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Determining the changes needed to improve classroom assessment: An analysis of secondary schools in Pakistan

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Abstract

This study aimed to determine the changes needed to improve classroom assessment at the secondary level in Pakistan. The instruments used in this mixed-method study included a research questionnaire, interview, and qualitative classroom observation. The study concluded that major changes needed to improve classroom assessment included the usage of a variety of assessment techniques, reduced workload of teachers, provision of special guidelines to weak students, and provision of professional training and proper assessment materials to teachers. It is recommended that the administration of Federal Government Educational Institutions (FGIEs) should arrange continuous professional training for teachers on classroom assessment. The provision of proper assessment materials should also be ensured. School principals should play an effective role in providing guidelines to faculty members.

Keywords: Changes, classroom assessment, secondary school, mixed-method, Pakistan

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Introduction

Assessment is a method that involves the collection and analysis of data related to objects or people (Reynolds et al., 2016). It has been used in many countries of the world since a long time ago. In China, the concept of assessment was well believed during the period of Sui dynasty (606 B.C). The individuals for government service were selected through a systematic process of national assessment (Esther, 2006).

In educational assessment, students are evaluated for their capabilities, knowledge, and understanding (Marriott & Lau, 2015). Measuring the learning progress of students is an important part of teaching and educational reform (Bagnato & Ho, 2006). It enjoys significant importance in the teaching-learning process (Dhindsa et al., 2016). Classroom assessment is a type of assessment in which teachers are directly involved and assess the performance of students around the session. It is directly connected to the learning achievement of students (Dixon & Haigh, 2011). The quality of the teaching-learning process and the achievement of students is enhanced by using effective classroom assessment (Allen & Fraser, 2015; Elkatms, 2016). To ensure the quality of classroom assessment, teachers must learn the latest techniques and hold updated knowledge regarding student assessment (Nitko, 2010). Classroom assessment is mainly related to the teachers who are responsible for informing the assessor about their instructional decision-making and students' learning (Zhao et al., 2016). It has remained a subject of debate for comparing the functions of formative and summative assessment since 1970, but later on, the concept of formative assessment became important as it enhanced the achievement of students (Tan & Towndrow, 2009). There exists a difference in opinion on the Meaning of formative assessment, but it helps make decisions about student learning and evaluate their improvement in learning (Wiliam & Leahy, 2015). Both types of assessment are interrelated and work parallel with each other as teachers use their combination in classes (Harlen, 2009; Leong et al., 2014).

Improving student academic achievement has been a significant factor in the whole teaching-learning process, and teachers have been focusing on it worldwide. It has been given importance in developed countries during the 18th century. Teachers have been using modern techniques for the assessment of their students since that time (Marzano, 2016). During the 1850s, the authorities of education and instruction in Massachusetts State, USA used paper examinations to assess the academic achievement of students. School authorities were held responsible and answerable for the progress of student learning achievement (Miller et al., 2015).

Different opinions of teachers can be seen on how to conduct the process of assessment. Some believe that it is better to use traditional techniques to assess student performance. Essay type and multiple-choice items are included in such techniques. They advocate that these techniques help them to measure the learning achievement of the students when the syllabus is lengthy. Using these techniques, knowledge, understanding, and application can be judged appropriately. Other teachers advocate for modern techniques of assessment. They

are of the view that creativity among the students cannot be judged using traditional techniques of assessment. For this purpose, they suggest that student portfolios, self-writings, essays, and peer-assessment should be used. In this way, the opinions of the teachers vary between traditional and modern assessments (McMillan, 2018). These capabilities cannot be measured using traditional assessment (Reynolds et al., 2016).

Depending upon the purpose of the assessment, teachers adopt different assessment techniques. The following types of assessments are mainly used by teachers in many countries (UNESCO, 2000).

School-based assessments are conducted at the institutional level. Teachers and other instructional staff are normally considered to be responsible for conducting such assessments. These assessments are held on a short-term basis and the results are quickly available to the stakeholders. Public examinations are conducted at the end of secondary education. These assessments allow the students to get admission to higher education institutes. The performance of teachers in secondary schools is also judged using the results of these examinations. A public examination body normally conducts these assessments. National assessments are used to evaluate the educational system of a country. A whole population or a selected sample is allowed to appear in these assessments and the results thus obtained are used by policymakers. International assessments help compare the performance of students of different countries of the world on certain educational issues and are conducted on an international basis by OECD, UNICEF, UNESCO, and IEA. Examples of these tests include, but are not limited to, TIMSS, PIRLS, PISA, MLA, etc.

