

Academic Integrity: Effects of Demographic Variables on Students' Conduct

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ABSTRACT

This study aimed to find out the effects of demographic variable i.e. gender, age, group of studies, GPA etc. on level of academic integrity among Pakistani students. The design of the study is quantitative in nature, in which the survey research method was employed to gather data from the respondents. A self-reported questionnaire was adapted on the basis of previously developed and validated questionnaire, with the consent of the authors. The developed scale was validated with the help of experts and pilot tested. Multilevel stratified convenience sampling technique was used to collect data from 4 provinces and federal area of Pakistan. The collected data was analyzed by using SPSS 16.0 version.

Key Words: Academic Integrity, Plagiarism, Pakistan

Introduction

The foundation of the academic and scholarly world revolves around ethics and integrity, where new ideas and theories are created, confirmed and re-confirmed; experiments and research is carried out and published for the benefit of humanity with a genuine desire of acknowledgement. Higher education institutions are established to create new ideas and formulate new theories, formulas and standards with the help of experiments, field work and through other research methods. The second important purpose of such organizations is to produce highly skilled and competent graduates with high standards of honesty and professional ethics to serve the community. It is generally assumed that due credit should be given to the authors of new ideas, innovations and revolutionary inventions (Ramzan, Munir, Siddique, & Asif, 2011).

According to McCabe, Trevino, & Butterfield (2001) cheating and plagiarism were found to be the most prevailing acts of academic dishonesty at the college level; however, the phenomenon is not limited to the college level only. The other issue which has been a core issue in debates is the definition of academic integrity.

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The problem with academic integrity or understanding academic dishonesty is basically, the absence of a generally accepted definition of the terminology (Kibler, 1998). However, there are many definitions which are acceptable now in the academic community.

“Academic integrity means honesty and responsibility in scholarship. Students and faculty alike must obey rules of honest scholarship, which means that all academic work should result from an individual's own efforts. Intellectual contributions from others must be consistently and responsibly acknowledged. Academic work completed in any other way is fraudulent” (University of Illinois, 2013).

In March 1965, the Senate Council of the University of Pittsburgh approved a policy statement on the subject of academic integrity. It was declared, in language that is as true and vital today as it was then, that:

“The University of Pittsburgh seeks excellence in the discovery and dissemination of knowledge. Excellence in scholarship cannot be achieved in situations which are contaminated by dishonest practices. All members of the University community are obligated to adhere strictly to the highest standards of integrity in study, research, instruction, and evaluation”.

A significant number of studies on self-reported cheating behaviors reveal high levels of academic misconduct in higher education – cheating on exams, plagiarizing other scholastic works, fabricating research results, and forging academic documents (Bartlett, 2006; Bowers, 1964; Davis, 1993; Drake, 1941; Hinman, 2002; McCabe & Trevino, 1993). In a study conducted by McCabe (2001) approximately 4,500 US schools found self-reported incidents of cheating. While cheating was typically thought to be an undergraduate concern (Powers, 2007), such results were also seen in business students (Mangan, 2006).

The student's perceptions of academic integrity have also been considered an important phenomenon in many studies. In quantitative studies this factor has been explored with the help of questionnaires (Ferguson, 2010; Ramzan, Munir, Siddique, & Asif, 2011)

After the transformation of University Grants Commission (UGC) to Higher Education Commission (HEC), Pakistan, the HEC has been more focused on research and development through giving incentives to students getting admissions in graduate and postgraduate programs in Pakistan and abroad. A substantial amount of grants, scholarships, financial aid and rewards are being given to students, researchers and faculty for carrying out and publishing research (Higher Education Commission, 2013). The level of focus on research and scholarship, however, has been changing with the changes in priorities of the incumbent governments.

In Pakistan, there are a number of plagiarism cases of faculty members and

students which were reported to their respective institutions and the Higher Education Commission (HEC) of Pakistan. The attraction to publish papers for promotions and financial gains has brought about ethical issues in research in our country. There have been reports of plagiarism cases in universities/institutes of higher learning in Pakistan in the press, newsletters and Higher Education Commission alerts. Plagiarism is a common issue in academic institutions in the world and it is also increasing in many Pakistani institutions. There are general discussions in Pakistan about plagiarism and the desire to minimize it (Shirazi, Jafarey, & Moazam, 2010).

