

## **Diverse Assessments of Female Students' Performance and their Perceptions about Assessment Tools**

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### **Abstract**

This paper examined students' performance through diverse assessments in MS first semester curriculum module in a women university. The module "Curriculum models and theories" incorporated three different assessments: a home assignment, a classroom presentation and a final term paper. A three step approach using mixed research method was used to investigate students' responses to the different assessment tools. First a quantitative analysis using descriptive statistics was conducted on the data from students' marks. Second, an examination of students' perceptions about different assessment was carried out through a questionnaire. Last a qualitative study was conducted using semi structured interviews. The findings revealed that majority of the students preferred more structured tasks having clear aligned learning outcomes. Familiarity with assessment types was also preferred by many students. The present study suggests that by making changes in assessment design and using more formative feedback, students' learning experience across diverse assessment tools can be enhanced.

**Keywords:** Assessment diversity, home assignment, classroom presentation, final term paper, learning

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## **Introduction**

Assessment is an essential part of a rational instructive experience. It is a vital part of an institutional push to enhance the nature of instruction and learning at all levels of education. The underlying purpose of assessment and evaluation is to support and enhance students' learning. It is not only restrictive for assigning marks to students, its role in providing guidance and advice is of great importance. Effective and quality assessments ought to be well planned, organized and arranged based on learners' abilities. Such kind of assessments offer opportunities to learners to get appropriate and energetic and convincing info, self-screen their progression, see deficiencies and get more effective methods to upgrade learning (Black & William, 1998).

Lowman (1984) and McKeachie (1986) stated that perceptions of students substantially differ about the comfort level of assessment techniques. Students with less developed writing skills, feel less comfortable with assessments that are encompassed entirely of essay questions. To utilize diverse evaluation approaches, all students encounter sporadic opportunities to exhibit their skills and knowledge that is most harmonious with their preferred learning style during evaluation (Sedlacek, 1994). It is necessary to provide students different prospects and methodologies to facilitate their learning (Ginsberg & Wlodkowski, 2009).

The concern towards enhancing the nature of instruction and learning at higher education level in Pakistan has expanded due to globalization and changes in advanced education in numerous nations around the world. Since the inception of HEC Quality education has been investigated and debated at various platforms. Curriculum, teachers and assessments have been considered as of supreme importance being aimed to raising student achievement and effective learning. There has been a decreased adoption of traditional exams in higher education and an increased use of differential assessment tools. Although students' performance can vary across assessments, however, diversified assessments provide comparable opportunities to students. Earlier research has shown that students tend to perform better in coursework than exams and coursework has a positive influence on over all learning. (Neil & McMahon, 2005). Current era can be considered as an era of high-pressure accountability testing.

All higher education institutes were directed by the Higher Education Commission (HEC) of Pakistan for changing their academic system from annual to semester. HEC took many initiatives to train and prepare faculty members of

universities to adopt and play their role effectively in changing scenario. Semester system is characterized by its formative, continuous and internal type of assessment. This assessment method allows students to get feedback and improve their learning in the light of teacher's frequent guidance. This relationship between teachers and students plays a vital role in promoting effective teaching and learning and provides blood to the whole process.

Although lack of teacher's competency to construct and use internal assessment techniques can create problems but feedback of students can be used to improve continuing teaching learning process. According to Shirazi (2004) and Satija (1999) internal examination system is direct, flexible and economical in terms of time and money. The primary purpose of assessment is to improve students' learning and teachers' teaching as both respond to the information it provides. Assessment for learning is an ongoing process that arises out of the interaction between teaching and learning. Curriculum and instruction are strictly interconnected with assessment as two main stake holder, teachers and students struggle towards getting curriculum objectives. Assessment provides information related to instruction and students' performance. Different types of assessments are used at higher education level. In this context, the present study was planned to analyze Diverse Assessments of female Students' Performance and their Perceptions towards Assessment Tools.

