

## **Teachers' Perceptions about the Use of Classroom Assessment Techniques in Elementary and Secondary Schools**

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### **Abstract**

Assessment plays central role in process of effective instruction. A number of assessment techniques are associated with the quality of instruction and evaluating its learning outcomes. This study was designed to analyze the perceptions of teachers about using classroom assessment techniques at elementary and secondary schools in district Lahore. The sample comprised of 500 teachers (300 elementary & 200 secondary) selected randomly. The data were collected through an opinionnaire which contained 55 items, each at five point Likert type scale, ranging from strongly disagree (1) to strongly agree (5). The Cronbach Alpha value of internal consistency of the instrument was measured at .939. The results revealed that most of the public and private school teachers use summative assessment. They believe that formative and summative assessment can play more pivotal role in promoting students' learning in the classroom. Teachers may also use other alternative assessment techniques such as peer assessment and portfolio assessment. Implementing these assessment techniques will result in more effective and holistic development of elementary and secondary grade students both in public and private schools.

**Keywords:** Classroom assessment techniques, Teachers' perceptions, Formative assessment

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## **Introduction**

Assessment is a major part of educational institutions which provides comprehensive information about the overall learning development of the teacher and students' performance in educational settings. It is the responsibility of teachers to use different classroom assessment techniques for assessing students' performance or focus on quality assessment. Literature provides adequate information that teacher needs to focus on self-development and for this he/she should have ample knowledge and skills in classroom assessment. Dhindsa, Omar, and Waldrup (2007) found that students are developing authentic and a realistic approach which is being related to their real learning that is done instead of measuring luck. Present research results show that teachers use different classroom assessment techniques in their classroom without knowing its purpose. The main reason is that teacher is not fully aware of the purpose of different classroom assessment techniques for students' learning (Stiggins & Conklin, 1992). Pellegrino and Goldman (2008) recommended the way that learning of students can be improved by the classroom assessment. Few researches are conducted on teachers' perception about their assessment practices and assessment skills. The purpose of current study is to investigate teachers' perceptions about the use of formative, summative and diagnostic assessment techniques such as observations, oral questioning, quiz, surprise tests, terminal tests, portfolio assessment, peer assessment and self-assessment at elementary or secondary school level.

Assessment considers as the major part in effective teaching learning process. All assessment practices are commonly used to develop different types of hypotheses which are related to educational assessment. In previous researches, it is used to train their graduates in teaching learning process and conduct professional training programs or courses to polish their skills such as conducting training sessions by the teachers to promote divergent thinking abilities among their students (Hargreaves, 1997). Struyven, Dochy and Janssens (2005) reveal that there are three important objectives for assessment in the educational context. The first one is to plan effective learning strategies for developing accountability habits among students, second is issue degree and result card after passed or fail the examination, and the third is to provide feedback of school and teachers' efforts or abilities and make them accountable for their all performances or duties which they serve for improvement of students' learning and found the observable significant influence on the performances of students.

Formative assessment also known as assessment for learning, is a major source for improvement of students' learning (Clark, 2010; Eyal, 2012; Johannesen, 2013). William and Thompson (2008) stated that many terms are used for formative assessment and discussed about some other type of assessing students' learning like monitoring assessment, diagnostic assessment, and formative assessment. In monitoring assessment different activities or actions are monitored which is related to educational learning process like for teacher strategies for assessing students' skills and knowledge, students learning abilities which teacher promotes in classroom, or all those activities which are designed and planned in classroom for effective teaching learning process. It facilitates about the effectiveness of whole education system and provides guidelines or instructions where the mistakes are found in effective teaching learning process and how to overcome these learning difficulties during session. Whereas in diagnostic assessment provides detailed information about learning difficulties of learners and provides its remedies how to solve their learner difficulties which they have face in learning process. The question is discussed in diagnostic assessment is that what is going wrong and how to overcome these learning difficulties? However in formative assessment, the question is dealt with that what to do about it? The students in formative assessment is actively engaged, because of the reasons that are collecting students data step by step to improve their learning progress (William, 2011).

