



## Assessment of Higher Education Learning Outcomes of University Graduates

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**Abstract:** *Learning outcomes is always an extensive research area in higher education. The research is to assess the learning outcomes of university graduates. To accomplish the aim, descriptive research and survey design was used for data collection. It was the case study of the University of Sargodha. A self-developed questionnaire was validated by expert opinion, and reliability was established at .92. For analyzing the data, descriptive and inferential statistics were applied to test the mean difference of participative programs. It was found that there is no significant difference in the learning of students on the basis of the program in which they are enrolled. The study recommends an extensive study of learning outcomes in higher education.*

**Key Words:** Assessment, Higher Education, Learning Outcomes, Graduates, Programs

### Introduction

Instructional objectives are difficult to delimit in terms of learning outcomes when discussing the development of a curriculum (Martin, M.L. 2016; Undang, R., Agus, S.& Abdurrahman, A. 2019). Higher education institutions are interested in presenting quantifiable and viable learning outcomes. Yet a huge gap is there between the objectives and outcomes. Comparative assessment techniques are needed to fulfil the purpose (Ines J, et-al 2020).

Besides all, learning has a significant role in justifying outcomes and objectives. Yet it needs more elaboration as for as meaning and nature are concerned. Measurement of learning is hence are critical than earlier (Nusche, 2008; Martin, M.L. 2016). Jones (2002b) elaborates that learning has diverse dimensions, due to which a single assessment method cannot fulfil the desire when talking about the assessment of the curriculum, its objectives and outcomes. The comprehensive assessment includes formative as well as a summative assessment, direct and indirect; the course focused and longitudinal, authentic and course-embedded (Ines, J, et-al 2020).

Many standardized tests are available for purchase and permit the comparison of scores among individuals and institutions (Undang, R., Agus, S.& Abdurrahman, A. 2019). One or more of these instruments is typically selected when an assessment is conducted for external purposes. However, if measures are selected for accountability purposes, only, it may not be desirable for fulfillment of the purpose. (Erwin, 2000a).

Mission statements, learning objectives, and course outlines are generally different among all the institutions even within the same subject area (Libba, M. Tanya, J., et-al 2020). This diversity causes a difference in teaching materials and methodologies. Specific programs may convey their best in teaching and learning domains while others may good in teaching generic competencies. Solitary, a single assessment system may insufficient to assess all the domains of outcomes in higher education. Yet the

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only outcomes available in mission or related to higher education outcomes, in general, may be assessed properly (Nusche, 2008; Ngemunang, A. N. L., 2020).

Outcome-based assessment approaches were introduced in USA, Australia, New Zealand and the United Kingdoms, but now in all OECD countries (Adam, 2004; (Libba, M. Tanya, J., et-al 2020). Palomba and Banta (1999) suggest that in order to select among the many possible assessment methods, faculty must establish their selection criteria and should become familiar with diverse assessment methods. The most important selection criterion, according to Palomba and Banta, is “whether the method will provide useful information – information that indicates whether students are learning and developing in ways the faculty have agreed are important” (p. 11).

The decisions as to who will be assessed, when, and how often are based on the goals of the assessment program ((Libba, M. Tanya, J., et-al 2020). Incoming students can be assessed to obtain a baseline estimate of skills and knowledge and then periodically throughout their college career to determine levels of growth in these skills and knowledge. This type of longitudinal design also provides feedback on which to base course refinements or student remediation before the student graduates (Akio, Y., Leon, Y., et-al 2014; Jones, 2002a). Jones (2002b) explains that an advantage of using commercially developed instruments is that there is typically evidence about reliability and validity.

Assessing undergraduates during their program and then as alumni in the workforce can also provide longitudinal data regarding the relevancy of their education (Jones, 2002a). Course-embedded assessments provide a snapshot of learning often gained within one course over the period of one semester (Jones, 2002b). Data from these assessments can be used to adjust learning outcomes and to make curricular adjustments to improve future student learning (Linley, M. and Marian, M., 2017; Ngemunang, A. N. L., 2020).

Different studies indicated that learning outcomes are accounts of what a learner is estimated to know, apprehend and/or be able to demonstrate after completion of the course (ECTS Users’ Guide, 2005; Gosling and Moon, 2001). Learning outcomes are indicated as the expected, predicted, estimated students’ knowledge, skills or attitudes modification in terms of described purposes (Jenkins & Unwin, 2001; American Association of Law Libraries, n.d; Bingham, 1999).

