Education Commission" (hereinafter HEC) in 2002 through an ordinance (HEC Ordinance, 2002); and the "Quality Assurance Agency" (hereinafter QAA) in 2005 to assist HEC and develop policies, monitor QA processes, and improve universities (Batool & Qureshi, 2007). The QAA has adopted a three-pronged QA framework in Pakistan that includes (1) Internal Quality Assurance (hereinafter IQA) or self-assessment; (2) External Quality Assurance (hereinafter EQA) or accreditation; and (3) meta-evaluation (Batool & Qureshi, 2007). The aim was to enhance the quality of the programs (by departments internally and through the respective accreditation councils) and the performance of the institutions (by HEC) externally (Batool & Qureshi, 2007).

Despite continuous efforts by HEC and QAA over the past two decades to improve the academic quality and performance of Pakistani universities, no significant improvement has been observed so far. This is also evident in the rankings of Pakistani universities internationally. According to the QS Ranking 2022, only six Pakistani universities were in the top 1000 list of universities. The researchers believe that this performance of Pakistani universities is due to the low quality of education in Pakistani universities (Ahmad et al., 2014; Amir et al., 2020; Banuri, 2021; Bilal & Khan, 2012; Hoodbhoy, 2009; Mahesar, 2019). However, most of these studies are exploratory in nature and therefore lack empirical evidence in the Pakistani context. Given the context of this study, the motivation for this study is the rapid rise of universities in Pakistan and students' concerns about the quality of academic programs in these universities.

LITERATURE REVIEW

Meaning of Quality in Higher Education

The word "quality" has become a buzzword in cross-sector organizations, enabling them a competitive advantage over their rivals. However, for many researchers defining quality appears to be a demanding task in HE (Elassy, 2015; Liu, 2016; Martin & Stella, 2007; Schindler et al., 2015; Wittek & Kvernbekk, 2011); and this is why quality has been defined multifariously in the context of HE, including: "notoriously elusive" (Green, 1994; Jonathan, 2000; Liu, 2016); (2) "relative" (Harvey & Green, 1993); (3) "subjective" (Doherty, 2008; Harvey & Green, 1993); (4) "dynamic" (Boyle & Bowden, 1997); (5) "multidimensional" (Campbell & Rozsnyai, 2002); (6) "contested" (Newton, 2002); and (7) "a philosophical concept that lacks a general theory in the literature" (Green, 1994; Vlăsceanu et al., 2007). However, the article written in the early 1990s gained a lot of attention and citations because the authors defined quality in education from five different perspectives, including quality as (1) exceptional, (2) perfection, (3) fitness for purpose, (4) value for money, and (5) transformative (Harvey & Green, 1993).

Considering the divergent views on quality in HE, some researchers have broadly classified these definitions into two categories. The first category is termed "standards-based" definitions, which focus on predetermined criteria and/or standards. While the second category is related to "stakeholder-driven" definitions that focus on stakeholder needs and emphasize the responsibility (accountability) of individuals/organizations (Schindler et al., 2015). According to Mussawy and Rossman (2018), the second category is a broader set of definitions that expresses quality as "purposeful, transformative, exceptional, and accountable". However, the "fitness for purpose" perspective of quality (Harvey & Green, 1993) has gained greater acceptance than others in the earlier literature, due to its flexible nature in setting goals and objectives in accordance with academic standards established in different contexts and cultures.

Quality Assurance in Higher Education

QA is a set of mechanisms used to achieve the objectives of HE while meeting common or specific quality standards at the program or institution level (Martin and Stella 2007). Similarly, QA is defined as: "an all-embracing term referring to an ongoing, continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining, and improving) the quality of a higher education system, institutions, or programmes"(Vlăsceanu et al., 2007). QA is also considered an important area of organizational performance in the context of global HE (Iqbal et al., 2022). There are two approaches to QA that have gained popularity in HE. First, IQA, which is known as a developmental approach (Sanyal & Martin, 2007; Skolnik, 2010). IQA is defined as "intra-institutional practices in view of monitoring and improving the quality of higher education" (Vlăsceanu et al., 2007). Similarly, IQA is more concisely defined as "policies and practices whereby academic institutions themselves monitor and improve the quality of their education provision" (Dill, 2010). IQA has several purposes, including performance evaluation, enhanced learning and management activities, and compliance with national standards (Martin 2018). Second, EQA, which is considered a regulatory approach (Sanyal & Martin, 2007; Skolnik, 2010). EQA is defined as "inter- or supra-institutional schemes assuring the quality of higher education institutions and programmes" (Vlăsceanu et al., 2007). In other words, EQA refers to "supra-institutional policies and practices whereby the quality of higher education institutions and programs are assured"(Dill, 2010). However, the responsibility for carrying out EQA rests with organizations outside of HEIs (Skolnik, 2010). Researchers believed that both IQA and EQA constitute an ecosystem of QA mechanisms in HE (Jingura & Kamusoko, 2019). This is perhaps the reason why international experts place the same emphasis on both types of QA (Martin and Stella 2007) to guarantee the effective implementation of quality in HE (FHEEC, 2008).