The HEC has provided guidelines to manage plagiarism and asked the universities and institutes to devise and implement plagiarism policies in their institutions. However, there is a lack of empirical data on the nature and level of plagiarism among the students of Pakistan, so the desired results to minimize plagiarism in academic institutions of Pakistan have not been achieved so far.

The Pakistani society has been in touch with news related to plagiarism reported by Pakistani media. One of the leading English newspapers reported that a senior educationist was involved in plagiarism (The Dawn, 2012).

It has also been observed that there were certain journals which were published in different academic institutions with fake editorial boards and were producing plagiarized work. Such cases were reported to high officials in the Higher Education Commission of Pakistan (Daudpota, 2011).

It was found that medical students and faculty were involved in plagiarism because of ignorance on the subject. Even those who have some knowledge of the subject admit having plagiarized their work at one time or another. They suggested that there is need to develop an educational strategy aimed at raising the awareness of people and institutions about plagiarism (Shirazi, Jafarey & Moazam, 2010).

It has also been found that students in Pakistani universities were involved in plagiarism due to family and social pressures to get higher grades, as it is considered important for employment and status in Pakistani society. These pressures sometimes force students to employ unfair means, such as plagiarism, as a shortcut to get better results on tests and produce various publications. It was also revealed in the study that many students were unaware of the plagiarism policy of the university and that these policies are not visible, disseminated and posted to the extent that they are available to all university students. Moreover, students consider plagiarism policies at universities not to be strict enough and rather too light to be effective in detecting and punishing those who violate university policy of plagiarism and unfair means (Ramzan, Munir, Siddique, & Asif, 2011).

In a recent study Rehman & Waheed (2014) have identified ten main activities that are commonly taken by students to participate in this type of misconduct. The second goal of this research was to determine the moral insights of university students on academic dishonesty. A significant number of students were in favor of academic dishonesty as a normal part of life, but conceded that it was an ethically improper activity.

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A number of studies have been conducted to find out the perceptions of students and faculty members about plagiarism and academic misconduct. Many studies have also been conducted to find out the effect of teachers' behavior on academic achievement of students. It means that there is a significant relationship between teachers' behavior and student's academic achievement. On the basis of these studies it could be assumed that this relation has an impact on student's quality of academic work and in creating a sense of responsibility to complete the job with honesty. This study was conducted to find out the nature of the academic relation between students and teachers in Pakistani universities and its impact on academic integrity.

Literature Review

For Academic Integrity different terms are frequently used such as academic misconduct, cheating, academic dishonesty, plagiarism, misrepresentation, academic fraud and academic integrity, but hardly explained in concrete understanding.

Gehring, Nuss & Pavella (1986) point out that those students participate in academic dishonesty when the apparent risk of the behavior is low. For instance, if students do not think that will be resulted in adverse consequences in case of their cheating behaviors and are more likely to exhibit dishonest behavior. Another important factor which increases the likelihood of cheating in students is unawareness to what exactly academic dishonesty entails.

Fass (1990) indicates that there is a general understanding of academic dishonesty, however there may be a difference between universities and colleges. In order to ensure consistency between different types of campuses, he states that explanations of academic dishonesty must cover a range of topics. These contain examinations ethics, the use of fonts in project and papers, bounds of writing support and tutoring, guidelines for data collection and reporting, proper and ethical use of academic resources, computer ethics, respecting others' work, limits on the provision of assistance to others and commitment, and understanding of academic expectations and policies.

Kibler (1993) explains in his study the reason why academic dishonesty prevails in colleges and universities; the foremost reason is that institutions may be treating it as aberrant behavior rather an educational problem in development. He also contends that when cheating is exposed, majority of the institutions only address the unethical behavior, without demanding the alleged cheater to address the developmental issues involved in the decision to use cheating as a means to attain a goal.

McCabe, Trevino, & Butterfield, (2002) explain that academic dishonesty and cheating across cultures may take on different perspectives or interpretations. Putting it briefly, students in different nations may have different opinions on what is and what is not considered wrong. This has received support from social learning theorists. McCabe and Trevino studied 12 different cheating behaviors.