Successful development and sound functioning of a democratic society need strong, and full success development of the higher education system as higher education is a curtail step in students’ life. Higher education commission of Pakistan is having regroups changes in research and development, promotion of higher education to ensure the quality of teaching and learning. In this scenario, this study will be carried out for the assessment of higher education learning outcomes of graduates of the Department of Education, University of Sargodha, and Sargodha.

## Method

The study aimed to investigate the learning outcomes of higher education students (HES). For the purpose of the case study of the University of Sargodha is carried out by the researchers. All the students who are studying in the last semester at the Department of Education, University of Sargodha, Sargodha constituted the population of the study. Purposive sampling is used to select the sample for the study. A total of 166 students enrolled in various programs of the department of education participated in the study. The response rate is given in the table below:

**Table 1.** Response Rate of the Students

Program	No. of Students Enrolled	No. of Students Responded	Percentage of Respondents
BEd Regular	44	27	61.3%
BEd ELT	46	34	74%
Med Regular	55	24	44 %
M.A Education Regular	42	36	86 %
M.A Education self	34	26	77 %

M.Phil	24	19	80 %
Total	245	166	68 %

## Research Tool

The study designed to measure the learning outcomes of the HES of UoS, Sargodha. To fulfil the purpose, an instrument was required to measure the learning outcomes. The questionnaire was developed, keeping in view the course outline devised by the DoE, UoS, Sargodha. The course outline is attached in Appendix II. All the learning objectives mentioned at the beginning of the core courses were taken. The repeated objectives were written once to avoid repetition. All the statements were set against a seven-point rating scale from 1 to 7 ranging from very poor to excellent. Furthermore, the objectives representing the similar concepts were merged into a single statement to make the instrument more precise and comprehensive, which made the instrument more convenient for the respondents.

## Pilot Study

For the sake of the validation of the instrument, the instrument was given to the experts when it got constructed. Initially, it was administered to the M.Phil scholars and later on, it was shown to the experts at the DoE, UoS, and Sargodha. In the light of suggestions proposed by the experts following changes were made. Like Question No 10, 24, and 37 were merged into a single item reflecting the single idea. The questionnaire was administered upon 32 students of DoE for pilot testing. The reliability coefficient of the scale was found .92.

**Table 2.**

No. of test Items	Cronbach Alpha
35	0.92

## Data Collection

Data were collected from the students of the Department of Education. All the students who are enrolled in the last semester of the Department of Education, University of Sargodha Sargodha constituted the population of the study.

## Administration of the Instrument

The students of BEd enrolled in the 2<sup>nd</sup> semester of BEd regular and self-support program. The students of MEd enrolled in the 2<sup>nd</sup> semester of MEd regular and weekend program. The students of M.Phil program enrolled in the 4<sup>th</sup> semester of M.Phil regular program. The constructed questionnaire will be provided to the above-mentioned students, and the students will be requested to mark their responses according to the best of their understanding.

## Scoring Criteria

The statements in the instrument were arranged on a 7-point scale.

- 1 for very poor
- 2 for poor
- 3 for satisfactory
- 4 for fair
- 5 for good
- 6 for very good
- 7 for excellent

After scoring each item according to the above-mentioned criteria, the gathered scored divided into two categories: good and weak. Initial four points from 1 to 4 were added together to get the total score under the category of weak. Former 3 points from 5 to 7 were added to get the total score under the category of good.

## Data Analysis

Data were collected and analyzed using SPSS. SPSS is a well-thought package to cumulate results in a batter way (Waller,1979). Different statistical techniques were used for analyzing the data like percentages, t-test, and correlation coefficient. Furthermore, t-test was applied to test the varying hypothesis regarding the study.

## Results

The study aimed to compare the learning outcomes of all the students whether enrolled in any program of the Department of Education in terms of separately and also separately Data were analysed through descriptive as well as inferential statistics. The questionnaire was used to collect the data. After collection, descriptive and inferential statistics were used for tabulation and interpretation.