Quality Assurance System in Pakistan

In Pakistan, HEC was established to improve the quality of HE and enable HEIs to

meet global standards in terms of quality teaching, learning, research, and services (Batool & Qureshi, 2007). To assist HEC, QAA was assigned a role to establish policies/ guidelines for academic programs; while Quality Enhancement Cells (hereinafter QECs) were established to monitor policy implementation and improve academic quality in HEIs in Pakistan (HEC, 2021). The HEC has made it mandatory to establish QECs at each university to facilitate departments and monitor the quality of academic programs through self-assessment (IQA) and accreditation (EQA) processes (Batool & Qureshi, 2007). Some researchers have argued that due to the initiatives taken by QAA, an improvement in the quality of academic programs has been seen. For instance, Usmani and Khatoon (2016) conducted a study based on data obtained from the QAA, in Pakistan. The results showed that the QA mechanism at the university level in Pakistan has matured, which in turn has ensured academic quality by overcoming problems identified through the self-assessment of academic programs. However, this study used secondary data retrieved from QAA, originally collected by the HEIs themselves and then provided to QAA; therefore, perhaps there could be an element of bias. On the contrary, most researchers have argued that the quality of HE (particularly teaching and research) in Pakistani universities is not good (Ahmad et al., 2014; Amir et al., 2020; Banuri, 2021; Bilal & Khan, 2012; Hoodbhoy, 2009; Mahesar, 2019).

Defining Academic Programs

In the context of HE, universities provide several educational services to a variety of their stakeholders, and the academic program is one of the educational services that universities offer particularly to their admitted students. In general terms, an academic program is a predefined learning path consisting of certain courses with and/or without practical work/lab work organized by an educational institution for eligible admitted students. For instance, according to Harvey (2004), "Programme (or program in US/Australian English) is shorthand for a study curriculum undertaken by a student that has coordinated elements, which constitute a coherent named award". While in another definition, an academic or study program is "a core, modular component of higher education including all the activities (design, organization, management, as well as the process of teaching, learning and research) carried out in a certain field and leading to an academic qualification" (Vlăsceanu et al., 2007).

Comparing Public and Private Universities

Generally, there are two types of organizations: (1) the public sector, and (2) the private sector. Public sector organizations are essentially service-oriented organizations that do not compete for profit, unlike private sector organizations that compete for profit maximization (Din et al., 2011). Also, in the context of HE, universities operate in both sectors, so it is up to students or their parents/guardians to decide which type of university is best for them. "Pakistan's higher education system is divided into private

and public sector universities that work under HEC" (Khan et al., 2018).

As for the comparison of public and private universities is concerned, a public university is one that operates with public money (funding) through the central or the corresponding state governments; therefore, public universities are also commonly known as government universities (Burrows, 2022). A private university, on the other hand, is a university that does not operate with public money (financing or funding) and through the government (either central or state) (Burrows, 2022). The sector-wise comparison of the universities is shown in Table 1, with factors that may influence the student's decision in choosing a suitable university.

Table 1: ***Sector Wise University Comparison***

Factors	Public	Private
Size	Large campus, more people	Small campus, restricted environment
Cost	Less expensive but limited school choice	Expensive but wider school choice
Major	Number of faculties, and programs	Specific specialization, degree, or program

Source: (Burrows, 2022)

RESEARCH OBJECTIVES

1. To investigate the extent to which students are satisfied with the quality of academic programs in public and private universities in Pakistan.
2. To examine the differences in the quality of academic programs based on the sector of universities in Pakistan.

RESEARCH HYPOTHESES

1. There is a significant difference between public and private universities in that the work of the programs is too heavy.
2. There is a significant difference between public and private universities in that the programs are effective in improving teamwork skills.
3. There is a significant difference between public and private universities in that program administration is effective in supporting learning.
4. There is a significant difference between public and private universities in that the programs are effective in developing analytic and problem-solving skills.
5. There is a significant difference between public and private universities in that the programs are effective in developing independent thinking.
6. There is a significant difference between public and private universities in that the programs are effective in developing written communication skills.

7. There is a significant difference between public and private universities in that the programs are effective in developing planning abilities.
8. There is a significant difference between public and private universities in that the mathematical content of the programs is adequate.

RESEARCH METHODOLOGY

Sample and Procedure

The study adopted a survey approach, while the population of this study consisted of students from public and private universities in Pakistan. However, given the limited resources and time constraints, a convenience sampling technique was employed to gather primary data from students. Researchers have advocated the use of a convenience sampling technique when it is impossible to collect data at random, such as when the population is exceptionally large (Etikan et al., 2016). Data were collected through in-person and online questionnaires from students from twelve universities, mainly from Punjab, as well as from Sindh and Islamabad in Pakistan. Participation in the survey was purely voluntary and with their consent and all respondents were informed about the scope and objectives of the research before the start of the data collection. In addition, participating students were assured that no identifying information such as student names, study programs, and/or university names will be disclosed at any stage of this study. A total of 600 questionnaires were distributed, of which 580 were returned. However, eleven questionnaires were discarded as being substantially incomplete, while 569 were considered valid with a response rate of 94.83%.

Measurement Scale

This study has adapted the scale proposed by HEC to assess the quality of academic programs (Raouf, 2006) based on student perceptions. The original scale consisted of a total of eleven questions, of which eight questions are closed-ended based on a 4-point Likert scale, while one question is optional, and two questions are open-ended in nature. In the present study, eight questions were included in the questionnaire based on a 5-point Likert scale (where 1=strongly disagree and 5=strongly agree), while seven demographic questions were also added. The reliability of the scale was assessed using Cronbach's alpha, which is considered the most popular test to assess the internal consistency of the scale (Sekaran & Bougie, 2016). Suggested Cronbach's alpha values include ≥0.90 (excellent), ≥0.80 (very good), and ≥0.70 (adequate) (Kline, 2011). The scale was found to be reliable as the resulting Cronbach's alpha value was 0.81, which is considered very good.

