

# Analysis of Competencies of Female Teachers Regarding Assessment Techniques in Teacher Education

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## Abstract

Assessment techniques such as paper-pencil tests, quizzes, assignments, presentations, projects and fieldwork guide the teaching-learning process. The major objectives of the study were to investigate assessment techniques practiced in pre-service teacher education and to explore uses of assessment techniques by teacher educators of universities and colleges of education in Punjab. The mixed methods research design was used to get data from teacher educators and prospective teachers of M.A Education program through self-designed five-point Likert scales and interview questions. Analysis of the data through mean, percentage, t-test and coding revealed that the universities were implementing diverse assessment techniques as compared to colleges of education including oral quiz, multiple-choice questions, short answer questions, extended response questions, project, portfolio, and fieldwork. However, the teacher educators of these institutes provided oral and written feedback on the student teachers' achievement through graded assessment techniques. It is recommended to switch over to advanced assessment techniques such as self-assessment and peer assessment in order to add more transparency in assessment and to involve students in the process of assessment.

**Keywords:** Assessment techniques, pre-service, teacher education, mix methods study, Pakistan

## Introduction

Assessment involves the explanation of quantitative data. It refers to the data collected on performance of students (Print, 1993: as cited in Khan, 2010). In the words of Linn, Miller & Gronlund (2005) "assessment includes variety of the techniques used to acquire data about the performance of students". It is a continuous process in which instructor collects data about student's learning through different sources which can be formal like tests or informal like teacher observation (Miler, Linn & Gronlund, 2009: as cited in Sparapani, 2013). In

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education, assessment plays a very fundamental role. It supports teachers for providing information about students' learning and advising improvements when their performance is below than satisfactory (Pellegrino, Chudowsky & Glaser, 2001). Hence, assessment aids instructors to recognize how to adjust their teaching to increase performance of students in a subject. Assessment is an influential device which affects students and their response to subjects. Assessment impacts students' views regarding higher education level. The students' learning is directly related with what is to be evaluated. It also influences students' motivation level which is compulsory for their learning. The techniques of assessment play a very important role in higher level of education especially for students, teachers and universities itself. Therefore, it is vital to investigate which techniques of assessment are being practiced in higher education institutions. In this context the most intensely studying factor, is the 'kind of university' which refers to public versus private higher education institutions, general versus technical entities or elitist versus mass enrollment institutions (Ordun~a-Malea, 2011: as cited in Casani, De Filippo, Gracia-Zorita & Sanz-Casado, 2013). In this line of thinking, this study aimed to investigate assessment techniques used in teacher education institutes and uses of techniques of assessment for prospective teachers.

Assessment is recognized as the most critical factor like teachers' preparation, mastery of content, learner centered interaction and course planning for quality of instruction. Hence, excellence in instruction can be enhanced through appropriate assessment techniques. In order to ensure quality of assessment, the instructor should have basic information of proposed assessment users like teacher, students and university. These information needs aid to select the appropriate assessment techniques. According to Boud & Falchikov (2005) students at higher education level possess different learning approaches; hence, relying on one method of assessment may lead some students at disadvantage stage. Therefore, it is best to apply numerous alternate assessment procedures in order to reduce the shortcomings of old-fashioned assessment practices. The assessment techniques influence on students' practices of learning in an intricate way (Maclellan, 2001). The most significant goal of assessment is to enhance learning of students. The worth of pupils' learning is estimated by the value of assessment procedures.

Assessment is an important and necessary part of the teaching and learning process. According to Khan (2019), the quality of assessment procedures in the classroom determines the quality of learning. Assessment is used to make educational judgments about students, offer students feedback on their progress (strengths and weaknesses), measure instructional effectiveness and curriculum appropriateness, and inform policy (Sanders & Vogel, 2018). Assessment is at the heart of education, according to Ojerinde (2019), because assessment results are used to judge students' academic strengths and weaknesses. One of the most effective educational techniques for encouraging effective learning is assessment. Robert Ebel stated in early 1962 that assessment of educational attainment is critical to effective education. Black and William (2017) collected evidence from over 250 studies linking assessment and learning in a review of research on assessment and classroom learning. The result was a clear and unmistakable message: activities aimed at improving the efficacy of assessment in the classroom to encourage learning can improve student accomplishment. As a result, teacher performance is crucial to student achievement.