Summative assessment is taken at the end of session and it is used for decision making process because it provides comprehensive information about whole session what teacher have taught and what students have learned during whole session (Wojtczak, 2002). Summative assessment is to provide detailed information about student or teacher learning activities after the completion of session or study period (Anthony & Susan, 2005). Summative assessment facilitates to decision makers and policy makers about the current performance of teaching learning process. American researchers (Bloom, Hastings, & Madaus, 1971) discussed that summative assessment is not only concerned with the grade position of the students but it also deals with the whole educational system performance like institutions, teacher, students and all those educational activities which are arranged for making effective teaching learning system. Summative assessment helps teacher to evaluate their students' performance what they have learned during whole session from their teacher classmates or learning activities which are designed to promote critical thinking among their students because the final decision about students' performance is taken on the basis of summative assessment (Luo, 2003).

Some researchers discussed that diagnostic assessment is different from formative assessment but many researchers agree that diagnostic assessments are used to make formative assessment effective. Diagnostic assessments are used for identifying learners' difficulties and provide information about learner weak areas so that remediation could be possible through well-planned instruction and acknowledging learners' needs. Wiggins and McTighe (2007) assert that pre-assessments include "checks of prior knowledge and skill levels and surveys of interests or learning-style preferences" (p. 101).

After formative and diagnostic assessment, the most commonly used classroom assessment technique is portfolio assessment which is not new terms in education. Herrera, Murry and Cabral (2007) stated that the purpose of portfolio is to integrate students work on one places, as they state "Portfolio is an effective tool which enables students to collect his work and assess his performance according to set criteria and improve his performance or products to meet the established criteria" (p. 29). Some researchers focus on the development of portfolio for effective teaching learning process. In portfolio assessment teachers decide that the nature of students collective work their efforts and set the criteria for assessment of student work (Wiggins & McTighe, 2007). Teacher gives them task or work on daily basis which includes reading, writing, sketching, short assignment etc. According to Herrera, (2007), in portfolio assessment students' work is displayed which shows students' learning and their achievement. Portfolio is considered as a best choice for collection of student work rather than traditional assessment because in portfolio assessment students' work is integrated in one document and all record is kept safely for improvement of students' work.

One of the most effective aspects of portfolio assessment is that it provides information about students' performance on the basis of longitudinal observation and assesses students' progress or their proficiency level which cannot easily be examined through traditional paper pencil test. In paper pencil test students' performance is assessed which is more or less based on rote memorization and decision is taken on the basis of final written test, rather than portfolio assessment (Herrera, 2007). It is an instrument that helps the students to develop higher order skills (Kotsopoulos, Lee, Cordy, & Bruyns, 2014).

Like self-assessment, educators consider peer-assessment beneficial, as it provides opportunities to the students to recognize targeted learning goals (Chappuis & Stiggins, 2004). In peer-assessment, students assess their peer performance and compare it with some pre-determined criteria. Another most important element of peer assessment is to involve students in classroom discussion and provide them opportunity to give their

critical reflection on each other's work instead of just signal teacher's comments on students' work. In this way, peer assessment will be the most effective tool to develop confidence and competitive skills among the peers.

Black and Wiliam (1998) recommend that students must be well trained and fully aware of the importance of peer assessment. As students criticize to their peer work and use informal language which is easy and comprehensive to them. Herrera et al. (2007) stated that "the idea of peer-assessment in the context that students evaluate other students' work to the established criteria, which "enable them to discern outstanding elements of both their own classmate's performances and products" (p. 34).

Self-assessment is an important instrument in teaching learning process as it helps students to evaluate their own performance according to predetermined criteria. Self-assessment provides opportunity to students to improve their weak learning areas and improve their performance according to set criteria. Black and Wiliam (1998) discussed that students are interested and show willingness to assess their own performance. Self-assessment provides clear picture to learners about their learning after self-assessment students are aware of their weak learning areas and they make their extra efforts to improve their learning through their own assessment. Through self-assessment students are able to make their extra efforts for the improvement of their learning weaknesses and compare themselves with their peers or classmates. Once they will be able to know their weaknesses and strengths, they become more committed and more effective as learners; their own assessment becomes an object discussion with their teachers and with one another.