### **Objectives**

The study was conducted to achieve the following objectives.

1. To analyze the students' performance through diverse assessments.
2. To explore students' perceptions towards different assessment tools.

### **Research Hypotheses**

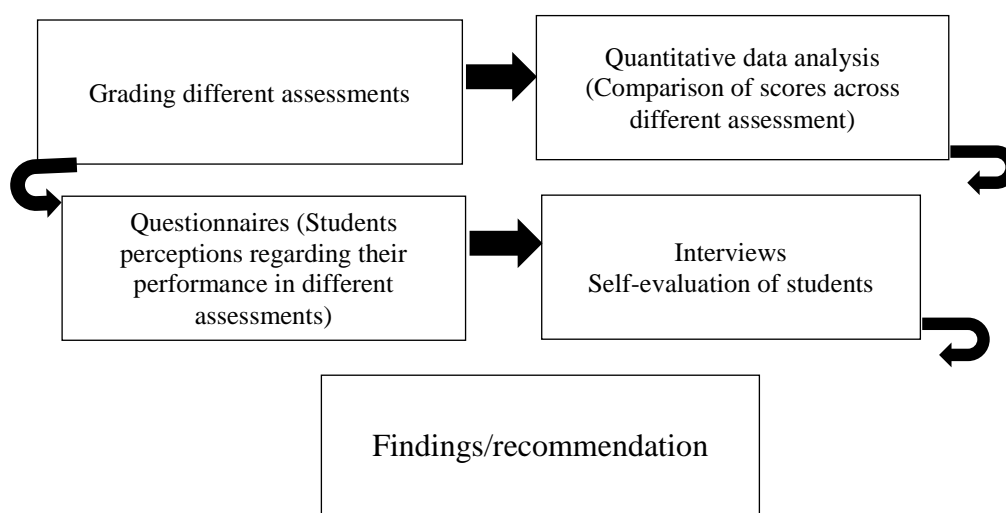
Based on objectives of the study, following hypotheses were formulated.

1. There is no significant difference among students' perceptions towards using different assessment tools.
2. There is no significant difference among students' perceptions regarding assessment tools matching their skills and learning approaches.
3. There is no significant difference among students' learning approaches across various assessments.
4. Students' prior experience, motivation, skills and abilities do not influence their performance across different assessment tools.

## Research Methodology

The respondents of the study were MS first year research students in “Curriculum models and theories” class. The total class size comprised 25 diverse students group with various institutions and back grounds. Some students had a break after their post-graduation and some had got fresh enrollment in the program. Important aspects to note here are that there was variation in the English language proficiency among the group. At the same time majority of students came from education system offering traditional exams system.

Mixed research method was adopted by using three step approach (Teddlie & Tashakkori, 2009). Firstly, quantitative analysis on the marks of students in different assessments was conducted. Secondly, an examination of student’s preferences and perceptions was carried out through questionnaires. Lastly, a qualitative study was carried out by conducting semi-structured interviews with students using thematic analysis. Approval from the Director of Institute of Education was obtained before data collection. In line with the research guidelines, participants were provided information on research. Student consent was sought and confidentiality was assured. The questionnaire also included information on the background and purpose of the research for participants. The research process is presented in Figure 1.



*Figure 1:* Research process

## Data Analysis

Marks of 25 students in the module were analyzed using descriptive statistics. The analysis compared marks on the following dimensions: individual assignment versus exams, group presentation versus exams, and Group presentation versus individual assignment.



*Figure 2:* Comparison of marks

## Questionnaire

The research instrument was closed ended questionnaire. The questionnaires were distributed among all 25 students. The response rate was 100%.