Learners research topics on which they believe they will be evaluated. Backwash, or the

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backwash-effect of evaluation, is a concept coined by Lewis Elton (1987) (as quoted in Biggs & Tang, 2011). This concept refers to the idea that students' study strategies vary based on the requirements of assessment activities (MacLellan, 2001; Segers, Nijhuis & Gijsselaers, 2006; Biggs & Tang, 2011). Backwash can have a beneficial or negative impact, although it has primarily had a negative one. When assessment is linked to learning outcomes, there is a positive backwash effect. This encourages appropriate learning by encouraging pupils to have a full understanding of the content (Biggs & Tang, 2011). If learners are actively involved in the assessment activity, they will be much more accountable and motivated to study in a more positive manner. Negative backwash, according to Biggs & Tang (2011), occurs in an examination-based system when method takes precedence over a solid comprehension of the subject content. Teachers mostly instruct their students on exam-taking strategies such as attempting the full question paper in the same manner; students prepare from guess papers and prior exams, and then cram answers to them. Such backwash leads to shallow learning, which is defined as skimming through knowledge without fully comprehending it.

Furthermore, learner evaluation is an important component of education, and successful teaching cannot exist without appropriate student evaluation (Kiomrs, Abdolmehdi, & Naser, 2017). Studies demonstrate, however, that teachers continuously apply a range of elements in their evaluation processes, resulting in incorrect conclusions. Most teachers lack effective assessment knowledge and abilities, which means they have misconceptions about assessment techniques when evaluating student academic success (Chen, 2015). As a result, some academics in the field have recently emphasized the importance of continuing to expand the capacity of classroom assessment to support learning. Black and William (2017), in particular, have advocated for research that aids instructors in establishing new formative assessment procedures. As a result, if instructors' competency in this area is lacking, assessment advantages may not be realized. Teachers are accountable for identifying pupils' strengths and areas where they need to develop, as they can help or hinder learning. As a result, assessment plays a crucial role in providing assistance for students' academic achievement. The importance of teachers' relevant help and suggestions based on assessment data in increasing students' learning has grown significantly. As a result, teachers must have a thorough understanding of relevant and successful assessment procedures and must put them into practise in the classroom. In other words, if the educational system's aims, such as providing high-quality education to all students, are to be met, teachers must be competent in educational assessment of students.

**Research Methodology**

The study was based on following objectives; to investigate assessment techniques used in universities and colleges of education offering teacher education programs, to explore uses of assessment techniques by teacher educators of universities and colleges of education in Punjab and to determine differences about assessment techniques used in universities and colleges of education. Mixed method research design was applied including quantitative and qualitative approaches. The quantitative stage of the study employed descriptive survey while the qualitative part of the study included semi-structured interviews. The study was delimited to the teacher education institutions offering M.A Education Program during the session 2013-2015. Population of the study comprised of teacher educators of universities

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and teacher educators teaching education related subjects in colleges of education. Moreover, the prospective teachers of these institutions were also taken. Stratified random sampling technique was used to select 80 teacher educators and 393 prospective teachers for quantitative phase of the study; while 6 public university teacher educators and 6 teacher educators from colleges of education were selected for qualitative segment of the study. The study involved two self-designed instruments; one for gaining opinions from the teacher educators and other from prospective teachers about assessment techniques practiced at universities and colleges of education. Both instruments were designed on five-point Likert scale including two parts: one part about assessment techniques and the other part about the uses of assessment techniques. Moreover, semi structured interviews were also scheduled with teacher educators in order to gather detailed information about uses of the assessment procedures. Quantitative data were gathered from the respondents of using afore mentioned instruments through personal visits of researchers. The partially structured interviews were conducted with the selected teacher educators. Quantitative data collected through self-developed instruments were analyzed through descriptive statistical measures (mean and percentage) while inferential statistical measure (t-test) was applied to compute university wise differences in assessment techniques. Themes were developed for qualitative data analysis conducted from teacher educators through interview questions.

**Results**

Following is the percentage and mean analysis of responses of teachers and students with reference to statements;

**Table: 1.** *Responses of Teacher educators and Prospective teachers about Assessment Techniques*

S.#	Dimensions	Groups	A	M	ST	R	NA	M	
1.	Oral Quiz	Colleges of education	Teacher educators	30.6	12.9	43.5	3.2	9.7	3.52
			Prospective teachers	15.6	14.4	26.9	21.6	22	2.81
		Universities	Teacher educators	44.4	50	5.6	0	0	4.39
			Prospective teachers	33.9	30.5	16.9	8.5	10	3.69
2.	Written Quiz	Colleges of education	Teacher educators	40	50	0	3.2	6.4	4.15
			Prospective teachers	42.5	36.5	10.2	8.4	2.4	4.08
		Universities	Teacher educators	72.2	27.8	0	0	0	4.72
			Prospective teachers	44.1	25.4	22	3.4	5.1	4.00
3.	Multiple-Choice Questions	Colleges of education	Teacher educators	9.7	14.5	50	20.9	4.8	3.03
			Prospective teachers	29.9	25.7	22.2	13.2	9	3.54