The process of classroom assessment is a systematic manner to help teachers in formative evaluation. It indicates the quality and quantity of learning of the students. Moreover, it plays a significant role in improving quality of learning in the classroom (Angelo & Cross, 1993). In this way, classroom assessment involves formative assessment but it prepares the students to perform actively and efficiently in public, national and international assessments.

Many researchers have explored that teachers do not feel positive about classroom assessment (Black et al., 2004). Teachers viewed that conducting classroom assessment hinders the normal teaching-learning process too. In an environment where superficial and rote learning is encouraged at all levels, it is very difficult to talk about creative skills. Teachers, students, and parents usually focus on grades. The attitude of teachers around grading causes students to have lowered self-esteem to feel demoralized. All of these factors create a lack of interest in classroom assessment (Black, 1998). Teachers lack proper skills and knowledge in assessment. A clear majority of novice teachers do not have basic knowledge regarding the assessment of students. Teachers do not discuss and review their teaching strategies and assessment techniques for their accountability (DeLuca & Johnson, 2017). The short duration of the subject period hinders the conduct of effective classroom assessment. An excessive number of students in a class cause difficulty in marking essay-type questions (Webb, 2010). Teachers have to face political or external pressures during the conduct of student assessments. The complex structure of society also creates a hurdle. The phenomenon of

globalization is affecting the process of student assessment, in one way or the other. Moreover, current practices in student assessment are not supporting students in knowledge comprehension, practical application, and expression of skills (Kotze, 2015). As the assessment process increases the workload of teachers and students, so they do not feel at ease with it. Teachers are also of the view that it overburdens them and causes them to slow down the process of teaching and learning (Brookhart, 2013). Students think that the process of student assessment is merely a method of recalling and reproducing knowledge (Chetcuti et al., 2006). Low-quality assessment material is another issue for teachers as it badly affects the conduct and management of the whole assessment process. Students show less interest in attempting such tests. It is difficult for teachers to manage sufficient time for preparation, administration, and evaluation of assessment tasks, because of which quality of assessment tasks is affected (Buabeng et al., 2019).

There are many problems in classroom assessment in Pakistan. Here the teachers, either trained or not in assessment, accept the importance of the latest assessment techniques and agree on the concepts of assessment as learning and assessment for learning. But a majority of these do not use such techniques. They prefer to complete the syllabi and prepare the students to get better grades in final examinations. Therefore, they do not find sufficient time to use modern assessment techniques (Thomas, 2017). Lack of training in assessment is another issue that causes teachers to be unable to use modern assessment and statistical techniques. Feedback practices in classroom assessment are also poor due to the lack of interest of students, parents, and teachers. Moreover, higher-order thinking skills like creative writing and problem-solving are not assessed by the teachers (Shazadiy & Rafaty, 2018). Overloaded classes hinder the teachers from conducting effective classroom assessments. They find it difficult to prepare, conduct and evaluate multiple assessment tasks of the students concurrently. They face a shortage of time in adopting different assessment strategies due to their heavy workload. Some of the students and parents feel formative assessments are unnecessary and prefer better performance in final term exams, which creates difficulty for teachers to run smooth and effective classroom assessments (Hussain et al, 2019).

Research objectives

In this study, the researchers explored the changes needed to improve classroom assessment at the secondary level in Pakistan. The study was conducted in Federal Government Educational Institutions (FGEIs). These institutions are working throughout Pakistan and focus on providing education, which is based on quality and innovation, to its students (FGEIs, 2021). The students, teachers and principals were included in the population of the study. The research project was carried out during the period September, 2020-March, 2022. The following were the research questions of this study; (i)Which practices of classroom assessment, are being used in FGEIs? (ii)Which tools of classroom assessment, are being used in FGEIs? (iii)Which formats of classroom assessment, are being used in

FGEIs? (iv)What are the issues involved in classroom assessment in FGEIs? (v)Which changes should be made to improve classroom assessment in FGEIs?

Study design

A concurrent nested mixed-method research design within the Pragmatism paradigm was followed here. The mixed-method approach joins quantitative and qualitative methods in such a way that both methods support one another by exploring (questionnaires) and confirming (interviews) the research problem (Gall et al., 2013). In particular, a concurrent nested mixed-method research design helped the researchers to explore data collected from one portion of the population (students and teachers) in the form of questionnaires and confirm them from other portions of the population (principals) through semi-structured interviews.