## Qualitative analysis

The semi structured interviews schedule was used. The sequential exploratory design (King & Horrocks, 2010) was adopted to develop the interview questions on the basis of the results of data analysis and questionnaire results. Only 3 students were interviewed using a thematic analysis and the contact method was face to face. First student had a low score in group presentation but high score in the final exam. Second student had high score in individual assignment and low score in the final exam. Third student had high marks in group presentations while low in individual task (assignment). The basis of selecting these three students was their contrasting performances in the different assessments of the module. The goal was to interview students who had significantly different experience and performance across different assessments of the module.

## Findings and Discussion

This section includes the analysis based on the quantitative analysis of student's marks and findings from the questionnaires and interviews. All the hypotheses were rejected as revealed by following data analysis.

**Table 1***Marks distribution of Module*

Sr. No.	Module	Assignments	presentation	Exams Term paper	Total
1	Mid term	5	5	30	40
2	Final term	5	5	50	60
	Total	10	10	80	100

**Quantitative Data Analysis**

Marks of 25 students across all assessment were analyzed. Ranges of students' marks across different assessment are presented in table 2.

**Table 2***Score ranges*

Score ranges	Presentation 10	Assignment 10	Essay(Final+mid) term Paper 50+30=80	Overall 100
1 to 5	4 , 16%	2, 8%	0	0
6 to 10	21,84%	23, 92%	0	0
11 to 20	0	0	0	0
21to 30	0	0	0	0
31 to 40	0	0	0	0
41 to 50	0	0	1, 4%	0
51 to 60	0	0	1, 4%	0
61 to 70	0	0	17, 68%	1, 4%
71 to 80	0	0	6, 24%	17, 68%
81 to 90	0	0	0	7, 28%
91 to 100	0	0	0	0

Table 2 shows different highest ranges for different types of assessment. Highest range in final exams was 71-80 while in presentation and assignment was 6-10. Highest range of overall assessment was 81-90. The level of scoring in each assessment can be studied by analyzing marks ranges in which most students scored. For exams, most students (68%) scored in second highest range (61-70) while for presentation and assignment most students scored in highest range which is (6-10).

In the final exams majority of the students( 68%) scored in the highest range of 71-80, in the presentation, 84% and in assignment 92 % student scored in the highest range of 5- 10. It can be noted that % of students in highest range (6-10) is higher for assignments (92%) than in presentation(84%) and for exams where only 24% students fall in highest range (81-90).

Exams<presentation<assignments

This aspect was explored in detail in the qualitative analysis.

## Descriptive statistics

The descriptive statistics of the student marks are presented in Table 3.

**Table 3**

*Descriptive statistics*

	Mean	Median	Mode	SD	Kurtosis	range	Skewness	Min	Max
Assignment	7.5	6	8	11	-0.43	4.00	0.40	5	9
presentation	7.00	6	7	12	5.40	4.00	-1.35	5	9
Exam	50.5	43.5	64	11.5	-0.23	60	-0.59	45	78
Overall	65.5	60.5	76	10.5	1.71	38	-0.44	62	90

The mean of the individual task, assignment (7.5) was higher than the mean of the group task, presentation (7.00). On the other side, mean of exams is 50.5; This is in line with the literature. Standard deviation was smallest for assignment (11) as for presentation (12) and for exam was (11.5). The marks range was largest for exams highlighting the students who scored lowest and students who scored highest, had a biggest difference in their marks.

A platykurtic curve (Kurtosis <3) of distribution has shown by the negative Kurtosis values for both assignment and final exam assessments. This suggests a flatter than normal distribution with a wider peak which reflects wider dispersion of marks in both assignment and final exams from the mean (students have a wider range of abilities and aptitude) and the probability of extremes values is less than a normal distribution. The overall marks have a Kurtosis values less than 3 representing wider spread of marks around the mean value, showing that there is high dispersion in students' marks from the mean.

## Questionnaire Analysis and Discussion

The questionnaire was developed on the basis of literature review and the data analysis to address the research question. The questions registered students' perceptions and preferences on the different assessment of the module. Table 4 presents the items included in the questionnaire and research question was addressed.