They calculated that almost 79% of the students included in the sample were reported to have exhibited at least one sort of cheating behavior amongst the 12 dishonest behavior options. When it came to individual cheating during exams and being guilty of plagiarism the findings were 52% and 48 % respectively.

Whitley & Keith-Spiegel (2002) projected four elements of academic dishonesty; these elements include plagiarism, cheating, fabrication, and assisting academic dishonesty. Plagiarism and cheating are the most observable behaviors. Fabrication implies a deliberate addition of dishonest citation or information for examples filling of references in the paper or fabricating the results of an experiment. Helping academic dishonesty comprises deliberately provide assistance to others engaged in dishonest activities.

McCabe, D. L. (2005) state that some people would claim that academic dishonesty is not an issue in colleges and universities. However, in his study of academic integrity that included 50,000 undergraduate students from 60 campuses, he founded that an average of 70% of students confessed to cheating in examinations and written assignments. Further he noted that the most important element in cheating was the culture of academic integrity that determine the level of academic dishonesty in colleges and universities to which new coming students were exposed.

Hard, Conway, & Moran (2006) define academic dishonesty as providing or getting unofficial support in the formation of a project to be submitted for academic credit (cheating); and presenting the ideas or words of other person or persons as one's own for academic benefit without properly citing the actual person (plagiarism).

Hughes and McCabe (2006) suggest that terms like academic integrity, academic misconduct and academic dishonesty are used interchangeably in the context of unethical behavior in their relationship to students' academic work. They state that academic dishonesty or academic misconduct can easily be defined as copying or changing university documents, writing an article for another student, and hiding or damaging library resources.

Langlais (2006) concludes that some evidence proposes that students of different cultural have different definitions of misconduct and professional behavior. For instance, it has been described that plagiarism is predominant in China because the culture has a vague definition of ownership of intellectual property. Moreover, other nations with group-oriented cultures such as those in Latin America, Africa, and Asia stress collaboration and copying as a form of learning.

Olasehinde-Williams (2006) state that since the 1960s there has been considerable attention drawn to the issue of academic dishonesty. There is sufficient evidence in literature to suggest that enforcement and sustenance of any approach to limiting academic dishonesty thrives only when all key players in the system (administration, academic staff and students) have a high degree of sensitivity (in terms of attitude and participation) to the institutional approach.

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Miller et al (2007) remark that ever since studies on academic dishonesty began in the 1920s, cheating in higher education has increased in frequency and sophistication. They examined several studies and concluded that “cheating rates appear to be increasing” due to higher numbers being cited in more recent studies but commented that the increase could be attributed to higher rates of self-reported cheating. Academic dishonesty is now considered a social norm by many students, and some even admire those whose cheating skills go undetected.

Udermann & Lamers (2009) state that academic integrity was and still is an active topic of discussion in most campuses of universities and colleges. Numerous studies have been done and have explored topics like why and how students cheat, how to discourage cheating, and the teachers’ and students’ attitude to teaching. They suggest that students and teachers must take action and take some responsibility, if they want to change the current culture concerning academic integrity in higher education. This study presented ten strategies that the faculty can use in large lecture courses as well as small enrollments courses to encourage academic integrity. These were:

1. Promote the code of honour of your school
2. Respond to cheating in your class
3. Individualize if possible the assignments and papers to the class
4. Give clear expectations for assignments and other course work required of students
5. Encourage student responsibility
6. Get to know as many students as possible
7. When space permits, during exams, separate students
8. Have sufficient staff to help with exams
9. Have multiple versions of exams
10. Engage your students and be enthusiastic

They believe that it is possible to have an impact on the amount of cheating that occurs on college and university campuses, but this will certainly take some effort on the part of both students and faculty.

Williams et al. (2012) remark that to combat the growing concern of academic misconduct; several universities are turning to technology (e.g. turnitin.com, etc.) to observe student work using web-based software to match assignments and to help in plagiarism determination. Universities have also enhanced the amount of training provided to both teachers and students through academic integration, online tutorials or independent training modules and tutorials. For example, lots of universities have joined the International Center for Academic Integrity, which provides particular information about academic integrity research, projects, and a mailing list for members to interchange information and ideas. In addition, various universities are trying to incorporate modifications within the classroom to help solve problems about the increasing ratio of academic cheating.

