The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 11, Issue 2, April- June, 2023
DIP: 18.01.135.20231102, DOI: 10.25215/1102.135
https://www.ijip.in

Research Paper

Graduate Attributes Among Professional and Non-Professional University Students

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ABSTRACT

At Universities, students not only learn concepts and theories about their selected subjects but also it is during this time, they develop in different ways. A university must prepare a student for a successful life and should also teach him to benefit from all types of anticipated learning opportunities. The present study was conducted to study the graduate attributes of professional and non-professional students of the central university of Kashmir. A sample of 202 students which consisted of 104 professional and 98 non-professional students was selected through a stratified sampling technique. The sample also consisted of 84 male and 118 female students. Mean, SD and t-test were used to analyze the data. The findings revealed that there is a significant difference between the professional and non-professional students in their graduate attributes which indicates that there exists a gap in the teaching-learning environment in different departments of the Central University of Kashmir. Results also show that there is an insignificant difference between male and female students in their Graduate Attributes.

Keywords: *Graduate Attributes, Professional students, Non-professional students, and Learning Opportunities*

Graduate Attributes refer to the skills, knowledge, and abilities of graduates, beyond disciplinary content knowledge, that are applicable in a range of contexts in their lives. Graduate attributes are the qualities and skills that the university hopes its students will develop as a result of their university studies. These are the qualities that assist individuals' integration into society in general and the working world after graduation. The Mayer committee (1992) first of all recognized graduate skills, and the development of such skills as indicators of employability, however, this concept now embodies notions of personal development for not only professional environments but also for participation in the wider community through engaged citizenship. According to the Australian technology network report, graduate attributes are "the qualities, skills, and understandings, a university community agree its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has

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Received: April 10, 2023; Revision Received: May 22, 2023; Accepted: May 25, 2023

traditionally formed the core of most university courses. These are qualities that also prepare graduates as agents of social good in an unknown future." Educators in higher education should be acutely aware that they are teaching a generation for a world that is unknown and, indeed, will be shaped by those very learners (Normand &Anderson, 2017). The present advanced and conceptual environment requires graduates to think in naive and creative ways. Studies stress the importance of different types of thinking and polarize logical-deductive thinking from intuitive-creative thinking (Pink, 2008). In the last few years, throughout the world, higher education has highlighted the need for all graduates to be employment-ready, demonstrating not only discipline-related knowledge and skills but also generic skills required in the world of work. Academics hold different views regarding the concept of graduate attributes. These were divided into four categories as precursory conception, complement conception, translation conception, and enabling conception. Some academics view graduate attributes as basic precursory abilities that students bring to the university and which provide them a base for understanding discipline knowledge in the university. Some define graduate attributes as those abilities which can usefully complement the discipline-specific learning outcomes of university education. Other academics understand graduate attributes as the skills that are essential in the application of discipline knowledge and translation of university learning to an unfamiliar setting while some academics express a more complex understanding of graduate attributes as enabling abilities that lie at the heart of all learning and helps in the creation of new knowledge (Barrie, 2006). Graduate attributes should be an important factor in planning the curriculum of any university program and necessary changes should be done in the curriculum so that maximum attributes of university education can be achieved (Barrie, 2006).

Significance of the study

This study is aimed at knowing the attributes developed by different students at the terminal stage of their course. The investigator conducted this study to highlight the issues that have affected non-professional students over a long time and that they lack some essential attributes as compared to professional ones. The results can be useful for the curriculum development and policy formation of the concerned institution. This study has been carried out with the intent that nowadays a huge number of graduates are emerging but they are mushrooming as quantity and not with requisite quality. Most of the institutes are suffering from this menace and this study may be useful for the quality improvement of the institution by making certain modifications in curriculum, policy formation, teaching methods, and other curricular activities.