**Table 4***Questionnaire items*

S. No.	Items included in questionnaire	Research question addressed
1	Preference for different types of assessment	RQ1
2	Fairness of assessment	RQ1
3	Assessment appropriate for learning approach and abilities	RQ2
4	Factors influencing performance	RQ3
5	Course influence on exams	RQ4
6	Use of different assessment, student performance and overall learning	RQ4

**Table 5***Preference for assessment*

Sr No	Types of assessment	% Preference
1	Presentation	5%
2	Assignment	6%
3	Exams	89%

It can be observed from above table that 89% students preferred Exams (mid + final term paper). Presentation was the least preferred assessment. This finding supports the literature that coursework is more preferred by students. This also suggests that the applicative nature of the task, working in groups, and higher marks could contribute to such a preference.

**Table 6***Tasks Assigned*

Sr No	Types of assessment	% Preference
1	Individual	50%
2	Group	50%

With regard to preference for individual versus group tasks, the students were equally divided (50% each) in their preferences for individual versus group tasks. As such clear conclusion can be drawn here. Therefore, preference for group and individual tasks was further explored in the interview phase of the study.

**Table 7***Fairness in assessment*

Sr No	Types of assessment	% Fairness
1	Presentation	24%
2	Assignment	25%
3	Exams	51%



It can be seen in table 7 above that 51% of the students perceived that exams are fairer than assignments and presentations. The findings were a bit different from earlier studies as suggested in the literature. The reason for this could be that students think grading presentation and assignment are more complicated process than exams.

**Table 8**

*Assessment suitability to learning approach and abilities*

Sr No	Types of assessment	% suitability
1	Presentation	13%
2	Assignment	13%
3	Exams	74%

The students were asked to rate the suitability of the different assessment tools on a 5 point Likert scale. Table 8 highlights that a higher percentage of students found the exam style to be well suited to their learning approach and abilities. This reflects that students perceive that they have to attempt better ability to attempt written exams as compared to writing assignments or presentations. A factor influencing this perception could be that a large number of students came from previous education system that had extensive use of the exam method. They thought that exams are better matched to their abilities. This highlights the prevalent use of exams in the education system and how it is preparing students.

**Table 9**

*Factors influencing performance*

Sr No	Types of assessment	Influencing factors
1	Presentation	Motivation, interest, skill, prior
2	Assignment	assessment and approach
3	Exams	

Students were asked about the factors that positively influenced their performance in assessment in which they did better than other assessments. In line with the research questions the factors that were considered were motivation, skills, prior experience. Table 9 highlights that students' level of interest in an assessment has major influence on performance. Other factors that were reported by students include, having the required skills for the task, and having prior assessment and the approach students will adopt. This aspect was explored further in the interview part of the study. Assessment design, guidelines and criteria play an important role in generating students' interest in the assignment. Student's level of interest in turn influences the effort that they will put in the task. Therefore, the role of motivation and students self-efficacy towards assessment has also been discussed in this study.

As discussed in the literature, all these factors have implications for *assessment design*.

**Table 10**

*Coursework influence on exams and overall learning*

Sr. No	Response	%
1	Strongly agreed + agreed	46%
2	Undecided	15%
3	Strongly disagreed + disagreed	39%

The students were asked to rate on a 5 point likert scale the degree to which they agreed that the coursework in the module had a positive influence on exams and over all learning. As shown in table, 46% students agreed, 39% disagreed and 15% neither agreed nor disagreed. This supports the findings from earlier studies that coursework helps prepare students better foe exams and that there is overall better learning through the use of coursework. At the same time a high percentage of students disagreed. These findings were further explored during the interview stage. Key aspect to consider here is how students related the assessment outcomes with the overall learning outcomes of the module. The high disagreement percentage could reflect that many students were unable to comprehend how different assessments fit in with the overall learning goals of the module.