Okanović et al., (2013) conducted a study to develop and validate a personality-based academic integrity test which could serve as a predictor of academic dishonesty. A new instrument – the Academic Integrity Test – was

developed during the study, based on methodological principles accepted in the field of work integrity. The concordance of results from the fields of work and academic integrity lead to the conclusion that these two constructs have the same or at least very similar correlatives. The AIT retains a significant correlation with personality measures (except with Neuroticism) even in the simulated applicant condition, leading to the conclusion that the test maintains construct validity in situations susceptible to self-presentation.

Yekta et al. M. (2013) revealed similarities and differences in attitudes between the academic staff members of Central Washington University (CWU) in the USA, and Shahid Beheshti University of Medical Sciences (SBMU) in Iran. There are definitely different interpretations and understanding of academic dishonesty between Iran and USA. Also, since Iranian staff members do not exactly know what academic dishonesty means with poorer standard of academic honesty, they actually do not recognize so-called academic dishonesty in Iranian classrooms. The last point was especially important since not knowing the concept of academic dishonesty does not connote cultural difference rather, this is a systematic problem. Therefore, their study actually served as a warning for other researchers who are focusing solely on cross-cultural differences in studies pertaining to academic dishonesty.

Rehman & Waheed (2014) identified ten main activities that are commonly taken by students to participate in this type of misconduct. The second goal of this research was to determine the moral insights of university students on academic dishonesty. A significant number of students were in favor of academic dishonesty as a normal part of life, but an ethically improper activity. These categories of moral insights have existed in literature; however, another category emerged through this study. Most Pakistani students are aware that academic dishonesty is not a seemly habit and should be evaded which clearly shows that Pakistani students are ready to do their best not to engage in such activities. However, time limits and relationship preferences lead students to accept an attitude of task completion, even by unfair means, such as academic misconduct. They also found that generally students in earlier stages of research (age 21-25 years) were more involved in academic misconduct due to lack of knowledge of the research areas; consequently they resorted to copying the contents of another author without giving the proper references and citations.

Aslam & Nazir (2014) find that the results of analysis of different correlations reveal that students who have high awareness and openness have been less frequently involved in cheating. Students who have high neuroticism and openness suggest a low penalty for academic dishonesty, while students have been found high on extraversion conscientiousness and agreeableness recommend a high penalty for this behavior. Students generally recommend low penalties for dishonest academic behaviors. This study noted that there was a significance relationship between students' personal traits and cheating behaviors. Further, no significance differences were found between students' attitude to academic dishonesty on the basis of low and high level of personal traits.

Hypothesis

1. There is a statistically significant difference in mean scores for academic integrity among male and female students studying in Pakistani Universities.
2. There is a statistically significant difference in mean scores for academic integrity among students studying at different levels in Pakistani Universities.
3. There is a statistically significant difference in mean scores for academic integrity among students studying in different subject groups in Pakistani Universities.
4. There is a statistically significant difference in mean scores for academic integrity among students studying in different provinces in Pakistani universities.
5. There is a statistically significant difference in mean scores for academic integrity among students in different age groups in Pakistani universities.
6. There is a statistically significant difference in mean scores for academic integrity among students studying in small, medium and large scale universities of Pakistan.
7. There is a statistically significant difference in mean scores for academic integrity among students of public and private sector universities.
8. There is a statistically significant difference in mean scores for academic integrity among students with different GPAs.

These hypotheses were tested at 0.05 level of significance.

Research Design

The main objective of this study was to find out the effect of demographical variables on students' level of Academic Integrity in Pakistani universities. To achieve this objective quantitative data was collected through questionnaire. As the study was descriptive in nature therefore a self-reporting questionnaire was used to collect data from students.