REVIEW OF LITERATURE

Malcolm (2008) found that the use of research as a project for students' learning promotes research-related qualities like critical thinking, understanding of sustainability concepts and their application, and understanding of the need for ethical and social, cultural, and environmental aspects. Star and Hammer (2008) found that skill-based pedagogy and student-centered pedagogy leads to the creation of reflective professionals and good citizens who can adjust themselves in the knowledge society. Anna Jonas (2009) found that generic skills are very much influenced by the disciplinary culture in which they are taught and certain attributes like critical thinking, problem- solving and communication skills are valued by teaching staff and implied in teaching. Moalosi, Oladiran, and Uziak (2012) confirmed that project-based learning was a productive teaching method in attaining graduate attributes like skills of creative thinking, accountability, and ethical standards. Malviya, Jain, Chowdhary, and Kotecha (2020) reveal that graduate attributes play a tremendous role in improving learning and associating this learning with the world of work

and in the absorption of graduates in global communities. Schreck and Reitsma (2020) found that the experiential teaching-learning approach is beneficial in the preparation of productive graduates and should form the base for teaching for recreation in higher education. Bitzer and Withering (2020) found that students who realize what graduate attributes are and how these can be acquired enhance those students' further growth and their success in employability. Wong, Chiu, Lake, and Nikolopoulou (2021) suggest that an 'ideal graduate' should possess self-awareness and lifelong learning, employability and professional development, global citizenship, and engagement & academic and research literacy. Vooren, Haelermans, Groot & Brink (2022) found that female students as compared to male students are less likely to enroll in STEM-related fields like science, technology, engineering, and mathematics however, female students do perform equally well as their counterparts in terms of graduation in such fields.

Objectives

- To study the Graduate Attributes among Professional and Non-professional University Students.
- To compare the Graduate Attributes of Professional and Non-professional University Students.
- To compare the Graduate Attributes of Male and Female University Students.

Hypotheses

Ho_1: There is no significant difference between Professional and Non-professional university students in their Graduate Attributes.

Ho_2: There is no significant difference between Male and Female university students in their Graduate Attributes.

Sample

The study was conducted on 202 Students of the Central University of Kashmir who were drawn from various professional and non-professional departments. Among these 104 students were selected from Professional courses and 98 from Non-Professional courses. Furthermore, 202 selected students were classified on the bases of gender where 84 are male and 118 are female by using the Stratified random sampling technique.

Data Collecting Tool

For the present investigation, the Graduate Attribute Assessment Scale developed by Bernie Quillianan from the University of Limerick, Ireland (2017) was used to collect the data. The tool consists of eight factors, viz., Knowledgeable, Proactive, Creative, Responsible, Collaborative, Technical skills, Communication, and Leadership.

Statistical Analysis

Descriptive statistics like Mean and SD and Inferential statistics like t-test were used to analyze and interpret the data.

Analysis of Data

The overall description of the data has been explained in the following manner:

Table (1) shows the significance of the difference between mean scores of Professional and Non-professional university students on various dimensions of Graduate Attributes.

Attributes	Course	N	Mean	SD	t value	Results
Knowledgeable	Professional	104	22.58	5.039	4.27	Significant at 0.01 level
	Non-professional	98	19.24	6.020		
Proactive	Professional	104	15.60	4.008	4.12	Significant at 0.01 level
	Non-professional	98	13.05	4.831		
Creative	Professional	104	16.644	3.27	6.54	Significant at 0.01 level
	Non-professional	98	12.974	4.517		
Responsible	Professional	104	15.5	3.70	3.90	Significant at 0.01 level
	Non-professional	98	13.43	3.815		
Collaborative	Professional	104	14.23	4.25	1.70	Insignificant
	Non-professional	98	13.16	4.66		
Technical Skills	Professional	104	14.68	4.167	4.35	Significant at 0.01 level
	Non-professional	98	11.99	4.627		
Communication	Professional	104	52.49	14.082	4.20	Significant at 0.01 level
	Non-professional	98	43.79	15.267		
Leadership	Professional	104	45.826	10.20	4.90	Significant at 0.01 level
	Non-professional	98	38.08	12.127		

A perusal of Table (1) shows that there is a significant difference between the mean scores of professional and non-professional university students on the attributes—Knowledgeable, Proactive, Creative, Responsible, Technical skills, Communication, and Leadership. The mean score favors the professional students which show that professional students have developed the above attributes more than non-professional students.