Self and peer assessment help students to control their learning put extra efforts for enhancing their performance in teaching learning process. Various teachers provide instruction about self-assessment and provide rubrics for their students to assess their performance. The rubrics integrate the criteria that provide the opportunity students to reflect 20 on the extent to which they have made progress. Atkin, Black, and Coffey (2001) stated that quality of alternative assessment that provides opportunity to learner to ask questions by their own self (as cited in Chappuis & Stiggins, 2004, p. 43).

The study was delimited to the district Lahore of Punjab, Pakistan, so the research team cannot make any statement that these findings will be truly generalizable to any other setting, other times or to the classroom assessment techniques can be analyzed. Time factor was another limitation of the study and sample was small, hence the results cannot be truly generalized on the whole Punjab as the province has variation with regard to gender, rural/urban, northern/southern/ central regions etc.

This study will be significant in exploring the classroom assessment techniques used by teachers at elementary and secondary schools, male and female teachers and public and private school teachers. This study may help in elaborating the most frequently used classroom assessment techniques. It may provide an evidence to improve the usage of classroom assessment techniques and exploring these techniques as tools to improve the learning of students that teacher's use assessment techniques to provide reinforcement to students in the current context of elementary and secondary schools of district Lahore.

The objectives of the study were as following:

1. To explore the perceptions of teachers about classroom assessment techniques used by elementary and secondary school teachers of district Lahore
2. To compare the perceptions of teachers about classroom assessment techniques used by male and female teachers of district Lahore.
3. To compare the perceptions of teachers about classroom assessment techniques use by public and private school teachers of district Lahore.
4. To compare the difference embedded in teacher classroom assessment techniques between elementary and secondary school teachers of district Lahore.
5. To recognize the major methods that teachers use to assess students' learning at elementary and secondary school level in district Lahore.

On the basis of research objectives, following research questions were formulated.

1. What are the perceptions of elementary and secondary school teachers about classroom assessment techniques in district Lahore?
2. What are the gender-wise differences in perceptions of teachers about classroom assessment techniques in district Lahore?
3. What are the differences in perceptions of teachers about classroom assessment techniques used by public and private school teachers of district Lahore?
4. What are the differences embedded in teacher classroom assessment techniques between elementary and secondary elementary school teachers?
5. Which classroom assessment techniques are more frequently used by the teachers to assess their students learning?
6. Which classroom assessment techniques are used most frequently by the elementary and secondary school teachers?

## **Methodology**

This study was quantitative in nature. The cross-sectional survey design was used in this research. The survey was used to determine the classroom assessment techniques use among elementary and secondary level and public and private school teachers in district Lahore was survey which is administered to teachers. Asking teachers about their classroom assessment techniques, using a survey, provided information on these techniques in elementary and secondary classrooms of public and private schools. The teachers participated mostly in supplying in extent of differences between teachers' classroom assessments techniques used in classrooms, which had varied significantly. The information gained through these surveys are valuable for the schools and school division personnel who are responsible for developing the policies and make plans about the use of classroom assessment techniques in the classroom. Furthermore, data taking from different teachers provide interesting findings concerning the usage of classroom assessment techniques.

## **Population and Sample**

The population of the study was all the teachers of elementary and secondary schools of Lahore. These were: 2011 male elementary teachers, 3821 female elementary teachers, 3898 male secondary school teachers, and 6500 female secondary teachers of Lahore (School Education Department, 2017). The population that was targeted was all 16,230 teachers of elementary and secondary teachers. The sample of 550 teachers was taken randomly from the population. In which, 330 elementary education teachers, 220 and secondary school teachers were selected randomly from the population.

## **Instrumentation**

A five-point Likert type scale was designed by the researchers for data collection. The instrument was developed through a rigorous procedure, as described in four steps.