Participants and procedures

The population of the study consisted of all principals, teachers, and students of all regions of FGEIs. The sample of the study was selected using a mixed-method (MM) sampling technique. Here, the probability sampling method was used for quantitative data, whereas qualitative data were collected using purposive sampling (Teddlie & Yu, 2017). A systematic sampling technique was deployed for quantitative data collection. This method helped the researchers to find essential cases for the study (Maxwell, 2005). Here, three schools from each region of FGEIs were systematically selected based on their average GPA (Kipkorir, 2015). The average GPA of schools was calculated as the Mean of SSC results for the last three years. So, a total of 36 schools were selected initially. From amongst these 36 selected schools, a total of 180 teachers and 180 students were randomly selected as the final sample. For qualitative data collection, 12 school principals for semi-structured interviews and 24 classrooms for qualitative observation were purposefully selected. In this way every effort was made to secure representativeness of the sample by schools, teachers, and students. Table 1 shows a complete sample for quantitative data collection of the study.

Instrumentation

The instruments used in this mixed-method study included a research questionnaire, interview and qualitative classroom observation.

A self-developed 40-item questionnaire was used for quantitative data collection. It contained dimensions like practices, tools, formats, issues and changes needed to improve classroom assessment. There were 10 items in the dimension of practices in classroom assessment which helped the researchers to explore the ways in which teachers were conducting classroom assessment. Similarly, there included five items each in the dimensions

of tools and formats in classroom assessment. It helped the researchers to find out the way the students were being assessed by the teachers. Moreover, 10 items were related to explore the issues faced by teachers and students in classroom assessment. Finally, 10 items were about the changes needed to improve classroom assessment. It helped the researchers to make suitable suggestions and recommendations about improving classroom assessment at the secondary level in the country. The research was carefully prepared in the light of the most recent literature and refined as per recommendations of the experts, too. All possible efforts were made to ensure the content validity and internal consistency of items. For checking its internal reliability, it was administered to 12 teachers and 48 students in a pilot study. Its internal reliability was equal to 0.92.

Table 1 Population and sample of the study

Name of region	Secondary schools		Secondary school teachers		Students	
	Total	Selected	Total	Selected	Total	Selected
1. Peshawar	28	03	45	20	885	25
2. Wah	22	03	35	16	743	15
3. Rawalpindi	30	03	45	18	832	25
4. Kharian	29	03	47	18	841	25
5. Lahore	06	03	15	09	280	05
6. Gujranwala	11	03	15	11	335	05
7. Multan	14	03	21	19	365	15
8 Bahawalpur	06	03	10	09	135	15
9. Karachi	10	03	14	13	180	15
10. Quetta	07	03	12	10	115	05
11. Chaklala	13	03	20	17	190	15
12. Fazaia	13	03	22	20	260	15
Total	189	36	295	180	5161	180

Table 2 Reliability values for the classroom assessment dimensions

Element of assessment	Number of items	Cronbach's alpha
Practices	10	.90
Tools	05	.98
Formats	05	.98
Issues	10	.88
Changes	10	.96
Overall	40	.92

Semi-structured interviews help the researchers to get an in-depth view of the research problem and maximum information in a short period (Cohen et al., 2010). Therefore, the researchers conducted semi-structured interviews with principals to obtain information regarding prevailing practices, tools, formats, issues, and changes in classroom assessment. Open-ended questions were included in these interviews. A non-judgmental role of the researchers was also ensured. The data thus obtained, was transcribed, coded, and interpreted accordingly.

Table 3 Sample for qualitative data collection

Principal Identity	Gender	Experience (Years)	Qualification	Grade level
PR-A	Female	13	M.Sc., M.Ed.	6-10
PR- B	Female	16	M.A., M.Ed.	6-10
PR- C	Male	12	Ph.D.	1-10
PR- D	Male	18	M.Sc., M.Ed.	6-10
PR- E	Male	15	M.Phil., M.Ed.	6-10
PR- F	Male	17	M.A., M.Ed.	1-10
PR- G	Male	18	M.Sc., M.Ed.	1-10
PR- H	Female	11	M.A., M.Ed.	1-10
PR- I	Male	13	M.A., M.Ed.	6-10
PR- J	Male	12	M.A., M.Ed.	1-10
PR- K	Female	22	M.Sc., M.Ed.	1-10
PR- L	Female	14	Ph.D.	1-10

Qualitative classroom observations help to provide a relationship between hypothetical statements and ground reality (Mouton & Marais, 1996). These are also supportive in complementing the findings and interpreting the results in a better way (Smit & Thomas, 2014). Hence qualitative classroom observations were also made a part of this study to obtain a real picture of the research phenomenon. Lessons were recorded and interpreted. These were also sent to the teachers to check for exactness and correctness.