DATA ANALYSIS AND FINDINGS

Respondents' Profile

The detail of the respondents' profile is given in Table 2, which showed that 383

(67.3%) students were from the public sector and 186 (32.7%) students were from private sector universities. Regarding the gender of the students, most of the students were male, 327 (57.5%), followed by female, 242 (42.5%). Similarly, 476 (83.7%) students were up to 25 years old, 73 (12.8%) were between 26 and 35 years old, 18 (3.2%) were between 36 and 45 years old and there were only 2 (0 .4%) students over 45 years of age. Finally, 363 (63.8%) were bachelor's (undergraduate) students, 104 (18.3%) were master's students, and 86 (15.1%) were MS/M. Phil students, while 16 (2.8%) of the students were pursuing their Ph.D.

Table 2: ***Respondents' Profile***

Characteristics	Frequency	Percentage
University Sector		
Public	383	67.3
Private	186	32.7
Gender		
Male	327	57.5
Female	242	42.5
Age (Years)		
25 or less	476	83.7
26 – 35	73	12.8
36 – 45	18	3.2
45 plus	2	0.4
Study Program		
Bachelor	363	63.8
Masters	104	18.3
MS/ M. Phil	86	15.1
Ph.D.	16	2.8

Source: Prepared by Authors

University Wise Quality of Academic Programs

The university-wise bar chart of the quality of academic programs shows that the mean (average) scores of 11 of the 12 universities are between 3 and 4 on a 5-point Likert scale, except for University-E whose mean score is between 2 and 3. However, their corresponding boxplots reveal that there are only 2 universities where most students rated the quality of academic programs above 3.5. While the mean score for the rest of the universities is around 3.5, except for one university whose students rated the quality of academic programs between 2 and 2.5. This means that the majority of students at 10 universities believe that the quality of academic programs is not good (See Figure 1).

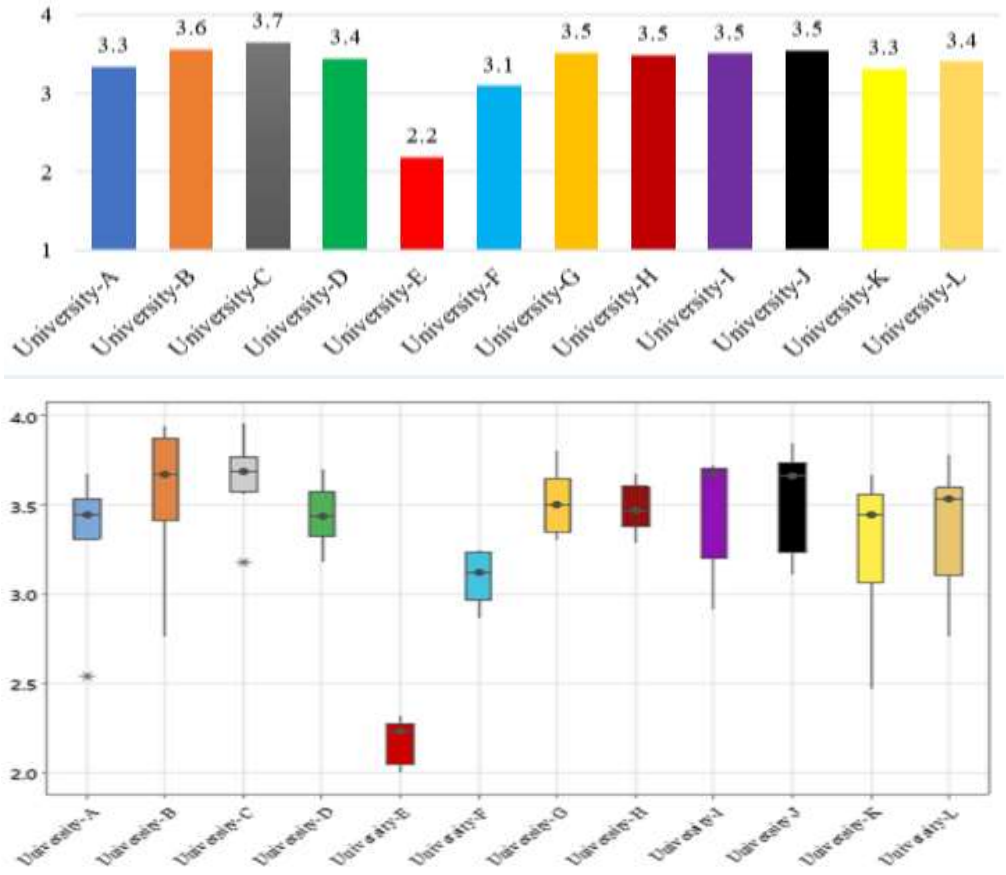

Figure 1: University Wise Quality of Academic Programs

Sector Wise Quality of Academic Program

The sector-wise bar chart shows that the mean scores of the academic programs of the public and private universities are 3.2 and 3.5 respectively, which seems more or less the same; however, their boxplots are quite opposite. The boxplot for public sector universities indicates that 75% of students rated the quality of academic programs below 3.3, while the boxplot for private sector universities reveals that 75% of students rated the quality of academic programs above 3.3.

This means that, regardless of the university sector, most students perceive that the quality of academic programs is not up to par. However, the boxplots reveal that the quality of academic programs in private universities is comparatively better than in public universities in Pakistan (see Figure 2).