### **Step 1: Scale development**

Instrument for teachers' perception about use of assessment practices based on Likert scale was developed. In this, we considered seven constructs for its development that are (i) importance of assessment, (ii) formative assessment, (iii) diagnostic assessment, (iv) summative assessment, (v) portfolio assessment, (vi) peer assessment and (vii) self-assessment. The instrument/scale was developed about 10 Likert type items on each of the construct under the supervision of the supervisor. After the construction of items its content validity and concise checking of every item was done by the supervisor.

**Step 2: Presentation of scale to M. Phil. Education scholars in seminar mode**

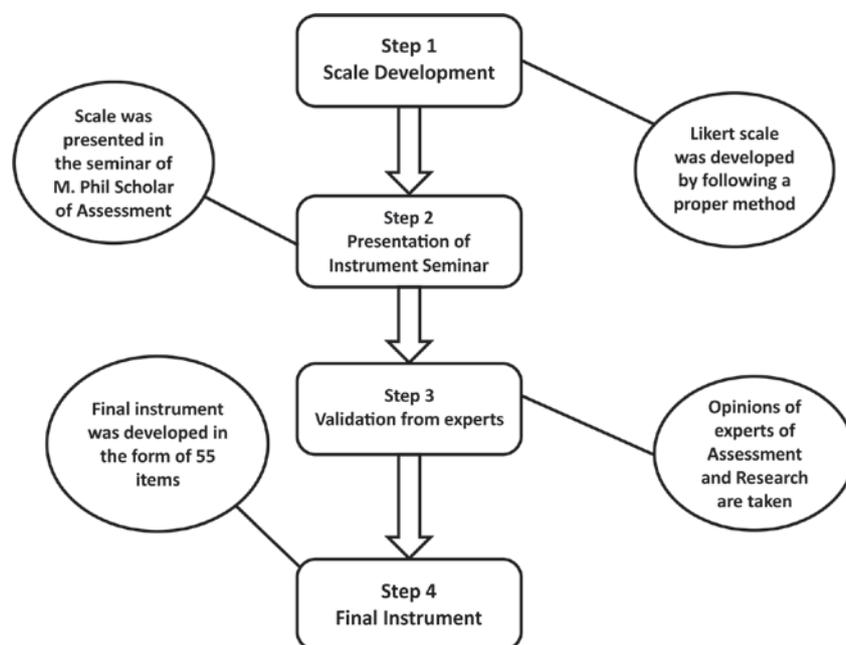
The scale was presented to M. Phil. Education Scholars in a seminar where they recommended different suggestions for the improvement of instrument. A scholar said that mention the domains of the lower and higher cognitive abilities. For instance, low abilities include knowledge and comprehension and higher abilities included problem solving skills. Another suggested that change the word of 'stated learning objective' to 'student learning outcomes'. One of the scholars suggested changing the arrangement of constructs of portfolio assessment.

**Step 3: Opinions of experts**

The scale was analyzed by the five experts of area. Expert I gave the review that some items should be changed in respect to their format. Some statements should be changed to show that these are the practices used by teachers. He also suggested that items for each construct would be 6-7 items. Expert 2 suggested that change the item 3 by replacing some strategies. Expert 3 found the instrument appropriate. Expert 4 suggested that some of the statements need to be rephrased. A repeated concept is deleted in the statements. He also recommended that check the language of statements; it is understandable to the elementary and secondary school teachers. Expert 5 indicated one irrelevant item which was removed.

**Step 4: Final instrument**

Finally, the instrument was comprised of 55 items on Likert type scale. Then it was used for further research and applied on the large sample. After piloting the instrument on 50 participants, it was found highly reliable as its reliability was tested on SPSS. Reliability co-efficient of scale was 0.939 which is highly reliable.