Triangulation of data

Here, multiple methods, theories, investigators and/or data sets are used to answer the research questions. This process helps researchers to enhance the credibility and validity of research findings. Types of triangulation of data include methodological triangulation, theoretical triangulation, investigator triangulation, and data triangulation. In methodological triangulation, the researcher uses different methods to address a research topic. Varying

theories are deployed in theoretical triangulation, whereas multiple researchers are involved in data collection/analysis in the case of investigator triangulation. In data triangulation, researchers use multiple respondents, places and times to collect data. Triangulation of data helps the researchers to cross check evidence, find a complete picture of the research phenomenon and to enhance the validity of the research project (Bhandari, 2022). The researchers used triangulation of data by collecting quantitative data from teachers using the research questionnaire and qualitative data form principals through semi-structured interviews, as well as through classroom observations of teachers. It helped the researchers to attain the validity of the study. It also assisted in obtaining a complete picture of the research phenomenon.

Data analysis

The quantitative data were entered into the computer using SPSS version 24.0. For descriptive statistics, frequencies, Mean and standard deviation were calculated, whereas independent sample t-test and one-way ANOVA were used for inferential stats.

Results

Demographics of the respondents (Teachers)

As shown in Table 4, below, teachers in the age group 30-39 years formed the largest portion of the largest population of the study, with a frequency of 58; teachers in the age group 50-59 formed the smallest portion with a frequency of 17. Teachers of age groups 23-29 years and 40-49 years also presented a reasonable portion of the study population, with frequencies of 52 and 53 respectively. Similarly, teachers with experience of 11-20 years constituted the largest population of the study with a frequency of 101, and teachers with an experience of more than 21 years formed the smallest population of the study with a frequency of seven. Teachers with experience of 1-10 years presented a reasonable portion of the population with a frequency of 72. Teachers with a master of arts or science degree were the largest group of the population of the study, with a frequency of 161, and teachers with a Ph.D. were the smallest group of the study, with a frequency of 3.

Similarly, teachers having professional qualifications of B.Ed. constituted the majority of the study population, with a frequency of 105, and teachers having professional qualifications of M.Ed. constituted the minority of the study population, with a frequency of nine. Teachers with B.Ed. (Hons) and M.A. (Education) were also part of the study with frequencies of 46 and 20 respectively.

Table 4 Demographics of the respondents (Teachers)

Demographic	Variables	Frequency
Age (Years)	23-29	52
	30-39	58
	40-49	53
	50-59	17
Experience (Years)	1-10	72
	11-20	101
	21 and above	07
Academic Qualification	M.A./M.Sc.	161
	M.Phil./ MS	16
	PhD	03
Professional Qualification	B.Ed.	105
	B.Ed.(Honors)	46
	M.Ed.	09
	M.A.(Education)	20

Research question 1. Which practices of classroom assessment are being used in FGEIs?

Table 5 shows the views of teachers and students on practices in classroom assessment. The Means and standard deviations of the practices of classroom assessment are below.

According to teachers: teachers ask only those questions which they have taught (M = 3.51, SD = 0.63), they use easy language for better comprehension of students (M = 3.53, SD = 0.64), teachers pay special attention to academically weak students (M = 3.42, SD = 0.67), teachers encourage the students to maximize their participation (M = 3.41, SD = 0.53), teachers follow the guidelines of FBISE in preparation for assessment tests (M = 3.59, SD =0.51), teachers appreciate those who show good performance on tests (M = 3.57, SD = 0.54), a majority of students do copy from others (M = 1.83, SD = 0.41), they are punished if found copying from others (M = 1.84, SD = 0.54), They seek help from their relatives in completing their homework (M = 1.88, SD = 0.61), teachers select questions directly through exercises (M = 1.81, SD = 0.39).

Similarly, according to students: teachers ask only those questions which they have been taught (M = 3.54, SD = 0.61), they use easy language for better comprehension of students (M = 3.56, SD = 0.62), teachers pay special attention to academically weak students (M = 3.40, SD = 0.65), teachers encourage the students to maximize their participation (M =3.44, SD = 0.51), teachers follow the guidelines of FBISE in preparation for assessment tests (M = 3.52, SD = 0.52), teachers appreciate those who show good performance on tests (M =3.55, SD = 0.59), a majority of students do copy from others (M = 1.86, SD = 0.39), they are punished if found copying from others (M = 1.81, SD = 0.58), they seek help from their relatives in

completing their homework (M = 1.87, SD = 0.64), teachers select questions directly through exercises (M = 1.86, SD = 0.43).