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		Universities	teachers Teacher educators	16.7	50	16.7	16.7	0	3.67
			Prospective teachers	37.3	20.3	25.4	10.2	6.8	3.71
4.	True/False Items	Colleges of education	Teacher educators	3.2	12.9	41.9	32.2	9.7	2.68
			Prospective teachers	21	16.8	31.1	18	13	3.14
		Universities	Teacher educators	22.2	44.4	16.7	11	5.6	3.67
			Prospective teachers	25.4	20.3	20.3	15.	19	3.19
5.	Short Answer Questions	Colleges of education	Teacher educators	27.4	51.6	20.9	0	0	4.06
			Prospective teachers	31.7	40.1	22.8	3.6	1.8	3.96
		Universities	Teacher educators	77.8	0	11	5.6	5.6	4.39
			Prospective teachers	40.7	33.9	13.6	10.2	1.7	4.02
6.	Extended Response Questions	Colleges of education	Teacher educators	6.4	37	43.5	12.9	0	3.37
			Prospective teachers	24	24	30.5	15.6	6	3.44
		Universities	Teacher educators	44.4	33.3	16.7	5.6	0	4.17
			Prospective teachers	35.6	23.7	18.6	13.6	8.5	3.64
7.	Discussion	Colleges of education	Teacher educators	51.6	43.5	4.8	0	0	4.47
			Prospective teachers	32.3	35.3	25.7	6.6	0	3.93
		Universities	Teacher educators	38.9	44.4	16.7	0	0	4.22
			Prospective teachers	54.2	30.5	11.9	1.7	1.7	4.34
8.	Assignment	Colleges of education	Teacher educators	46.8	45.2	3.2	4.8	0	4.34
			Prospective teachers	45.5	36.5	14.4	2.4	1.2	4.23
		Universities	Teacher educators	22.2	66.7	11.1	0	0	4.11
			Prospective teachers	45.8	28.8	18.6	5.1	1.7	4.12

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9.	Presentation	Colleges of education	ve teachers Teacher educators	29	61.3	9.7	0	0	4.19
			Prospective teachers	38.3	29.3	25.7	4.8	1.8	3.98
		Universities	ve teachers Teacher educators	22.2	61.1	11.1	5.6	0	4.00
			Prospective teachers	39	32.2	18.6	8.5	1.7	3.98
10.	Portfolio	Colleges of education	ve teachers Teacher educators	16	35.5	33.9	11.3	3.2	3.50
			Prospective teachers	29.3	14.4	22.2	16.8	17	3.22
		Universities	ve teachers Teacher educators	38.9	50	11	0	0	4.28
			Prospective teachers	50.8	18.6	15.3	11.9	3.4	4.02
11.	Individual Project	Colleges of education	ve teachers Teacher educators	25.8	30.6	24.2	19.4	0	3.63
			Prospective teachers	16.8	23.4	38.3	15.6	6	3.29
		Universities	ve teachers Teacher educators	11.1	83.3	5.6	0	0	4.00
			Prospective teachers	37.3	35.6	20.3	1.7	5.1	3.98
12.	Group Project	Colleges of education	ve teachers Teacher educators	30.6	37.1	22.6	9.7	0	3.89
			Prospective teachers	21	40.7	28.7	4.8	4.8	3.68
		Universities	ve teachers Teacher educators	22.2	50	27.8	0	0	3.94
			Prospective teachers	33.9	37.3	23.7	3.4	1.7	3.98
13.	Fieldwork	Colleges of education	ve teachers Teacher educators	8.1	29	25.8	21	16	2.92
			Prospective teachers	18	12	24	21	25	2.77
		Universities	ve teachers Teacher educators	22.2	55.6	11.1	5.6	5.6	3.83
			Prospective teachers	32.2	33.9	13.6	11.9	8.5	3.69

*Analysis of Competencies of Female Teachers Regarding Assessment Techniques ...***Table 2** Responses of Teacher educators and Prospective teachers about Uses of Assessment Techniques