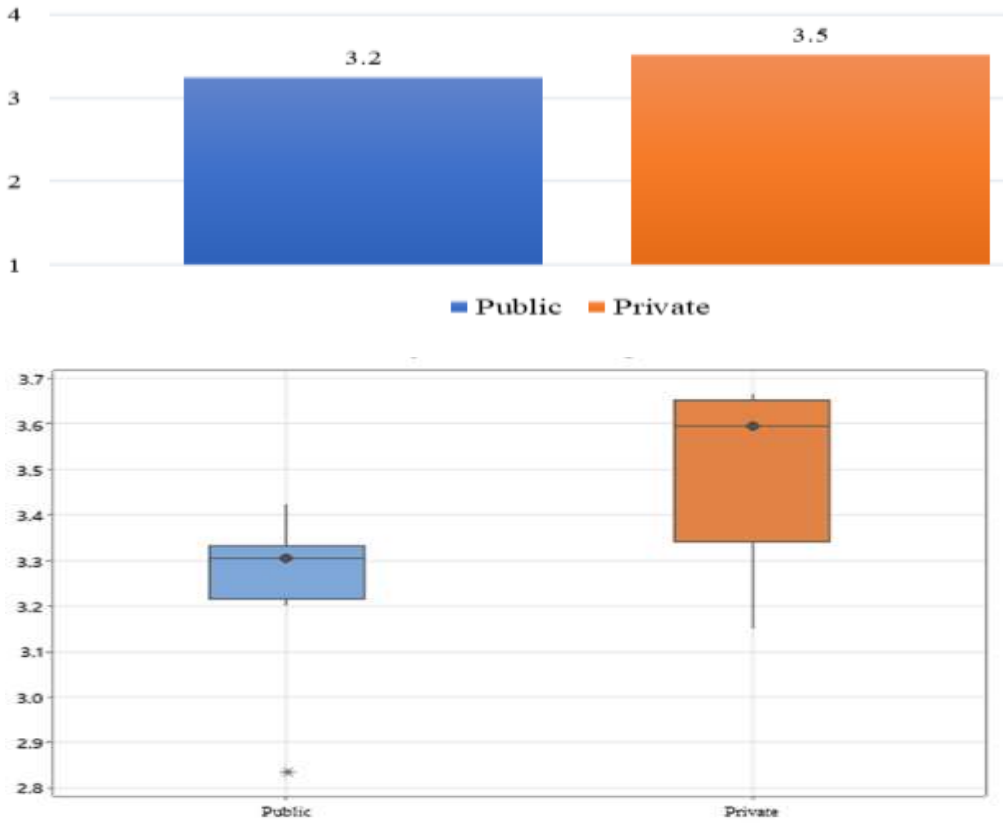

Figure 2: Sector Wise Quality of Academic Programs

Gender Wise Quality of Academic Programs

The gender-wise bar chart illustrates the average score of male and female students regarding the quality of academic programs as 3.3 and 3.4, respectively, which is almost identical. However, the boxplot indicates that 75% of male students rated the quality of academic programs less than 3.4, and 50% even rated it below 3.3;

while the boxplot of the female students reveals that 50% of the female students rated the quality of the academic programs as less than 3.5 (see Figure 3). Briefly, the quality of academic programs perceived by female students is slightly better than that of male students in Pakistani universities.