The most common practices in classroom assessment include: teachers asking questions from amongst those that they have taught; teachers using easy language for better comprehension of students; teachers paying special attention to academically weak students; teachers encouraging the students for maximum participation in tests; teachers following a paper pattern of FBISE in-class assessment tests; and teachers appreciating the students who show good performance in tests. Similarly, the least common practices include a majority of students copying from other students during testing; students being punished if they are found copying from others; students seeking help from their relatives to complete their homework, and teachers selecting questions directly from their books.

Table 5 Practices in classroom assessment

Practices	Teachers		Students	
	Mean	*SD*	*Mean*	*SD*
1. Teachers ask only those questions which they have taught.	3.51	0.63	3.54	0.61
2. They use easy language for better comprehension of students.	3.53	0.64	3.56	0.62
3. Teachers pay special attention to academically weak students.	3.42	0.67	3.40	0.65
4. Teachers encourage the students to maximize their participation.	3.41	0.53	3.44	0.51
5. Teachers follow the guidelines of FBISE in preparation for assessment tests.	3.59	0.51	3.52	0.52
6. Teachers appreciate those who show good performance on tests.	3.57	0.54	3.55	0.59
7. A majority of students do involve in copying others.	1.83	0.41	1.86	0.39
8. They are punished if found involved in copying others.	1.84	0.54	1.81	0.58
9. They seek help from their relatives in completing their homework.	1.88	0.61	1.87	0.64
10. Teachers select questions directly through exercises.	1.81	0.39	1.86	0.43

The following paragraphs show extracts from semi-structured interviews of principals on practices in student assessment.

"I strongly recommend the teachers ask questions from amongst those that they have taught and to use easy language for better comprehension of students. A clear majority of the teachers follow these instructions and the GPA of my school remains good every year". [PR- D]

"The teachers in my school pay special attention to academically weak students, encourage them to maximum participation in tests and appreciate those who show good performance in tests". [PR- I]

During classroom observation of Teacher F, it was noted that the teacher was giving the assessment test from amongst the prescribed syllabus and the FBISE paper pattern was

also followed. In another class of Teacher E, it was noted the teacher was paying special attention to academically weak students. She was also found to use easy language for better comprehension of students.

Research question 2. Which tools of classroom assessment, are being used in FGEIs?

Table 6 below shows the views of teachers and students on tools in classroom assessment. The *Means* and standard deviations of tools of classroom assessment are presented below.

According to teachers: group work ($M = 3.11$, $SD = 0.46$), class test ($M = 3.14$, $SD = 0.48$), class exercise ($M = 3.18$, $SD = 0.39$), trial work during lessons ($M = 1.49$, $SD = 0.35$), homework ($M = 1.54$, $SD = 0.33$).

Similarly, according to students: group work ($M = 3.09$, $SD = 0.47$), class test ($M = 3.06$, $SD = 0.45$), class exercises ($M = 3.11$, $SD = 0.34$), trial work during lessons ($M = 1.52$, $SD = 0.37$), homework ($M = 1.57$, $SD = 0.31$).

Thus, the most common tools in classroom assessment include group work; class tests; and class exercises. Similarly, the least common tools include trial work during lessons, and homework.

Table 6 Tools in classroom assessment

Tools	Teachers		Students	
	Mean	*SD*	*Mean*	*SD*
11. Group work	3.11	0.46	3.09	0.47
12. Class test	3.14	0.48	3.06	0.45
13. Class exercise	3.18	0.39	3.11	0.34
14. Trial work during lessons	1.49	0.35	1.52	0.37
15. Homework	1.54	033	1.57	031

The following paragraphs present extracts from semi-structured interviews of principals on tools in student assessment:

"Class exercises and tests are vastly used by the teachers in my school at the secondary level as tools in student assessment. This results in better preparation of students for the SSC Examination in FBISE." [PR- B]

"I advise my teachers to use a variety of tools in student assessment, including trial work during lessons, class exercises, trial work during lessons, class tests, and homework." [PR- C]

In the classroom of Teacher C, it was noted the teacher was using group work as a tool for student assessment. During classroom observation of Teacher J, the students have observed the engaged in-class exercise. In another class of Teacher M, it was noted that

the teacher was telling the students about the importance of group work, class tests, and class exercises.

Research question 3. Which formats of classroom assessment, are being used in FGEIs?