*Figure 1* Instrument Development and Validation Process

Data were collected from elementary and secondary teachers in March 2017 by using survey questionnaire as instrument. These surveys were administered by the researchers; the researchers personally visited the institutions and collected the data obeying the ethical consideration. Teachers were informed that their participation is very meaningful as they fill the data honestly. Surveys were collected at the spot from the participants and organized. Therefore, total 500 surveys were administered and total 500 surveys were completed. The analysis of data was done using SPSS. The results obtained were summarized and then these were compared according to the following categories from the survey instrument: (1) demographic data which were used to compare public/private institutions, gender, level indicated by teachers; (2) reliability of the scale; and (3) factors for teachers considered on classroom assessment techniques such as, importance of assessment, formative assessment, diagnostic assessment, summative assessment, portfolio assessment, peer assessment and self-assessment.

The researchers collected data after seeking permission from the heads of the schools. Uniform procedures were followed during the administration of the opinionnaire. The teachers were given sufficient time to complete the opinionnaire; however, caution was taken not to discuss or copy each other's responses while filling opinionnaire. The participants were guaranteed that their responses would be kept confidential in compliance with the research ethics.

**Data Analysis and Results**

Teachers were requested to select one level, institute and gender when they had to answer the statements of the survey. Comparisons of above mentioned categories revealed the following results.

**Table 1**  
*Frequency distribution of demographic data*

	N	Percent
Male	189	37.8
Female	311	62.2
Elementary Education	300	60
Secondary Education	200	40
Public	266	53.2
Private	234	46.8

Table 1 indicates that 189 male teachers and 311 female teachers responded with the proportion of 37.8% and 62.2% respectively and 300 elementary school teachers and 200 secondary school teachers responded with the proportion of 60% and 40% respectively. There were 266 public and 234 private school teachers who responded with the proportion of 53.2% and 46.8% respectively.

**Table 2**  
*Difference in mean values of classroom assessment techniques by gender, school type and level*

Grouping Variable	N	Mean	SD	df	t-value	P	Eta Square
Male	189	190.3598	35.088	328.597	-6.78	0.000**	0.08
Female	311	210.68	27.68				
Public	266	202.045	30.84	498	-.707	0.541*	
Private	234	204.085	33.72				
Elementary	300	216.7067	22.54	317	12.649	0.000**	0.24
Secondary	200	182.44	33.6				

\*\*level of sig <.01, \* level of sig <.05

Table 2 shows that an independent-samples t-test was conducted to compare the classroom assessment techniques scores for male and female school teachers. There was a significant difference in scores for male ( $M = 190.35$ ,  $SD = 35.08$ ) and female ( $M = 210.68$ ,  $SD = 27.68$ ;  $t(328.56) = -6.78$ ,  $p = .000$ ). For measuring effect size, we employ eta square to measure effect size which is (eta squared = .008) and it had very small effect size. It is used to compare the classroom assessment techniques scores for public and private schools teachers.

There was no significant difference in scores of public school ( $M = 202.045$ ,  $SD = 30.84$ ) and private school ( $M = 204.085$ ,  $SD = 33.72$ ;  $t(498) = -.707$ ,  $p = .541$ ). It is also indicated that there is a significant difference in scores for elementary ( $M = 216.7067$ ,  $SD = 22.54$ ) and secondary ( $M = 182.44$ ,  $SD = 33.6$ ;  $t(317) = 12.649$ ,  $p = .000$ , two-tailed). For measuring effect size, we employed eta square to measure effect size which was (eta squared = .006) and it had very small effect size.

It was predicted that male and female schools had significant difference as they used different classroom assessment techniques to measure students learning and it had a very small difference that was almost negligible. This study investigated the teachers' perception about the use of classroom assessment techniques at elementary and secondary schools of district Lahore. It was also found that in public and private institutions, there was no significant difference in using the classroom assessment techniques at both elementary and secondary level. Both used comparatively the same method to assess students' learning.