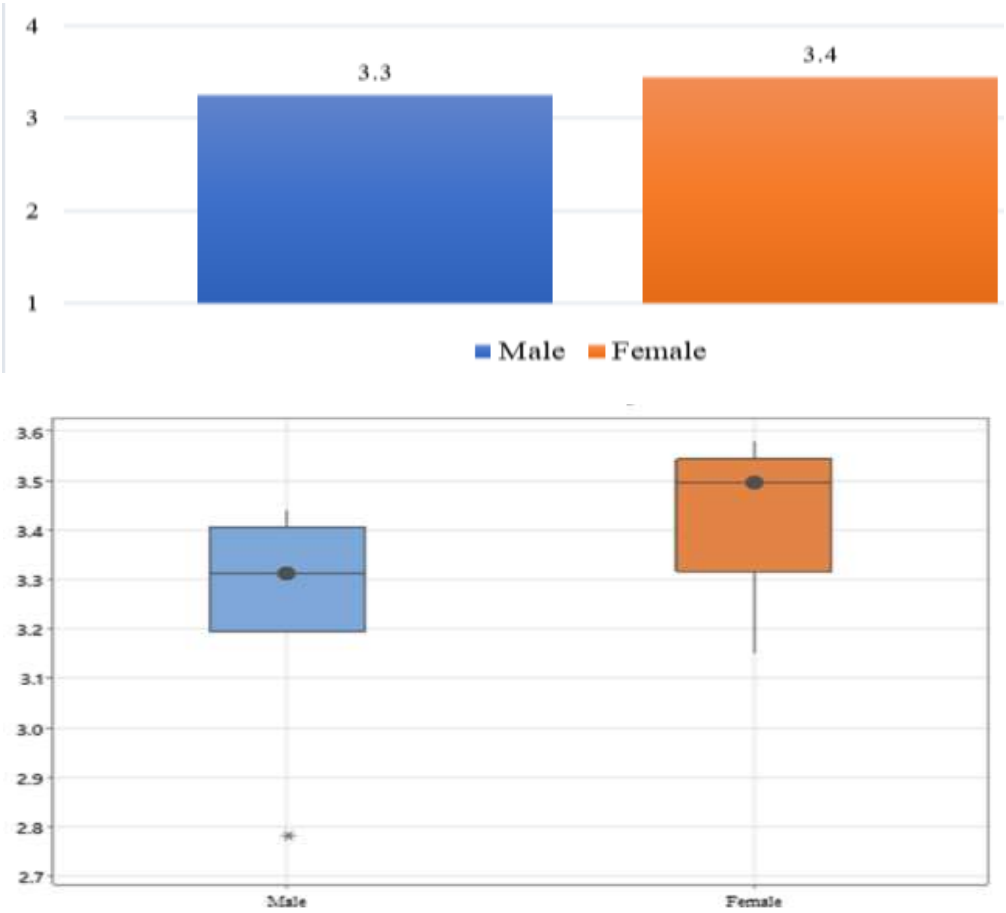

Figure 3: Gender Wise Quality of Academic Programs

Age Wise Quality of Academic Programs

The bar chart by age shows that the mean scores for perceived program quality by students across all age groups is between 3.3 and 3.9, which are less than 4. Regarding the box plots corresponding to each group, students in the age group ≤ 25 years rated the quality of the academic programs as less than 3.5, which is the minimum; while the highest rating was given by students in the age group > 45 years, where 50% of students rated the quality of academic programs above 4. In contrast, students in other age groups (26-35) and (36-45) have rated the quality of the academic programs between 3.5 and 4.0 (See Figure 4).

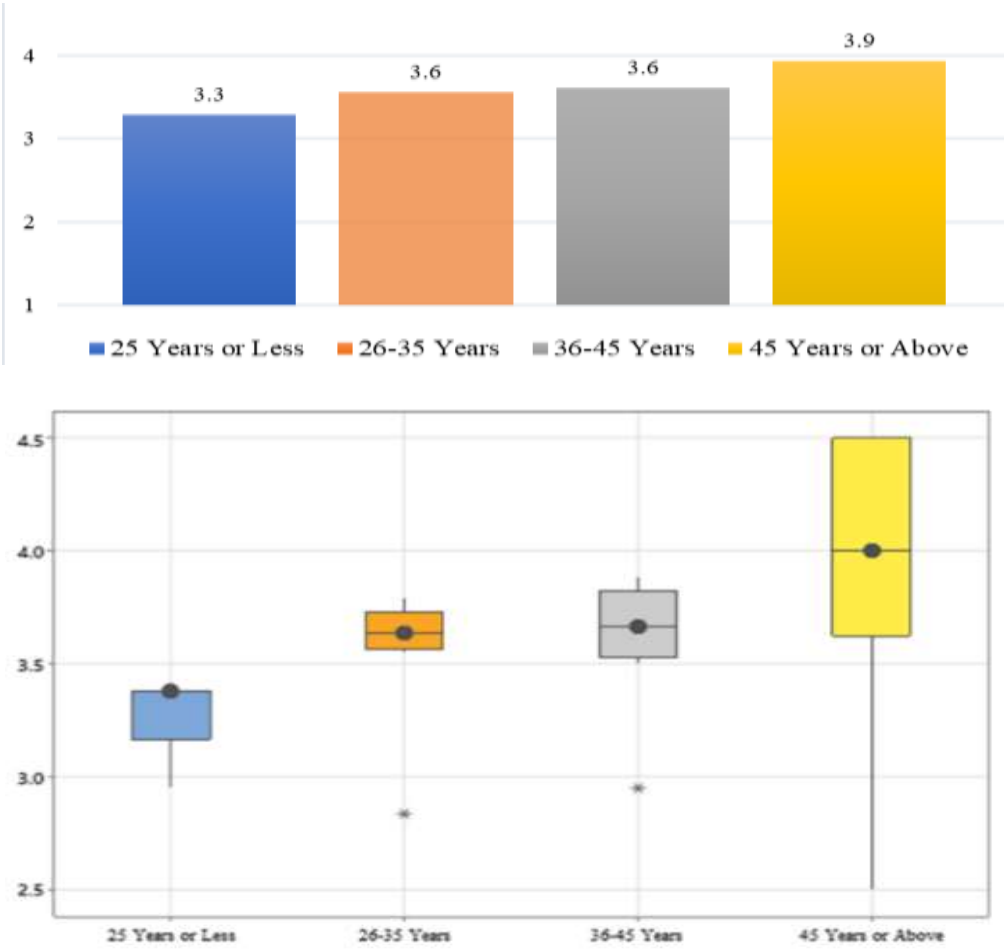

Figure 4: Age Wise Quality of Academic Programs

Study Level Wise Quality of Academic Programs

The students' study level-wise bar chart reveals that the mean scores for the quality of academic programs are between 3.3 and 3.7. As shown in the boxplot, bachelor (undergraduate level) students have given the minimum rating (i.e., 3.4) regarding the quality of academic programs; while the highest score was given by Ph.D. students, where almost all students rated the quality of academic programs above 3.6. In contrast, most master's, and MS/M. Phil. level students have rated the quality of academic programs between 3.4 and 3.6 (See Figure 5).