The relation between assessments outcomes and how they fit in the overall module curriculum are important factors to consider. The assignment addressed conceptual understanding, contrasting and evaluation skills. Presentations focused more on building skills to launch new ventures, and the exam addressed the lower order learning outcomes- remembering and understanding as per the *Bloom's taxonomy* (Biggs & Collins, 2007). On the other hand the coursework addressed higher order learning outcomes. The assignment encouraged the skills of contrasting and analyzing, and the presentation focused on the skills of evaluating and creating. It is important that students are able to develop a complete picture of the module learning outcomes and how each assessment fits in the scheme.

**Table 11**

*Differentiated assessment, students' performance and overall learning*

Sr No	Response	%
1	Strongly agreed + agreed	49%
2	Undecided	15%
3	Strongly disagreed + disagreed	39%

The students were asked to rate on 5 point likert scale the degree to which they agreed that the use of diversified assessment helped them perform better in the module overall. It can be observed from table that 49% of the students agreed that their overall grade was better because there were three different assessments. As such, it could be said that by and large, students perceive that diversity in assessment helps them earn better grades as it provides a broader range to demonstrate their abilities. This is also supported by the findings from quantitative analysis which highlighted that even if a student could not do well in one assessment, he/she could do better in the other assessment. This supports the literature that assessment diversity provides comparable opportunities to students and results in better learning for all.

**Table 12**

*Ranking of Assessment tools based on the level of learning*

Sr No	Types of assessment	%	
1	Presentation	24%	3.01
2	Assignment	25%	1.99
3	Exams		1.54

The students were asked to rank the assessment tools based on the level of learning they had from each type. It can be observed from table that most students ranked the presentation at the top (average ranking at 3.01), followed by the assignment (1.99) and the lowest rank was given to exam (1.54). This support finding from earlier research studies that students feel that greater learning takes place with coursework. More students found that the group presentation was a greater learning experience. Many students used their previous knowledge to construct theory. This supports the literature that constructivist approaches to learning makes it more student centred.

### **Interview questions**

In this part of the study, three students were interviewed. The selection of students for this stage was based on the differences in their performance across different assessment tools. The main objective of this part of the study was to conduct a deeper analysis and gather more information. The requirement for a deeper study was identified based on the information gathered through the questionnaires. By gathering additional information the final aim of the interview questions was to address the research question 5; that how can student learning experience be enhanced with the use of diversified assessment tools (RQ 5). Based on the findings from questionnaire semi structure interviews were conducted. The main topics that were covered during the interviews were: challenges in attempting the assessments,

performance and learning across assessments, influence of motivation, ability and previous experience, group based assessment and enhancing learning across assessment tools.

### Challenges in Attempting the Assessment

The students were asked about the challenges they faced in completing each assessment. Table 13 presents some of the challenges that were reported by students.

**Table 13**

*Challenges in completing different assessment*

Assignment	Presentation	Final Exam
The assignment topic was not bored enough not to write 4000 words	Coordination with group member	Memorization reliance on rote learning
No reading list given	Division of work	Examination environments increase anxiety
No prior opportunity to practice writing abilities; difficulty in referencing and citation		Exam question were too specific not applicable.
Detailed marking criteria not shared prior to assessment		Time management to write 3 hour unseen paper
Word count limit was too high		The sample/past papers were not available
Topics were vague		

It can be observed that very few challenges were registered for the presentation. Greater choice and structured guidelines of the presentation could be possible factors that made these students feel more comfortable with the assessment. Understanding the challenges of each assessment from the students' perspective could be useful in making improvements in the assessments and enhancing student learning experience (RQ 5). Factors that are of key importance in helping students to overcome such challenges are: Developing specific assessment guidelines including formative feedback and increasing more choice. According to the literature inclusion of these factors in the assessment design makes learning more student-centric.