S.#	Dimensions	Groups		A	M	ST	R	NA	M
1.	Assessing to improve prospective teachers' performance	Colleges of education	Teacher educators	48.4	51.6	0	0	0	4.48
			Prospective teachers	34.1	53.9	9	1.8	1.2	4.18
		Universities	Teacher educators	61.1	38.9	0	0	0	4.61
			Prospective teachers	44.1	39	10.2	6.8	0	4.20
2.	Assessing for ranking prospective teachers	Colleges of education	Teacher educators	22.6	51.6	11.3	14.5	0	3.82
			Prospective teachers	24.6	36.5	22.2	13.2	3.6	3.65
		Universities	Teacher educators	33.3	50	16.7	0	0	4.17
			Prospective teachers	15.3	55.9	22	3.4	3.4	3.76
3.	To share assessment criteria with prospective teachers	Colleges of education	Teacher educators	35.5	46.8	17.7	0	0	4.18
			Prospective teachers	20.4	48.5	15	13.2	3	3.70
		Universities	Teacher educators	38.9	61.1	0	0	0	4.39
			Prospective teachers	27.1	47.5	11.9	11.9	1.7	3.86
4.	Assessing understanding of concepts	Colleges of education	Teacher educators	41.9	53.2	4.8	0	0	4.37
			Prospective teachers	32.3	52.1	10.2	3	2.4	4.09
		Universities	Teacher educators	50	27.8	22.2	0	0	4.28
			Prospective teachers	30.5	42.4	13.6	11.9	1.7	3.88
5.	Assessing Retention of Facts & Concepts	Colleges of education	Teacher educators	6.5	74.2	4.8	14.5	0	3.73
			Prospective teachers	25.7	50.3	16.8	4.2	3	3.92
		Universities	Teacher educators	38.9	55.6	0	5.6	0	4.28
			Prospective teachers	20.3	67.8	8.5	3.4	0	4.05
6.	Assessing application of	Colleges of	Teacher educators	54.8	32.3	8.1	4.8	0	4.37

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	concepts	education	Prospective teachers	26.9	44.9	20.4	4.8	3	3.88
		Universities	Teacher educators	50	50	0	0	0	4.50
			Prospective teachers	23.7	54.2	11.9	8.5	1.7	3.90
7.	Assessing prospective teachers' performance	Colleges of education	Teacher educators	29	48.4	16.1	6.5	0	4.00
Prospective teachers			22.8	50.3	15	9.6	2.4	3.81	
Universities		Teacher educators	38.9	44.4	16.7	0	0	4.22	
		Prospective teachers	23.7	50.8	16.9	5.1	3.4	3.86	
8.	Norm-Referenced Assessment	Colleges of education	Teacher educators	17.7	41.9	16.1	21	3.2	3.50
Prospective teachers			22.2	32.9	23.4	15.6	6	3.50	
Universities		Teacher educators	44.4	38.9	16.7	0	0	4.28	
		Prospective teachers	10.2	50.8	20.3	15.3	3.4	3.49	
9.	Providing timely feedback	Colleges of education	Teacher educators	43.5	46.8	3.2	6.5	0	4.21
Prospective teachers			19.8	40.1	21	14.4	4.8	3.56	
Universities		Teacher educators	33.3	33.3	33.3	0	0	4.00	
		Prospective teachers	20.3	40.7	25.4	11.9	1.7	3.66	

Findings of Tables 1 & 2 indicate no significant difference in the mean value of responses of teacher educators and prospective teachers regarding assessing prospective teachers; to improve their performance, to share assessment criteria with prospective teachers and to assess prospective teachers' performance. However, with reference to use of assessment techniques; for ranking of prospective teachers, assessing understanding of concepts, retention of facts & concepts, application of concepts and Norm-Referenced Assessment the mean score of teacher educators of universities were higher than that of colleges of education. While mean of responses of teacher educators were greater than that of prospective teachers' responses regarding providing timely feedback.



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**Table 3:** *Difference in Teacher educators' responses of universities and colleges of education about Assessment Techniques*

<b>Institution</b>	<b>N</b>	<b>Mean</b>	<b>t</b>	<b>df</b>	<b>p-value</b>
Colleges of education	62	3.74	-3.451	78	0.002
Universities	18	4.15			

Results of Table 3 indicated a significant difference between colleges of education and universities teacher educators about use of assessment techniques. The higher mean score of universities teacher educators showed that they used to apply diverse assessment techniques than teacher educators of colleges of education.

**Table 4:** *Difference in Prospective teachers' responses of universities and colleges of education about Assessment Techniques*

<b>Type of Institution</b>	<b>N</b>	<b>Mean</b>	<b>t</b>	<b>df</b>	<b>p-value</b>
Colleges of education	334	3.45	-3.187	391	0.000
Universities	59	3.84			

Findings of Table 4 revealed a significant difference in the responses of colleges of education and universities prospective teachers. The difference in the mean values of prospective teachers projected their view that there was wider range of assessment techniques used for their assessment.