Table 7 shows the views of teachers and students on formats in classroom assessment. The Mean and standard deviations of the formats of classroom assessment are presented below.

According to teachers the Means and standard deviations are: true/false questions (M = 3.12, SD = 0.41), multiple choice questions (M = 3.16, SD = 0.43), essay-type questions (M = 3.17, SD = 0.38), completion items (M = 1.44, SD = 0.36), matching items (M = 1.41, SD = 0.35).

Similarly, according to students, the Means and standard deviations are: true/false questions (M = 3.14, SD = 0.48), multiple choice questions (M = 3.18, SD = 0.44), essay type questions (M = 3.15, SD = 0.34), completion items (M = 1.46, SD = 0.37), matching items (M = 1.48, SD = 0.36).

Finally, it can be deduced that the most common formats in student assessment include True/false questions; Multiple type questions; and essay-type questions. Similarly, the least common formats include completion items and matching items.

Table 7 Formats in classroom assessment

Formats	Teachers		Students	
	Mean	*SD*	*Mean*	*SD*
16. True/false questions	3.12	0.41	3.14	0.48
17. Multiple choice questions	3.16	0.43	3.18	0.44
18. Essay type questions	3.17	0.38	3.15	0.34
19. Completion items	1.44	0.36	1.46	0.37
20. Matching items	1.41	0.35	1.48	0.36

The following paragraphs show extracts from semi-structured interviews of principals on formats of student assessment.

"At the secondary level, I advise the teachers to follow FBISE instructions regarding the assessment of students. A large majority follows multiple-choice and essay-type formats during the conduct of student assessments" [PR- C]

"My institution is continuously producing the best results at SSC Level in FBISE. A major reason for it is the usage of all student assessment formats including reason matching items, true/false questions, completion items, and essay type and multiple-choice questions." [PR- G]

It was observed in the classroom of Teacher A that he was giving the test which was composed of multiple-choice and essay-type questions. In another classroom of Teacher E,

it was seen that the teacher was taking the oral test in mathematics and true/false questions were being asked.

Research question 4. What are the issues in Classroom Assessment in FGEIs?

Table 8 shows the views of teachers and students on issues in classroom assessment. The *Means* and standard deviations of issues in classroom assessment are below.

According to teachers: Some of the students habitually remain absent on test days (M = 3.41, SD = 0.51), some of the students show less interest in assessment tasks (M = 3.47, SD= 0.60), the response of the parents to assessment tests is poor (M = 3.32, SD = 0.57), the school does not provide adequate materials for classroom assessment (M = 3.32, SD = 0.52), proper guidance on classroom assessment is not provided (M = 3.36, SD = 0.53), teachers lack professional assessment training (M = 3.49, SD = 0.56), classroom assessment increases the workload of teachers (M = 3.52, SD = 0.55), it takes much of their class teaching time (M = 3.43, SD = 0.59), teachers lack the skills to efficiently conduct assessment tasks (M = 3.51, SD = 0.52), sometimes, students do not submit their tests for checking (M = 3.49, SD = 0.57).

Similarly, according to students: some of the students habitually remain absent on test days (M = 3.36, SD = 0.53), some of the students show less interest in assessment tasks (M = 3.42, SD = 0.62), the response of the parents to assessment tests is poor (M = 3.31, SD = 0.57), the school does not provide adequate materials for classroom assessment (M = 3.37, SD = 0.51), proper guidance on classroom assessment is not provided (M = 3.48, SD = 0.55), Teachers lack professional assessment training (M = 3.46, SD = 0.58), classroom assessment increases the workload of teachers (M = 3.48, SD = 0.57), it takes much of their class teaching time (M = 3.42, SD = 0.53), teachers lack the skills to efficiently conduct assessment tasks (M = 3.50, SD = 0.55), sometimes, students do not submit their tests for checking (M = 3.42, SD = 0.52).

Finally, it can be deduced that the issues in classroom assessment include: some of the students habitually remain absent on test days, some of the students show less interest in assessment tasks, the response of the parents to assessment tests is poor, the school does not provide adequate materials for classroom assessment, proper guidance on classroom assessment is not provided, teachers lack professional assessment training, classroom assessment increases the workload of teachers, it takes much of their class teaching time, teachers lack the skills to efficiently conduct assessment tasks, sometimes, students do not submit their tests for checking.