### Performance and Learning across Assessments

Students were asked to share their opinions on how each different assessment contributed to their performance and overall learning. Supporting the earlier findings, all three students appointed that greater learning took place from coursework than exams. Between the two types of coursework the students reported that there was maximum learning from the presentation. *"We had to compile information on the*

*given topic from various sources, then had to ready for presentation and finally had to satisfy others queries too*". The students could come up with their own information and strategies for presenting it. In the Final exams, the students were confined to prepare topics given to them. These topics were from the course outline whereas the presentation covered the wider range of topics that were part of and related to the module. Students reported that the formative feedback received on the assignment before the final submission improved their learning. *'the feedback given to us was useful and we made changes in the final assignment'*" this reinforces the popularity of formative feedback in higher education to encourage learning.

### **Role of Motivation**

The questionnaire analysis indicated that many factors influenced a students' motivation towards assessments. The students were questioned about the factors that increased their motivation toward a particular assignment. Students gave different answers which reflected that their individual situation and personal thought process influenced their motivation. Following statements from student highlight their motivation in different assessments:

*"..... I always obtained highest marks in exams, I like to attempt question paper"*

*"I knew that I can improve my low position by managing my preparation for the final exams in a systematic way"*

*"Presentations scare me, and I know that I have lack of confidence for presenting before the class. I try to do back ground work in the group presentation."*

*"I am used to work harder in beginning classes and try to prepare lectures regularly; at the end I feel no burden of exams"*

### **Ability and Previous Experience**

Students were asked about the role of their abilities and previous assessment experiences in completing different assessments of the module. Students reported that their strengths, abilities and previous experiences influenced their performance. One student who did well in the assignment said this is due to her good language skills. Similarly a student, who did better in final exam, gave credit to her memorization skills.

*“My assignment score was better because I am confident of my writing and language skills”*

*“I come from the public school system where we are used to memorizing and writing huge course material....that’s why I could get higher marks in exams”*

*“I was not used to presentations; it affects my performance a lot”*

*“I have problem in surfing, referencing and citations during assignment”*

Different assessments test different skills in students. Students' past experiences with different assessment improve their skills required to attempt similar assessments. In groups with high student diversity, it is not possible that all students will have the same past learning experiences and skills. Therefore, it is important that different type of assessments in higher education provide opportunities to students' to acquire skills that they do not possess. This implies that adequate opportunities should be provided to students receive formative feedback. This will help them to acquire the needed skills. Once such opportunity has been provided, and then the students should be given summative assessment.

### **Group based Assessments**

Students reported many positive aspects of working in groups. “it is division of work” “good opportunity to learn from others”, ‘sharing of ideas’ more brains working together produce better results; the relationship between positive opinion on group assignments and group marks need to be analyzed further. Do students achieve higher marks in group assignments because they like working in groups? Or do students like group assignments because they score higher marks in them? Nonetheless positives group based assessments have also been recognized through in social constructivism theory, which enables students to learn from one another. This is important in the context when students working in a group possess different skills. Group work provides opportunity to students to learn from one another’s skills and experiences.

### **Enhancing Learning across Assessments Tools**

During the interviews, students shared their opinions on how their experiences with different assessments could have better. Overall these students preferred to have more applicative and situation based assignments. A student said that instead of very specific exam questions, an exam with a case study and some questions, or a 100% case study based exam would allow students to demonstrate

their learning in a way better. According to these students, other factors that could help them to perform, better in different assessments include; making criteria more specific defining structure of tasks, providing detailed guidelines, and providing reading lists.

## Conclusions

The findings revealed that majority of the students preferred more structured tasks having clear aligned learning outcomes. Familiarity with assessment types was also preferred by many students. The present study suggests that by making changes in assessment design and using more formative feedback, students' learning experience across diverse assessment tools can be enhanced. The Present study points toward the significance and use of different types of assessment at higher education level. It would make learning more student centric. However, diversified assessment is fully beneficial when it is well planned, based on learners' needs and accommodates their skills and characteristics. Further linking each assessment with the module's objectives is important, as it builds the complete picture for the students.

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