Table (1) also reveals that there is an insignificant difference between professional and non-professional university students on the attribute—'Collaborative'. Although the mean score favors the professional students but fails to reach any level of significance which indicates that there is no significant difference between professional and non-professional university students on attribute—Collaboration.

Table (2) shows the significance of the difference between the mean scores of Professional and Non-professional university students in their Graduate Attributes.

Course	N	Mean	SD	t value	Results
Professional	104	197.56	41.523	5.008	Significant at 0.01 level
Non-professional	98	165.77	48.26		

A perusal of Table (2) shows the mean comparison of professional and non-professional university students. The table depicts that there is a significant mean difference between the two groups of students at a 0.01 level of significance. The mean score favors professional

students which reveals that they show good graduate attributes as compared to non-professional university students. The above results make it clear that there is a significant difference between professional and non-professional university students in their Graduate Attributes. Therefore,

Ho_1 "There is no significant difference between the Professional and Non-professional University students in their graduate attributes" is rejected. The result is supported by the study conducted by Star and Hammer (2008) which suggests that skill-based and student-centered pedagogy leads to the development of reflective professionals and good citizens and we witness that this type of teaching style is mostly adopted in professional departments as compared to non-professional departments. The findings are also supported by the study conducted by Moalosi, Oladiran, and Uzaik (2012) which also confirmed that project-based learning helps in attaining graduate attributes.

Table (3) shows the significance of the difference between means of Male and Female university students in their Graduate Attributes.

Gender	N	Mean	SD	t value	Results
Male	84	186.369	53.93	1.070	Insignificant
Female	118	179.1017	42.43		

A perusal of Table (3) shows that there is an insignificant difference between the mean scores of male and female university students in their Graduate Attributes. The mean score favors the male students but fails to reach any level of significance which means there is no significant difference between the two groups. The table depicts that there is an insignificant mean difference between the two groups of students at both 0.05 level and 0.01 level of significance. The above results make it clear that male and female university students have no difference in their Graduate Attributes. Therefore, **Ho_2 "There is no significant difference between the Male and Female university students in their Graduate Attributes" is accepted.** Results are supported by the study conducted by Vooren, Haelermans, Groot & Brink (2022) which confirmed that female students do perform equally well as male students in terms of graduation in the fields of science, technology, engineering, and mathematics (STEM).

Major Findings:

- It was found that students from professional departments of the Central University of Kashmir have more developed graduate attributes than the students from non-professional departments.
- It was also found that professional students of the Central University of Kashmir have a better understanding of their subject than non-professional students.
- The result shows that professional students are more proactive, creative, and responsible than students from the non-professional background.
- It was found that students from both professional as well as non-professional departments are equally collaborative.
- The results show that professional students have more Technical skills than non-professional ones.
- It was depicted that professional students have more communication and leadership skills than non-professional students.
- Results also showed that male and female students of the Central University of Kashmir have equally developed the Graduate Attributes.

Inferential Suggestions

The difference in graduate attributes between professional and non-professional departments is because the students from professional departments participate more in debates, discussions, and other events. Moreover, in professional departments, students are more engaged in giving presentations, role-playing, and quiz competitions in their classrooms. All these activities are responsible for better development of graduate attributes among students from professional departments than students from non-professional departments. So, the changes in the teaching-learning environment in non-professional departments may help to eradicate this difference.

This study can be useful for curriculum development, improvement in teaching-learning methods, and policy formation.

The study can be used in the development of the institution effectively. This study deals with the terminal behavior of the students, as it is pertinent to mention that the standard and quality of any institution largely depends on the output in the form of quality of students, therefore, the results of this study can help in the quality improvement of the institutions

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Acknowledgement
The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest
The author(s) declared no conflict of interest.

How to cite this article: Tabinda, Puju, J.A.& Dar, S.A. (2023). Graduate Attributes Among Professional and Non-Professional University Students. *International Journal of Indian Psychology, 11(2),* 1257-1263. DIP:18.01.135.20231102, DOI:10.25215/1102.135