**Table 3.** Learning outcomes of postgraduate students of M.A Education regular and self-support program

Variables	Program	N	Mean	t value	df	Level of Sig.
Learning outcomes of MA Education Regular and Self Support	M.A Regular	37	157.31	-2.59	61	.012
	MA Self Support	26	173.43			

The table 1 indicated that since the probability of error was less than .05, so we must reject the null hypothesis of no difference in the learning outcomes of the graduates who were enrolled in M.A Education Regular and MA Education self-support program. The mean values mentioned in the tables also support the notion of difference in the learning outcomes of MA Education Regular and self-support programs.

**Table 4.** Learning Outcomes of Rural and Urban Students

Variables	Residence	N	Mean	t value	df	Level of Sig.
Learning outcomes of Urban and Rural Students	Urban	81	170.14	.006	161	.995
	Rural	82	170.11			

The statistics in table 2 indicated that the null hypothesis of no difference between the learning outcomes of urban and rural students was rejected. So, the difference between the learning outcomes of urban and rural graduate students was significant.

**Table 5.** Learning Outcomes of BEd Regular and BEd ELT Students

Variables	Residence	N	Mean	t value	df	Level of Sig.
Learning outcomes of BEd Regular and BEd ELT	BEd Regular	27	170.19	-.74	58	.459
	BEd ELT	33	175.24			

It can be easily interpreted from table 3 that the null hypothesis of no difference in the learning outcomes of BE.d regular and BE.d ELT students was rejected. The mean of BEd ELT students, i.e., 175.24, was higher than the mean of regular BEd students i.e., 170.19.

**Table 6.** Learning outcomes of MEd and MA Education Regular Students

Variables	Program	N	Mean	t value	df	Level of Sig.
Learning outcomes of MA Education Regular and MEd	MA Education Regular	37	173.43	2.57	58	.013
	Med	23	157.22			

Table 4 mentioned that we failed to reject the formulated hypothesis that there is no significant difference in the learning outcomes of MA Education Regular and MEd students. The mean value of MA Education regular, i.e., 173.43 was higher than the mean of MEd students, i.e., 157.22.

**Table 7.** Learning outcomes of MEd and MA Education Self Support Students

Variables	Program	N	Mean	t value	df	Level of Sig.
Learning outcomes of MA Education Self Support and MEd	MA Education Self-Support Med	26 23	157.31 157.22	.013	47	.990

The statistical data presented in table 5 revealed that we failed to reject the null hypothesis that there is no difference in the learning outcomes of MA Education self-support and M.Ed program students. The mean of MA education self-support program, i.e. 157.31, was higher than the mean of M.Ed program, i.e. 157.22. Although the mean difference between the two groups was small, that was significant.

**Table 8.** Learning outcomes of all the Students Enrolled in all Programs

Program	N	Mean	Std. Deviation
BEd R	27	170.19	27.00
BEd ELT	33	175.29	25.44
MA SS	26	157.31	25.13
MA(R)	37	173.43	23.61
MEd	23	157.22	23.83
M.Phil	17	189.94	20.41
Total	163	170.12	26.15

The table 6 showed the descriptive statistics like the number of students responded on the self-developed questionnaire in various study programs in DoE, UoS. In the department 27 students responded from BEd regular program, 33 responded from BEd ELT, 26 responded from M. A Education self-support program, 37 responded from M. A Education regular program, 23 responded from MEd program, and 17 responded from M.Phil program.

**Table 9.** Difference Between the Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16047.92	5	3209		
Within Groups	94713.61	157	603.23	5.32	.000
Total	110761.55	162			

The table showed that our F value is 5.32, and the significance level was .000. Consequently, it showed that the difference was significant between our groups. For that reason, it could be inferred from the above statistical data that there was a significant difference between BEd R, BEd ELT, M.A Education Regular, M.A Education Self Support, MEd, and the M.Phil.

### Collected Responses on all the Learning Outcomes

**Table 10.** Consolidated Table of learning outcomes I am able to:

Sr.	Statement	1 Very Poor	2 poor	3 Satisfactory	4 Fair	5 Good	6 Very Good	7 Excellent
1	explain the concept of Education	1	---	5	10	24	41	19