The questionnaire was adapted to understand the status of Academic Integrity among students of universities of Pakistan after modification to the "*Ferguson Academic Integrity Student Survey*" developed by Lauren Ferguson by using the five-point Likert scale from strongly agree to strongly disagree. In order to validate items, the panel of experts was requested to refine the items, in format and language. In the light of feedback received from the experts, the questionnaire was finalized. On the basis of the experts' opinion the questionnaire was translated into Urdu from the English language.

The study was pilot tested in order to know the reliability of the Instrument. The questionnaire was administered to 100 students of University of the Punjab, Lahore. The researcher personally visited and administered relevant questionnaires and the respondents were requested to give their suggestions freely for the

improvement of the questionnaires. These results of the pretest were analyzed using the Software Package for Social Sciences (SPSS) version 16.0. For determining the reliability of the instrument, Cronbach's Alpha was applied to calculate the internal consistency of items. The Academic Integrity Scale consisted of 15 statements and Cronbach's Alpha was 0.700. However, with the exclusion of one statement, the scale "Academic Integrity" consisted of 14 items and reliability of scale was 0.875 according to Cronbach's Alpha.

The researcher distributed 900 questionnaires and received back 818 using multilevel sampling strategy. The overall response rate was 91 percent.

Results and Analysis

Students were asked to provide demographic information as this information helps to understand results in better way. Table 1 shows that there were total of 818 respondents of the study. Results of the collected data also show that there were 426 (52.1%) undergraduate students, 342 (41.8%) were graduates and 50 (6.1%) were post graduate students. This indicates that the number of undergraduate students was the most and the least number of students belonged to the post graduate level. The Table 1 also indicates that 313 (38.3%) responding students were from the faculty of social sciences, 454 (55.5%) students were from the faculty of science and technology and 51 (6.2%) responding students were from the faculty of humanities and arts from the different sample universities of Pakistan.

Table 1

Demographic Variables		
Variables	Frequency	Percentage
Student Status		
Under Graduate	426	52.1
Graduate	342	41.8
Post Graduate	50	6.1
Students Faculty		
Social Sciences	313	38.3
Science & Technology	454	55.5
Arts & Humanities	51	6.2
GPA		
<2.50	74	9.0
2.50-2.99	208	25.4
3.00-3.49	372	45.5
3.50-4.00	164	20.0
Gender		
Male	506	61.9
Female	312	38.1
Age		
16-20	195	23.8
21-25	559	68.3
>26	64	7.8
Category		
Public Sector	436	53.3
Private Sector	382	46.7
Province		

Federal	194	23.7
Punjab	189	23.1
Sindh	185	22.6
KPK	200	24.4
Baluchistan	50	6.1
HEC Category		
Small	196	24.0
Medium	433	52.9
Large	189	23.1

Hypotheses 1: There is a statistically significant difference in mean scores for academic integrity among male and female students studying in Pakistani Universities.

Independent t-test was applied to test the mean difference in academic integrity among male and female students. Results in Table 2 show that there is no statistically significant difference ($p>.05$) in academic integrity between male and female students studying in universities of Pakistan. However, the level of academic integrity among female students ($M=3.78, SD=.76$) is higher than the level among male students ($M=3.73, SD=.69$). Thus Hypotheses 1 was rejected at 0.05 level of significance.

Table 2

	Male (n=506)		Female (n=312)		<i>t</i>	<i>P</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Academic Integrity	3.73	.76	3.78	.69	-.89	.38

Strongly Disagree=1- Strongly Agree= 5

Hypotheses 2: There is a statistically significant difference in mean scores for academic integrity among students studying at different levels in Pakistani Universities.

To explore the mean difference in academic integrity among students studying at different levels one way ANOVA was applied. The results in table 3 reveal that there is no statistically difference ($p>.05$) in academic integrity among students studying at different levels in Pakistani Universities. The results also show that the level of academic integrity among students studying at post graduate level is ($M=3.88, SD=.51$) higher than students studying at graduate level ($M=3.73, SD=.72$) and students studying at undergraduate level ($M=3.75, SD=.77$).

Table 3

Student-Teacher Relationship and Academic Integrity among students at different levels of studies in Pakistani universities

	Undergraduate (n=426)		Graduate (n=342)		Post Graduate (n=50)		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>
Academic Integrity	3.75	.77	3.73	.72	3.88	.51	.939	.391

Strongly Disagree=1-Strongly Agree= 5

Hypotheses. 2 was rejected at 0.05 level of significance.