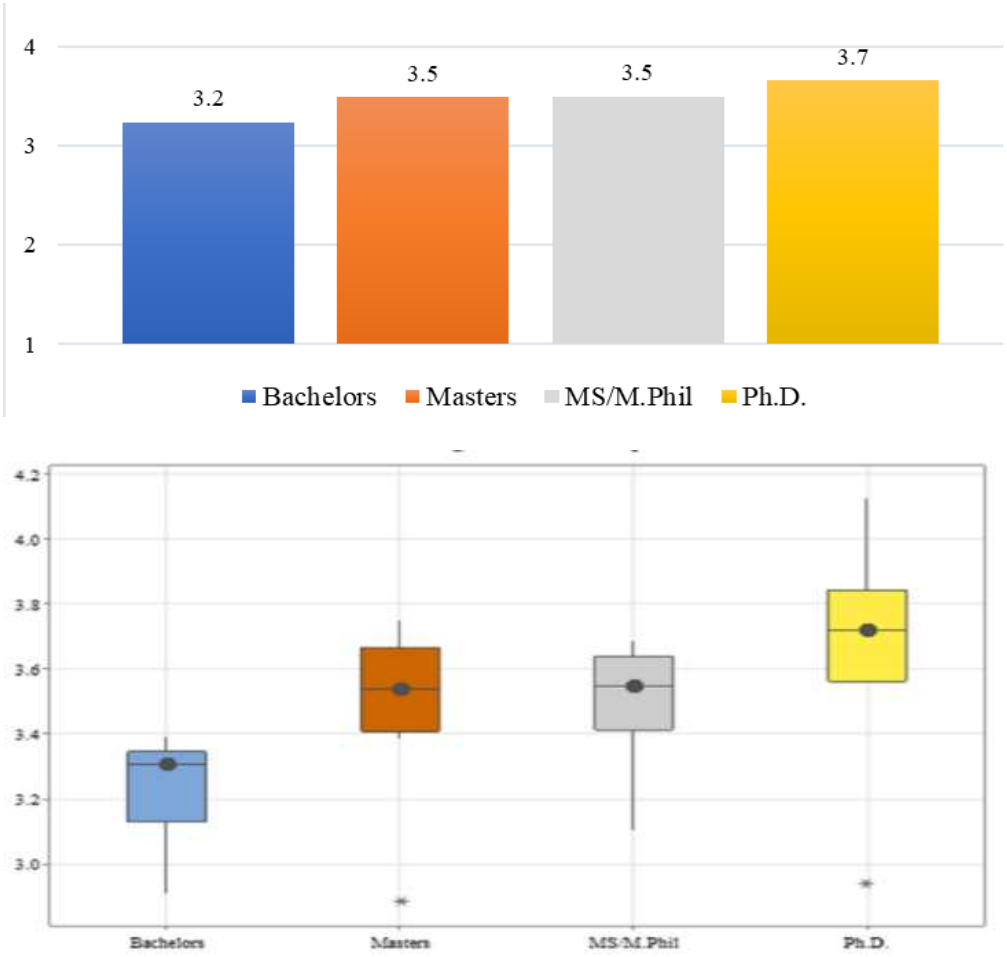

Figure 5: Study Level Wise Quality of Academic Programs

Item Wise Quality of Academic Programs

The item-wise bar chart reveals that the mean scores for all questions are between 3.2 and 3.5, except for question PQ1 with a mean score of 2.9. Also, the box plots of all the items reveal that 75% of all students rated the quality of programs as less than 4, which means that most students perceive that the quality of the programs is not satisfactory. In contrast, the boxplots of the items PQ1 and PQ8 show that 50% of the students rated the quality of the academic programs less than 3, which means that the students believe that the work in the programs is not competitive; and that their mathematical content is not adequate to take advanced level courses at their respective universities (See Figure 6).

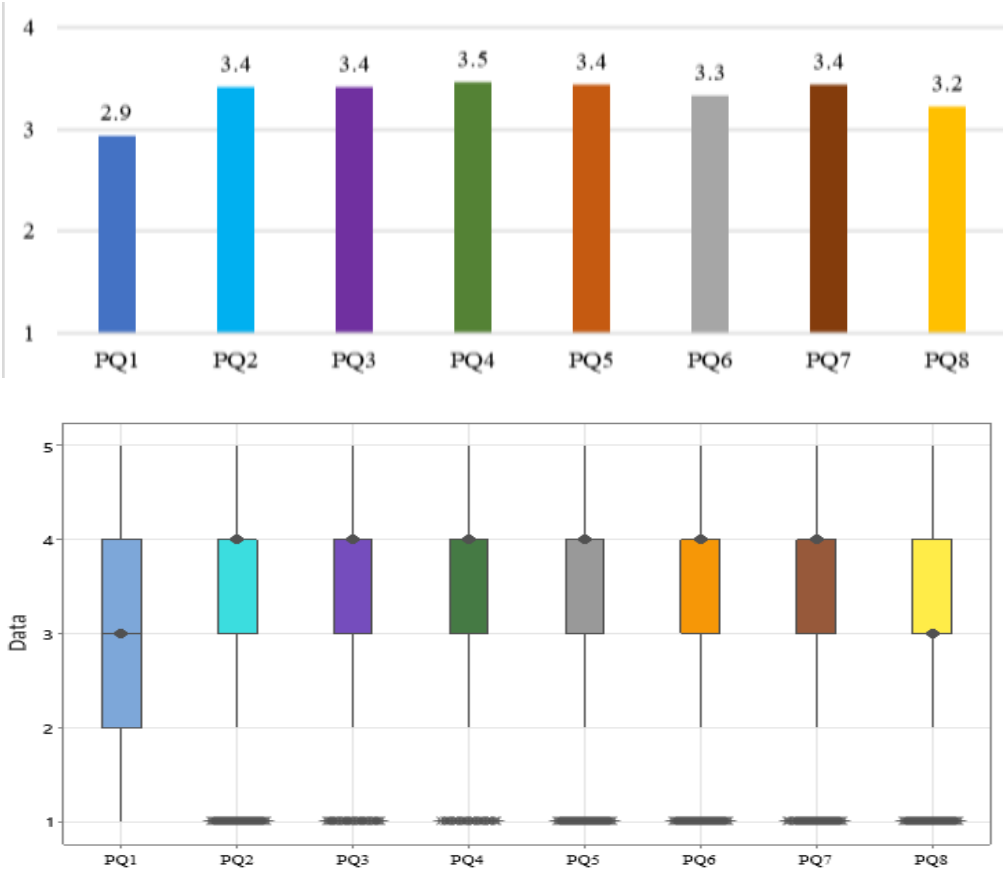

Figure 6: Item Wise Quality of Academic Programs

Data Normality

Prior to the inferential statistical analysis, the data were subjected to a Shapiro-Wilk test to verify the normality of the data. The results showed that the p-value of the Shapiro-Wilk test turned out to be less than 0.05, so H0 is rejected, which means that the data did not follow a normal distribution.