2	explain various foundations (philosophy, psychology etc.) of education	2	---	14	22	35	19	8
3	analyze the education system of Pakistan	1	4	10	22	34	21	8
4	analyze Pakistan's current education policy	3	4	15	21	37	15	5
5	identify the issues and challenges in <i>education</i>	---	---	10	17	34	23	16
6	evaluate the process of curriculum development in Pakistan	1	7	14	24	28	20	6
7	comprehend written texts	1	3	7	22	28	29	10
8	make oral presentations	1	1	3	17	30	32	16
9	comprehend the implications of the use of technology in <i>education</i>	---	2	12	22	29	24	11
10	plan for instructional delivery to students in and out of the classroom	---	4	8	26	26	24	12
11	employ relevant techniques and technologies in education	1	7	9	26	24	26	7
12	express pedagogical competence (knowledge + skill + behavior)	1	1	12	19	30	23	14
13	apply various ways of measuring student's progress	---	4	9	24	25	30	8
14	understand the importance of action research in education	---	4	14	23	31	18	10
15	construct test items keeping in view the characteristics of a good test	---	3	10	12	34	27	14
16	Distinguish the term aims, goals and objectives	---	1	7	13	23	29	27
17	construct a valid classroom test	---	2	7	21	33	30	7
18	interpret and report student's scores using statistical techniques	2	4	16	21	34	17	6
19	understand the usefulness of educational psychology	1	3	11	25	26	24	10
20	appreciate guidance and counseling in education	1	2	14	17	25	28	13
21	accommodate individual differences in teaching and learning	1	1	9	18	34	31	6

22	enhance students' creative potentials	---	1	10	25	30	28	6
23	conduct research in the field of education	2	7	14	24	29	19	5
24	use Statistics in research	7	13	17	20	23	15	5
25	construct a valid and reliable research instruments	4	11	15	21	24	19	6
26	write research reports and articles	3	13	14	21	27	18	4
27	understand basic concepts of 'Curriculum and Instruction'	1	2	10	21	30	26	10
28	understand the process of curriculum change in Pakistan	---	5	15	24	30	20	6
29	evaluate the quality of our local textbooks	1	---	14	17	30	26	12
30	describe the link between school and community for effective education	---	2	11	20	32	25	10
31	evaluate the implications of learning theories	1	6	9	15	29	24	16
32	use these skills for meaningful communication	2	2	15	15	32	24	10
33	listen with maximum comprehension	1	---	5	10	24	41	19
34	write and speak in English	2	---	14	22	35	19	8
35	exhibit scientific thinking and attitude to solve educational problems	1	4	10	22	34	21	8

### Ability to Explain the Concept of Education

According to professor Peters (1967) philosophy of education is mainly concerned with the question, "What do you mean?" and "How do you know?" the answer to these questions follows the philosophy of education. The concept of education is an attempt to meet this concern. The students' responses on first learning outcome showed that 16% of the total students reported that they didn't have even the foggiest notion on this learning outcome while the remaining 84% of the subjects reported in affirmative when it comes to explaining the concept of education.

### Ability to Explain Various Dimensions (Philosophy, Psychology etc.) of Education

According to the statistics gathered from the students of the Department of Education, 62% of the graduates were good in explaining the various dimensions (Philosophy, psychology, etc.) of education. 38% of the graduates didn't even have a clue about explaining the various dimensions.

### Ability to Analyze the Education System of Pakistan

Right after independence, affords have made to align and improve the system of education according to the latest and international standards. First educational conference (1947), Presided by Quaid e Azam was the first step in this race. At that time, he laid the stress to make education outcome-based and need for proper assessment system. He emphasized that education should also provide scientific and technical

knowledge to build up our economic life. (---) When asked about the ability to analyze the education system of Pakistan 63% of the graduates ranked themselves “competent” while the others 37% reported themselves “incompetent” in the analysis of education system of Pakistan. Majority of the graduates got the ability to analyze the education system.

### **Ability to Evaluate Pakistan’s Current Education Policy**

National education policy 2009 laid stress upon the quality of higher education and to promote integrity and individuality among the learners. Students’ responses were also gathered on this learning outcome and found 57% reported in affirmative and 43% reported in negative in evaluating Pakistan’s current education policy.

### **Ability to Identify the Issues and Challenges in Education**

In curriculum practices assessment is an essential component. Curriculum operations in order to make decisions about students learning are an essential part of any assessment system (Van Den Akkar, 2003). Statistical data gathered on this item reflected 73% of students good, while the other 27% of the respondent’s week in identifying the issues and challenges in education.