Table 8 Issues in classroom assessment

Issues in classroom assessment	Teachers		Students	
	Mean	*SD*	*Mean*	*SD*
21. Some of the students habitually remain absent on test days.	3.41	0.51	3.36	0.53
22. Some of the students show less interest in assessment tasks.	3.47	0.60	3.42	0.62
23. The response of the parents to assessment tests is poor.	3.32	0.57	3.31	0.57
24. The school does not provide adequate materials for classroom assessment.	3.36	0.52	3.37	0.51
25. Proper guidance on classroom assessment is not provided.	3.49	0.53	3.48	0.55
26. Teachers lack professional assessment training.	3.48	0.56	3.46	0.58
27. Classroom assessment increases the workload of teachers.	3.52	0.55	3.48	0.57
28. It takes much of their class teaching time.	3.43	0.59	3.42	0.53
29. Teachers lack the skills to efficiently conduct assessment tasks.	3.51	0.52	3.50	0.55
30. Sometimes, students do not submit their tests for checking.	3.49	0.57	3.42	0.52

In the following paragraphs, extracts from semi-structured interviews of principals on challenges in student assessment have been mentioned.

"My teachers are facing several challenges in student assessment. Some of these include the habitual absence of some students on test day and less interest in assessment tasks, poor response and less cooperation of parents, and excessive." [PR- D]

"Some of the teachers lack professional assessment training and they have less interest in conducting assessment tests, too. This results in poor academic achievements of their students." [PR- I]

During classroom observation of Teacher A, it was noted that the attendance of students was poor. The teacher stated that some of the students habitually remain absent on test days. It was observed in the classroom of Teacher N that some of the students were not taking interest in the assessment task. The teacher highlighted that these students have less attention to their tests and their parents do not respond positively to assessment test and their results.

Research question 5. What are the changes needed to improve classroom assessment in FGEIs?

Table 9 shows the views of teachers and students on changes needed to improve classroom assessment. The Means and standard deviations of changes needed to improve classroom assessment are below.

According to teachers: a variety of assessment tools and formats may be used (M = 3.51, SD = 0.51), the workload of teachers may be reduced (M = 3.57, SD = 0.60), special attention may be given to the students with learning deficiencies (M = 3.52, SD = 0.57), students should be guided on improving their weaknesses (M = 3.56, SD = 0.52), extensive in-service training

on assessment is to be provided to teachers (M = 3.59, SD = 0.53), provision of adequate assessment materials to the teachers may be ensured (M = 3.58, SD = 0.56), a reasonable time should be allowed for students to solve assessment tasks (M = 3.54, SD = 0.53), questions may be based on student learning outcomes (M = 3.51, SD = 0.55), appreciation should be given to those who perform well (M = 3.58, SD = 0.51), engagement in test malpractices may be discouraged (M = 3.56, SD = 0.54).

Similarly, according to students: a variety of assessment tools and formats may be used (M = 3.56, SD = 0.53), the workload of teachers may be reduced (M = 3.52, SD = 0.62), special attention may be given to the students with learning deficiencies (M = 3.51, SD = 0.57), students should be guided on improving their weaknesses (M = 3.57, SD = 0.51), extensive in-service training on assessment is to be provided to teachers (M = 3.58, SD = 0.55), provision of adequate assessment materials to the teachers may be ensured (M = 3.56, SD = 0.58), a reasonable time should be allowed for students to solve assessment tasks (M = 3.52, SD = 0.54), questions may be based on student learning outcomes (M = 3.54, SD = 0.50), appreciation should be given to those who perform well (M = 3.53, SD = 0.52), engagement in test malpractices may be discouraged (M = 3.51, SD = 0.51).

It can be deduced that the teachers and students believe that: a variety of assessment tools and formats may be used, the workload of teachers may be reduced, special attention may be given to the students with learning deficiencies, students should be guided on improving their weaknesses, extensive in-service training on assessment is to be provided to teachers, provision of adequate assessment materials to the teachers may be ensured, a reasonable time should be allowed for students to solve assessment tasks, questions may be based on student learning outcomes, appreciation should be given to those who perform well, engagement in test malpractices may be discouraged.