Hypotheses Testing

Given the non-normal nature of the data, the Mann-Whitney U test was used to compare various aspects of the quality of academic programs in public and private universities in Pakistan. Overall, eight hypotheses were tested to determine if there is any difference in students' perceptions of the quality of programs in public and private universities in Pakistan. Of the eight hypotheses, six hypotheses (H1, H2, H3, H5, H6

and H7) were accepted and two hypotheses (H4 and H8) were rejected. The detail of each hypothesis is presented below, while the results of the eight hypotheses are summarized in Table 3.

The first hypothesis (H1) was about assessing the difference in student perceptions that the program work is too heavy between public and private universities. The test revealed significant differences in students' perceptions of the workload of public (median=3, n=383) and private (median=3, n=186) university programs in Pakistan, while U=28915, z = 3.798, r = 0.16, and p = 0.000. Therefore, H1 was supported.

The second hypothesis (H2) was about evaluating the difference in student perceptions that the programs are effective in enhancing team-working abilities between public and private universities in Pakistan. The test revealed significant differences in students' perceptions of program effectiveness in enhancing team-working abilities from public (median = 4, n = 383) and private (median = 4, n = 186) universities in Pakistan, while U = 30350, z = 3.047, r = 0.13, and p = 0.002. Hence, H2 was supported. The third hypothesis (H3) was about assessing the difference in student perceptions that the program administration is effective in supporting learning between public and private universities in Pakistan. The test revealed significant differences in students' perceptions of the effectiveness of the program administration in supporting the learning of public (median = 4, n = 383) and private (median = 4, n = 186) universities in Pakistan, while U = 29794, z = 3.349, r = 0.14, and p = 0.001. Thus, H3 was supported.

The fourth hypothesis (H4) was about evaluating the difference in student perceptions that the programs are effective in developing analytic and problem-solving skills between public and private universities in Pakistan. The test revealed that there are no significant differences in the students' perceptions of the effectiveness of the program in developing analytical and problem-solving skills between public (median = 4, n = 383) and private (median = 4, n = 186) universities in Pakistan, while U=33585, z=1.163, r=0.05, and p=0.245. Therefore, H4 was not found to be supported.

The fifth hypothesis (H5) was about evaluating the difference in student perceptions that the programs are effective in developing independent thinking between public and private universities in Pakistan. The test revealed significant differences in students' perceptions of the effectiveness of the program in developing independent thinking in public (median = 4, n = 383) and private (median = 4, n = 186) universities in Pakistan, while U = 30537, z = 2.888, r = 0.12, and p = 0.004. Therefore, H5 was found to be supported.

The sixth hypothesis (H6) was about assessing the difference in student perceptions

that the programs are effective in developing written communication skills between public and private universities in Pakistan. The test revealed significant differences in students' perceptions of the effectiveness of the programs in developing written communication skills at public (median = 3, n = 383) and private (median = 4, n = 186) universities in Pakistan, while U = 31662, z = 2.241, r = 0.09, and p = 0.025. Thus, H6 was found to be supported. The seventh hypothesis (H7) was about evaluating the difference in student perceptions that the programs are effective in developing planning abilities between public and private universities in Pakistan. The test revealed significant differences in students' perceptions of the effectiveness of the programs in developing planning abilities of public (median = 4, n = 383) and private (median = 4, n = 186) universities in Pakistan, while U = 29799, z = 3.328, r = 0.14, and p = 0.001. Therefore, H7 was supported.

The eight hypothesis (H8) was about assessing the difference in student perceptions that the mathematical content of the programs is adequate between public and private universities in Pakistan. The test revealed that there are no significant differences in the students' perceptions of the adequacy of the mathematical content of the programs between public (median = 4, n = 383) and private (median = 4, n = 186) universities in Pakistan, while U = 34312, z = 0.742, r=0.03, and p = 0.458. Hence, H8 was not found to be supported.

Table 3: ***Hypotheses Testing Results – Mann-Whitney U Test***

	Sector	**n**	**Median**	**U**	**z**	**r**	**p-value**	**Decision**
H1	Public	383	3	28915	3.798	0.16	0.000	Supported
	Private	186	3					
H2	Public	383	4	30350	3.047	0.13	0.002	Supported
	Private	186	4					
H3	Public	383	4	29794	3.349	0.14	0.001	Supported
	Private	186	4					
H4	Public	383	4	33585	1.163	0.05	0.245	Not Supported
	Private	186	4					
H5	Public	383	4	30537	2.888	0.12	0.004	Supported
	Private	186	4					
H6	Public	383	3	31662	2.241	0.09	0.025	Supported
	Private	186	4					
H7	Public	383	4	29799	3.328	0.14	0.001	Supported
	Private	186	4					
H8	Public	383	3	34312	0.742	0.03	0.458	Not Supported
	Private	186	3					

Source: Prepared by Authors

DISCUSSION

This study incorporates the perceptions of students studying in their final semesters to investigate the quality of programs in public and private sector universities in Pakistan. Data were examined using descriptive analysis techniques to describe the results; while inferential statistical techniques were employed to test the hypotheses to determine if there are significant differences in public and private sector universities in Pakistan about the quality of academic programs.