### **Ability to Evaluate the Process of Curriculum Development in Pakistan**

According to Memon, M. (1999), the term curriculum is defined in various ways as people perceive, conceive and interpret it. The curriculum should be considered as a dynamic process which is evolving all the time. To make the lived curriculum, it is the job of the teachers and supervisory personnel to evolve curriculum in response to the specific context. In this regard, an effort has been made to develop the skills for the evaluation of the curriculum development process. On this question, students highlighted that in the evaluation process of curriculum development, 54% of the graduates were good, and 46% were weak.

### **Ability to Comprehend Written Texts**

Comprehending written texts is very important for students. Without acquiring this skill, it’s not possible to get certain courses passed out. Comprehension of the written texts was another statement of which 67% of the students reported that it was like a piece of cake for them and 33% of the students found it a hard nut to crack.

### **Ability to Make Oral Presentations**

Enabling enrolled students to deliver an oral presentation was one of the core learning outcomes. It’s not always an easy task for the learners to present in front of the audience. 78% of the total reported that they feel home in making oral presentations and rest of the students (22%) marked themselves as poor when it comes to deal with oral presentations.

### **Ability to Comprehend Implications of the Use of Technology in Education**

According to Shami (1999), teaching aids make teaching more realistic, and the concept of effective aids is not new in education. Effective use of technology in education depends upon the intellectual maturity and skills of the teacher who is familiar with the advantages and limitation of aids. The technologies in education should be used as an aid to teaching but should not replace the teacher but revolutionize the methods of teaching. According to the statistical results, 64% of the taught were willing to comprehend the use of technology, while 36% of the graduates found themselves shaky.

### **Ability to Plan for Instructional Delivery to Students in and out of Class Room**

Gathered data on this item revealed that 62% of the total was good, and the other 38% were weak on this learning outcome.



### **Ability to Employ Relevant Techniques and Technologies in Education**

According to the data gathered from the graduates of Department of Education reflected that 57% of the taught were quite eager to employing relevant techniques and technologies in education while the other 43% were not sure about the subject in question.

### **Ability to Express Pedagogical Competence (knowledge + Skill + Behavior)**

Every region and state have its typical cultural identity, and there is a need to utilize the same as a basis for developing meaningful, relevant pedagogies. Since there is no one universal way in which the children learn, there is a strong need for looking into the cultural context in which a child is placed. Pedagogy, therefore, should be culture-specific. Cultural practices such as story-telling, dramatics, puppetry, folk-play, community living, etc. should become a strong basis of pedagogy instead of using one uniform, mechanistic way of student learning. Cultural specificity should get embedded in the pedagogical practices which should be evolved for tribal, rural, urban communities and other ethnic groups. Similarly, on the question of pedagogy, it was found that 67% of the subjects were good, and 33% of the graduates presented themselves as weak in expressing pedagogical competence.

### **Ability to Apply Various ways of Measuring Student's Progress**

The responses of the graduates on this learning outcome declared that 63% of the subjects are good, while the other 37% of the total was weak in applying various ways of measuring students' progress.

### **Ability to Understand the Importance of Action Research in Education**

Specifically, action research in education can be defined as the process of studying a school situation to understand and improve the quality of the educative process (Hensen, 1996; Johnson, 2012; McTaggart, 1997).

According to the data gathered from the graduates of Department of Education reflected that 59% of the taught were finding it an easy candy to swallow while understanding the importance of action research in education while the other 41% reported that they were quite blind to the concept.

### **Ability to Construct test Items Keeping in view the Characteristics of a Good Test**

According to the statistical results processed by the SPSS, 75% of the subjects were good, and 25% of the graduates ranked themselves as weak.

### **Ability to Distinguish the Terms Aims, Goals and Objectives**

According to the assembled data from the students of Department of Education 79% of the graduates were good in distinguishing the terms aims, goals, and objectives while the other 21% of the students considered themselves as weak.

### **Ability to Construct a Valid Class Room Test**

According to the collected statistical data, 70% of the subjects were good, and 30% of the graduates presented themselves as weak in constructing a valid classroom test.

### **Ability to Interpret and Report Students' Scores Using Statistical Techniques**

Applying statistical techniques for reporting students' scores is very significant in the field of education. In this regard, 57% of graduates claimed that they were good while 43% of the respondents reflected that they were weak in interpreting and reporting students' scores with the help of using different statistical techniques.

### **Ability to Understand the Usefulness of Educational Psychology**

According to the graduate's opinion, 60% of the respondents were good; on the other hand, 40% of the learners marked themselves as weak in understanding the usefulness of educational psychology.