Hypotheses 3: There is a statistically significant difference in mean scores for academic integrity among students studying in different subject groups in Pakistani Universities.

To find out the mean difference in academic integrity among students studying at different levels one way ANOVA was applied. The results in table 4 show that there is no statistically mean difference ($p > .05$) in academic integrity among students studying at different levels in Pakistani Universities.

Table 4

Academic Integrity among students of different faculties

	Social Sciences (n=313)		Science & Technology (n=454)		Humanities & Arts (n=51)		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Academic Integrity	3.74	.74	3.74	.74	3.85	.67	.533	.587

Strongly Disagree=1-Strongly Agree= 5

The results also show that the level of academic integrity among students studying in the faculty of Humanities & Arts ($M=3.85$, $SD=.67$) is higher than students studying in the faculty of Social Sciences ($M=3.74$, $SD=.74$) and students in faculty of the Science & Technology ($M=3.74$, $SD=.74$). Hypotheses 3 was rejected at 0.05 level of significance.

The findings indicate that the level of academic integrity among students studying in the faculty of humanities & arts is higher than the other two faculties. The reason could be the nature of subjects and methodology involved in it. This factor could be explored with the help of extensive research in this area.

Hypotheses 4: There is a statistically significant difference in mean scores for academic integrity among students studying in different provinces in Pakistani universities.

To find out the mean difference in academic integrity among students of different provinces, one way ANOVA was applied. The results in table 5 show that there is a statistically significant mean difference ($p < .001$) in academic integrity among students of different provinces in Pakistani universities. The results indicate that the mean score of academic integrity amongst students of all four Pakistani

provinces can be ranged in descending order as of KPK ($M=3.93, SD=.79$) than Baluchistan ($M=3.84, SD=.73$), Sindh ($M=3.83, SD=.60$), Federal ($M=3.63, SD=.69$) and Punjab ($M=3.58, SD=.79$). Hypotheses 4 was confirmed at 0.01 level of significance.

Table 5

Academic Integrity among students of different provinces

	Federal (n=194)		Punjab (n=189)		Sindh (n=185)		KPK (n=200)		Baluchistan (n=50)		ANOVA	
	M	SD	M	SD	M	SD	M	SD	M	SD	F	p
Academic Integrity	3.63	.69	3.58	.79	3.83	.60	3.93	.79	3.84	.73	7.823	<.001

Strongly Disagree=1-Strongly Agree= 5

It was observed from the results that the students from small provinces have reported a higher academic integrity level as compared to students from other provinces.

Hypotheses 5: There is a statistically significant difference in mean scores for academic integrity among students in different age groups in Pakistani universities.

To find out the mean difference in academic integrity among students studying in Pakistani universities in different age groups one way ANOVA was applied. The results in table 6 shows that there is a statistically significant mean difference ($p>.001$) in academic integrity among students in different age groups in Pakistani universities. The results also show that level of academic integrity among students of age group 16-20 is higher ($M=3.97, SD=.61$) than in the age group 21-25 ($M=3.67, SD=.72$) and the age group >26 ($M=3.72, SD=.82$). Hypotheses 5 was confirmed at 0.01 level of significance

Table 6

Academic Integrity among students with different age group

	16-20 (n=195)		21-25 (n=559)		>26 (n=64)		ANOVA	
	M	SD	M	SD	M	SD	F	p
Academic Integrity	3.97	.61	3.67	.72	3.72	.82	12.140	<.001

Strongly Disagree=1-Strongly Agree= 5

Hypotheses 6: There is a statistically significant difference in mean scores for academic integrity among students studying in small, medium and large scale universities of Pakistan.

One way ANOVA was applied to find out the difference in academic integrity among students studying in universities categorized by HEC in small, medium and large scale universities. The results in table 7 show that there is a statistically significant mean difference ($p<.001$) in academic integrity among students of universities of Pakistan categorized by HEC in small, medium and large universities. The results also show that the level of academic integrity among students of small universities ($M=3.92, SD=.80$) is higher than medium ($M=3.70,$

SD=.71) and large universities ($M=3.69, SD=.70$). Hypotheses 6 was confirmed at 0.01 level of significance.