Table 9 Changes needed to improve classroom assessment

Changes needed to improve classroom assessment	Teachers		Students	
	Mean	*SD*	*Mean*	*SD*
31. A variety of assessment tools and formats should be used.	3.51	0.51	3.56	0.53
32. The workload of teachers should be reduced.	3.57	0.60	3.52	0.62
33. Special attention may be given to the students with learning deficiencies.	3.52	0.57	3.51	0.57
34. Students should be guided on improving their weaknesses.	3.56	0.52	3.57	0.51
35. Extensive in-service training on assessment is to be provided to teachers.	3.59	0.53	3.58	0.55
36. Provision of adequate assessment materials to the teachers may be ensured.	3.58	0.56	3.56	0.58
37. A reasonable time should be allowed for students to solve assessment tasks.	3.54	0.53	3.52	0.54
38. Questions may be based on student learning outcomes.	3.51	0.55	3.54	0.50
39. Appreciation should be given to those who perform well.	3.58	0.51	3.53	0.52
40. Engagement in test malpractices may be discouraged.	3.56	0.54	3.51	0.51

In the following paragraphs, extracts from semi-structured interviews of principals on changes needed to improve classroom assessment have been mentioned.

"Workload should be decreased and continuous professional development is made available for teachers." [PR-C]

"Teachers should provide motivation and encouragement to the students. A variety of assessment techniques should be used by the teachers during the assessment task." [PR-E]

Inferential statistics

Hypothesis 1. The teachers differ by gender in their opinions on the changes needed to improve classroom assessment

Table 10 shows that the Mean scores for male and female teachers are 30.39 and 32.03 respectively. Male and female teachers have a *Mean* difference of 1.638 along with a t value of 2.21 and sig. value .035. It can be concluded that male and female teachers differ in their views on how to change classroom assessment for improvement.

Table 10 Differences among views of teachers upon the changes needed to improve classroom assessment, based on gender

Gender	N	*Mean*	*Std. D*	Df	M.D	T	Sig
Male	84	30.39	6.03				
				178	1.638	2.12	.035
Female	96	32.03	4.26				

Hypothesis 2. The teachers differ by age in their opinions on the changes needed to improve classroom assessment

To verify this hypothesis, an ANOVA test was deployed using SPSS (24.0). The results are shown in Table 11 And show that teachers of different ages differ in their opinions on changes needed to improve classroom assessment in FGEIs as ANOVA (F (2,177) = 4.722, p = .004).

Table 11 Differences in issues in classroom assessment, based on age

	Sum of Squares	*Df*	*Mean Square*	*F*	Sig
Between Groups	49.531	2	12.368	4.722	.004
Within Groups	7934.462	177	39.351		
Total	7983.993	179			

Discussion, conclusion, recommendations

This study explored practices, tools, formats, issues, and changes needed to improve classroom assessment at the secondary level in FGEIs. The most common practices in classroom assessment included: teachers asking questions from amongst those, they have taught, teachers using easy language in an assessment task, teachers paying special attention to academically weak students, teachers encouraging students to participate in tests, and teachers following the paper pattern of FBISE. Moreover, the common tools included: group work, class test, and class exercises, whereas the common formats in classroom assessment included: true/false questions, multiple type questions, and essay-type questions. These findings are similar to those of Thomas (2017), Kipkorir (2015), and Shazadiy & Rafaty (2018). In addition to these, the study found that issues in classroom assessment included: some of the students do not take or submit assessment tests and show lack of interest, parents do not show good response on assessment test and its results, sufficient guidance, training and adequate materials are not provided to teachers on classroom assessment, workload of teachers increases and much of class teaching time is spent in assessment tests, and the teachers lack professional skills to efficiently conduct assessment tests. Finally, the study explored how classroom assessment at secondary level can be improved by taking various steps: different assessment tools and formats may be used, the workload of teachers may be reduced, students with learning deficiencies may be given special attention and they should be properly guided to improve improving their weaknesses, teachers may be provided extensive in-service training and adequate materials on assessment, students should be allowed sufficient time to solve assessment tasks, questions may be student learning outcomes (SLO)-based, students performing well should be appreciated, and engagement in test malpractices may be discouraged. These results are similar to the findings of previous research including Rahim et al. (2014), Hussain et al., (2019), and Buabeng et al., (2019).

Now we present suggestions and recommendations for the teachers, principals and administration of FGEIs. The teachers should motivate the students for their maximum and active participation in classroom assessment tasks. They should contact parents to highlight the importance of classroom assessment. They should prepare SLO-based assessment tasks and emphasize assessment for learning. The principals have a key importance in the FGEIs system and they should focus on improving the quality of classroom assessment. They may help the teachers by providing guidance, training and adequate materials of classroom assessment. Their interest in this task may cause an improvement in the overall results of the institutions. Students may become efficient at performing well at SSC Level Exam of the Federal Board of Intermediate & Secondary Education. Finally, that the administration of FGEIs should arrange continuous professional training of teachers on classroom assessment, and provision of adequate assessment materials should also be ensured. A central plan of assessment may also evaluate performance of students and teachers during the session.

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