### **Conclusions**

Following conclusions were drawn from the analysis of results; Teacher educators in colleges of education mostly used written quiz, short-answer questions, discussion, assignment, presentations and group projects as assessment techniques. Oral quizzes, written quizzes, multiple choice questions, short answer questions, extended response questions, portfolios, discussions, assignments, presentations, individual projects, group projects, and fieldwork are some of the most common assessment procedures used at universities. Both colleges of education and universities teacher educators used to assess their prospective teachers continuously through graded assessment techniques. They also focused course objectives as assessment criteria for prospective teachers. The teacher educators frequently used to provide oral feedback but written feedback was also given some times only after midterm or any other assessment task. The teacher educators also guaranteed fairness in assessment practices; however the teacher educators of universities used diverse strategies for ensuring fairness in assessment. The prospective teachers of colleges of education and universities showed positive attitude towards uses of assessment techniques by their teacher educators. They are satisfied with the communication and development of assessment criteria by teacher educators, norm-referenced/criterion-referenced assessment, and feedback. Significant difference was observed in the perception of prospective teachers about the variety of assessment techniques used by teacher educators of colleges and universities. Universities prospective teachers viewed that their teacher educators used diverse variety of assessment techniques as compared to colleges of education teacher educators.

### **Recommendations**

The study envisaged following recommendations: Non-graded assessment techniques may be used to guide prospective teachers more effectively. Informal feedback may be provided

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on daily basis so that the prospective teachers can perform better in graded assessment techniques. Variety of assessment techniques e.g., classroom assessment techniques, self-assessment and peer assessment may be used for assessing prospective teachers' performance so that they may be involved in assessing their own performance in colleges of education as well. Computer assisted assessment may be used in teacher education programs to increase student teacher interaction and to help them in their self-assessment and address their weak areas.

#### **References**

1. Ayubuzder, M., Ali, A., Akhtar, J. H., Maqbool, S. & Nadeem, M. (2013). Assessment of Students' Learning Achievement under Semester System in Pakistan. *Journal of Basic and Applied Scientific Research*, 3(6), 79-86.
2. Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university*. Maidenhead: McGraw-Hill/Society for Research into Higher Education/Open University Press.
3. Black, P., and William, D. (2017). Assessment and classroom learning. *Assessment in Education*, 5(1), 7-75.
4. Boud, D. & Falchikov, N. (2005). Redesigning Assessment for Learning beyond Higher Education. *Research Dev. Higher Education*, 29, 34-41.
5. Casani, F., De Filippo, D., Garcia-Zorita, C., & Sanz-Casado, E. (2013). Public versus private universities: Assessment of research performance; case study of the Spanish university system. *Research Evaluation*, 23(1), 48-61. <http://dx.doi.org/10.1093/reseval/rvt028>
6. Chen, P. P. (2015). Teacher candidates' literacy in assessment. *Academic Exchange Quarterly*.
7. Flint, N., & Johnson, B. (2011). *Towards fairer university assessment*. Milton Park, Abingdon, Oxon: Routledge.
8. Khan, S.A. (2010). *Assessment in Education*. Rawalpindi: Capital Book Service.
9. Khan, B. (2019). Relationship between assessment and students' learning. *International Journal of Social Sciences and Education*. 2(1), 576-588.
10. Kiomrs, R., Abdolmehdi, R., and Naser, R. (2017). On the Interaction of Test Washback and Teacher Assessment Literacy: The Case of Iranian EFL Secondary School Teachers. *English Language Teaching*, 4 (1).
11. Ojerinde, D. (2019). Using assessment for the improvement of tertiary education in Nigeria: The Joint Admissions and Matriculation Board (JAMB) role. Paper presented at the 35th International Association for Educational Assessment Conference, Brisbane, Australia.
12. Pellegrino, J., Chudowsky, N., & Glaser, R. (2001). *Knowing what students know*. Washington, DC: National Academy Press.
13. Sambell, K., McDowell, L., & Montgomery, C. (2013). *Assessment for learning in higher education*. Milton Park, Abingdon, Oxon [England]: Routledge.
14. Sanders, J. R., and Vogel, S. R. (2018). The Development of Standards for Teacher Competence in Educational Assessment of Students. *Teacher Training in Measurement and Assessment Skills*.
15. Sparapani, E.F. (2013). *Differentiated Instruction: Content Area Applications Other Considerations*. Maryland: University Press of America.