Table 7

Academic Integrity among students studying in universities of HEC different categories

	Small Universities (n=196)		Medium Universities (n=433)		Large Universities (n=189)		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>
Academic Integrity	3.92	.80	3.70	.71	3.69	.70	7.457	<.001

Strongly Disagree=1- Strongly Agree= 5

The reason behind the findings that students from small scale universities have reported higher level of academic integrity could be that teachers might have more time for their students and individual attention and guidance could be provided easily. This phenomenon can be studied with the help of in-depth research.

Hypotheses 7: There is a statistically significant difference in mean scores for academic integrity among students of public and private sector universities.

To find out the difference in mean score of academic integrity among students of public and private sector universities of Pakistan, independent t-test was applied and results in table 8 show that there is a statistically significant difference of opinion among students of Public & Private Sector Universities in academic integrity ($p<.001$) among students of public and private sector universities. The results also illustrate that the level of academic integrity among students of private sector universities ($M=3.85, SD=.74$) is higher than students studying in public sector universities ($M=3.66, SD=.72$). Hypotheses 7 was confirmed at 0.01 level of significance

Table 8

Academic Integrity among Public and Private Sector Universities

	Universities					
	Public Sector (n=436)		Private Sector (n=382)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>P</i>
Academic Integrity	3.66	.72	3.85	.74	.31	.000

Strongly Disagree=1-Strongly Agree= 5

The reason why students of private sector universities have reported a better level of academic integrity as compared to students from public sector universities could be that in the private sector university teachers provide more time and individual attention to their students. Moreover, the students in private sector are taken as clients who are to be given the best services. This could have a positive impact on their academic integrity level. This impact could be studied in separate research.

Hypotheses 8: There is a statistically significant difference in mean scores for academic integrity among students with different GPAs.

One way ANOVA was applied to know the mean difference in academic integrity among students studying in Pakistani universities with different GPAs. The results in Table 9 show that there is a statistically significant mean difference ($p < .01$) in academic integrity among students studying in different Pakistani Universities with different GPAs. Hypotheses 8 was confirmed at 0.01 level of significance

Table 9

Academic Integrity among students with different GPAs

	<2.50 n=74		2.50-2.99 n=208		3.00-3.49 n=372		3.50-4.00 n=164		ANOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>S</i> <i>D</i>	<i>F</i>	<i>p</i>
Academic Integrity	3.47	.74	3.75	.74	3.79	.72	3.79	.74	4.106	.007

Strongly Disagree=1-Strongly Agree= 5

The results also show that the level of academic integrity among students studying in Pakistani universities with a GPA of 3.50-4.00 ($M=3.79, SD=.74$) and 3.00-3.49 ($M=3.79, SD=.72$) is higher than the students with a GPA of 2.50-2.99 ($M=3.75, SD=.74$) and a GPA <2.50 ($M=3.47, SD=.74$).

These are quite interesting findings that students with higher GPA have higher levels of academic integrity. The reason could be that students who have higher GPA have a higher level of seriousness regarding their studies.

Conclusion

The study employed the Academic integrity Scale in order to examine the effects of demographic variables on level of academic integrity. The results of the study reveal that gender, level of studies and subject groups have statistically no significant effect on level of academic integrity. Additionally, GPA was an antecedent of the academic integrity. The students with higher GPA reported higher levels of academic integrity. There was also a statistically significant difference of opinion among students of Public & Private Sector Universities in academic integrity. Students of private universities reported more inclined towards academic integrity. Finally, age was found to have statistically significant effect on level of academic integrity. It was also found that the level of academic integrity among students of age group 16-20 is higher than the age group 21-25 and the age group >26. The findings clearly indicate that level and academic integrity in the age group of 16-20 is higher than other age groups. There could be a variety of reasons amongst which is that with the increase in age, people get more engaged in other social activities and they may not spare their quality time for research activities. Furthermore, use of text matching software at university level is also a

debatable issue. Nevertheless, an extensive study would be helpful in understanding this area of research.

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