### **Ability to Appreciate Guidance and Counseling in Education**

On this learning outcome, 66% of the students positioned themselves as good, and the remaining 34% of the graduates reported themselves as weak in appreciating the guidance and counselling in education.

### **Ability to Accommodate Individual Differences in Teaching and Learning**

According to the collected statistical data, 71% of the subjects were good, and 29% of the graduates presented themselves as weak in accommodating individual differences in teaching and learning.

### **Ability to Enhance Student's Creative Potentials**

On this learning outcome, 64% of the graduates claim themselves as good, and on the other hand, 36% of the remaining declared themselves as weak in enhancing students' creative potential.

### **Ability to Conduct Research in the Field of Education**

The data collected from the graduates revealed that 53% of the graduates were good while the remaining 47% of the remaining graded themselves as weak in conducting research in the field of education.

### **Ability to use Statistics in Research**

Statistical acquaintance is vital in modern days and recognized as succession tool (King, 1982). The term statistics is used in 3050 BC for the creation of pyramids (Parkash, 1978). The graduates of the department of education reported that 43% of them were good, and 57% were weak in using statistical techniques in educational research.

### **Ability to Construct a Valid and Reliable Research Instruments**

Constructing a valid and reliable research instrument is the foremost step in every research as all the study primarily depends on the research instrument. In the case of the poorly developed research instrument, appropriate results cannot be attained. In this regard, 49% of the graduates claimed that they were good, and the remaining 51% of the students stated themselves as weak in construction a valid and reliable research instrument.

### **Ability to write Research Reports and Articles**

Student's feedback gathered on this self-assessed learning outcome reflected that 49% showed that they have the first-rate ability, while the remaining 51% expressed their blindness regarding their ability to write research reports and articles.

### **Ability to Understand Basic Concepts of 'Curriculum and Instruction'**

Student's views gathered on twenty-seventh self-assessed learning outcome showed that 66% of the learners were good, and the other 34% of the subjects were of pathetic tendencies.

### **Ability to Understand the Process of Curriculum Change in Pakistan**

Student's reported data portraits that 56% of the total was good and the other 44% were found in troubled waters while understanding the process of curriculum change in Pakistan.

### **Ability to Evaluate the Quality of our Local Text Books**

Results reported by the graduates on this item demonstrated that 68% of the students were good while the other 32% had misty notion while evaluating the quality of our local textbooks.

### **Ability to Describe Link Between School and Community for Effective Education**

Students responses gathered on thirtieth self-assessed learning outcome highlighted that 66% were good at the same time as 34% found it hard to describe the link between school and community for effective education.

### **Ability to Evaluate the Implications of Learning Theories**

According to the data collected from the graduates described the 56% of the total were finding themselves at ease when they are asked to evaluate the learning theories, whereas 44% made me seriously doubtful about their ability to evaluate the implications of learning theories.

### **Ability to use these Skills for Meaningful Communication**

The students' responses illustrated that 68% of the students were good though the other 32% were weak in using the particular skills for meaningful communication.

### **Ability to Listen with Maximum Comprehension**

Statistical data revealed the student's responses gathered on this learning outcome that 67% were good in listening, and the other 33% were weak in listening with maximum comprehension.

### **Ability to Write and Speak English**

The student's responses revealed that 69% of the graduates claimed themselves as good, while the remaining 31% marked themselves as pathetic when it comes to deal with creative writing and spoken English.

### **Ability to Exhibit Scientific Thinking and Attitude to Solve Educational Problems**

The data provided by the graduates of the department of education reflected that 66% of them were able to exhibit the scientific thinking and attitude to solve educational problems though the other 34% ranked themselves as weak in this regard.

## **Conclusions and Discussion**

The data reflected that the difference existing between the groups was low, but that was significant. Two other groups, i.e., BEd ELT and BEd regular, were also explored on the basis of learning outcomes and found that the students belonging to the BEd have a superior stage of learning. The students who are studying in MA Education Regular and self-support program have the same learning level. No difference was found in the learning of students on the basis of the program in which they are enrolled, whether it is MA Education Regular or MA Education self-support. Similarly, on comparing two other groups, i.e. MA Education Self-support and MEd, the data revealed that the students of MA Education self-support has better achievement on all the learning outcomes. There was a significant difference between all groups.

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