Regarding the descriptive analysis, the data were analyzed based on the characteristics of the respondents, including student profile, gender, age, study programs, university code, and type/industry. In addition, data were analysed based on mean (average) and median scores. The mean value is a popular measure of central tendency and is used particularly when the data distribution is normal. However, the mean is considered sensitive due to the influence of outliers. Therefore, in addition to the mean score, the current researchers have used the median score, which is considered best in the presence of outliers or non-normal data distribution. The descriptive analysis revealed that most of the students rated the quality of the academic program in the public and private universities as less than 4, which means that the students are dissatisfied with the academic quality of the Pakistani universities. The study findings are in line with some of the previous studies that highlighted the various quality aspects of HE, especially the low quality of teaching, research, and other educational services. However, most of the previous studies were exploratory in nature (Ahmad et al., 2014; Amir et al., 2020; Banuri, 2021; Bilal & Khan, 2012; Hoodbhoy, 2009; Mahesar, 2019). This study adds to current knowledge by providing empirical evidence of the quality of academic programs in the context of Pakistani universities.

In addition to the descriptive analysis, a sector-based comparative analysis was also conducted to determine the differences in the quality of the programs offered in the public and private universities in Pakistan. However, prior to the hypotheses tests, the normality of the data was verified through the Shapiro-Wilk test and the results revealed that the data is not normal. Therefore, the Mann-Whitney U test was applied to test hypotheses and compare students' perceptions of the quality of programs offered in public and private universities in Pakistan.

Overall, eight hypotheses were tested, six hypotheses were accepted, and two hypotheses were rejected. The hypotheses (H1, H2, H3, H5, H6, and H7) were supported since the results revealed significant differences in the students' perceptions that the work of the program is too heavy (H1); that the programs are effective in improving teamwork skills (H2); that program administration is effective in supporting learning (H3); that the programs are effective in the development of independent thinking (H5); that the programs are effective in developing written communication

skills (H6); and that the programs are effective in developing planning abilities (H7). However, two hypotheses (H4 and H8) were rejected as no significant differences were found in students' perceptions that the programs are effective in developing problem-solving and analytical skills (H4); and that the mathematical content of the programs is adequate (H8) among the public and private universities in Pakistan.

Given the results of descriptive and inferential statistics, a considerable difference has been seen in terms of students' perception of the quality of academic programs in the universities of both sectors in Pakistan. This was also evident in their mean scores, as the mean score for public universities was 3.2, while that for private universities was 3.5. In other words, the quality of academic programs is better in private universities than in public universities in Pakistan. This is probably because while public sector universities have adequate resources and facilities, their faculty seem a bit rigid compared to private universities and therefore pay little attention to student satisfaction. Also, since faculty members in public universities are on the government payroll, they are comparatively more relaxed and feel less accountable, which is also evident in their orthodox styles of teaching, research, and obsolete knowledge and skills. This is also in line with previous findings, where the researchers found that most Pakistani universities lack qualified and competent teachers (Hoodbhoy, 2009). In addition, the staff of public universities, including university administrators, feel less vulnerable and are not as concerned about university expenses compared to private universities, since they are at the disposal of the Pakistani government. On the contrary, private universities and their administrators are innovative and dynamic, as they have to increase student enrollment to generate income and equally control their expenses to maintain a balance between income and expenses. Given these facts, researchers have argued that private university leadership is often more willing to adopt proactive strategies than public universities to shake off such crises (Chien-ern et al., 2008).

Besides, in Pakistan, HEC has taken some serious steps to implement self-assessment and institutional performance standards at both program and institutional levels through QECs established in public and private sector universities to improve academic quality (Batool & Qureshi, 2007). However, despite the fact that universities claim to implement these standards, so far the results are not favorable and that is why many researchers still criticize the level of academic quality in Pakistani universities (Banuri, 2021; Hoodbhoy, 2009; Murtaza & Hui, 2021). This is also evident in the latest "QS World University Rankings 2022", only six Pakistani universities were among the top 1000 universities (QS, 2021).

CONCLUSION

This study aimed to examine the quality of academic programs taught in Pakistani public and private universities based on the perceptions of students who were in their

final semesters, while the data were analyzed descriptively and through inferential techniques. The results showed that the majority of students believe that the quality of academic programs in public and private universities is not good. In addition, it also turned out that there are considerable differences in the perception of students about the quality of the academic programs in the universities of the two sectors. The study concludes that while the quality of academic programs in public and private sector universities as a whole is not up to par; however, the programs offered in private universities are comparatively better than public universities in Pakistan in terms of quality.

RECOMMENDATIONS

Despite the valuable contributions in the field of HE, the present study has some limitations. Firstly, the study collected data at one given point in time using convenience sampling techniques mainly from universities located in Punjab, as well as Sindh and Islamabad in Pakistan. Secondly, the respondents only consisted of students who were in their last semesters. Therefore, researchers can incorporate other stakeholders by collecting data using random sampling techniques from universities across Pakistan in their future studies to increase the generalizability of the results. This study has implications for university leaders, administrative managers, and QEC staff to emphasize quality education; so that programs can challenge students in terms of workload, develop teamwork skills, support learning, develop problem-solving and analytical skills, written communication, planning skills, and suitability of mathematical content for advanced level courses. This will enrich the learning experience of Pakistani students and they will be more satisfied.

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