**Table 3**

*Mean score of classroom assessment techniques at elementary (N=300) and secondary (N=200) level & male (N=189) and female (N=311) (N=500)*

	Grouping Variable	Mean	SD
Formative Assessment	Overall	33.13	6.59
	Elementary Education	23.88	3.76
	Secondary Education	20.69	4.72
	Male	31.41	7.12
	Female	34.18	6.03
Diagnostic Assessment	Overall	26.31	5.01
	Elementary Education	28.16	3.83
	Secondary Education	23.53	5.28
	Male	24.70	5.43
	Female	27.28	4.47
Summative Assessment	Overall	32.58	6.13
	Elementary Education	35.02	4.16
	Secondary Education	28.91	6.75
	Male	30.25	6.87
	Female	33.99	5.15
Portfolio Assessment		28.85	5.50
	Elementary Education	30.36	4.89
	Secondary Education	26.59	5.62
	Male	27.57	5.78
	Female	29.63	5.18

Peer Assessment	Overall	29.28	5.48
	Elementary Education	31.36	4.26
	Secondary Education	26.15	5.62
	Male	27.25	5.89
	Female	30.51	4.82
Self-Assessment	Overall	30.23	6.09
	Elementary Education	32.67	4.88
	Secondary Education	26.56	5.91
	Male	27.84	6.20
	Female	31.68	5.56

Table 3 describes that the overall Mean and standard deviation (SD) of formative assessment was 33.13 and 6.59 respectively. For diagnostic assessment, the overall values were  $M=26.31$ , and  $SD= 5.01$ . For summative assessment  $M=32.58$ , and  $SD= 6.13$ ; for portfolio assessment  $M=28.85$  and  $SD= 5.5$ , peer assessment  $M=29.28$  and  $SD= 5.48$ , and self-assessment  $M=30.23$  and  $SD= 6.09$ . Hence based on the descriptive statistics, the most frequently used assessment techniques were formative and summative, while diagnostic assessment was used rarely.

It was found that in elementary schools ( $N=300$ ) Mean and standard deviation for formative assessment was  $M = 23.88$ ,  $SD = 3.76$ , for diagnostic assessment  $M = 28.16$  and  $SD = 3.83$ , for summative assessment  $M = 35.02$  and  $SD = 4.16$ , for portfolio assessment  $M = 30.36$  and  $SD = 4.89$ , for peer assessment  $M = 31.36$  and  $SD = 4.26$ , for self-assessment  $M = 32.67$  and  $SD = 4.88$ . Therefore, the most frequently used classroom assessment technique was summative assessment. In secondary schools ( $N=200$ ) mean and standard deviation for formative assessment  $M = 20.69$  and  $SD = 4.72$ , for diagnostic assessment  $M = 23.53$  and  $SD = 5.28$ , for summative assessment  $M = 28.91$  and  $SD = 6.75$ , for portfolio assessment  $M = 26.59$  and  $SD = 5.62$ , for peer assessment  $M = 26.15$  and  $SD = 5.62$ , for self-assessment  $M = 26.56$  and  $SD = 5.91$ . Therefore, in secondary schools most frequently used classroom assessment technique was summative assessment.

It was also found that male teachers ( $N= 189$ ) mean and standard deviation for formative assessment  $M = 31.41$  and  $SD = 7.12$ , for diagnostic assessment  $M = 24.7$  and  $SD = 5.43$ , for summative assessment  $M = 27.28$  and  $SD = 6.87$ , for portfolio assessment  $M = 27.57$  and  $SD = 5.78$ , for peer assessment  $M = 27.84$  and  $SD = 5.89$ , for self-assessment  $M = 27.84$  and  $SD = 6.2$ . Consequently, male teachers used most frequently classroom assessment technique was formative assessment. Female teachers ( $N=211$ ) showed mean and standard deviation for formative assessment  $M = 34.18$  and  $SD = 6.03$ , for diagnostic assessment  $M = 27.28$  and  $SD = 4.47$ , for summative assessment  $M = 33.99$

and  $SD = 5.15$ ), for portfolio assessment  $M = 29.63$  and  $SD = 5.18$ ), for peer assessment  $M = 30.51$  and  $SD = 4.82$ , for self-assessment  $M = 31.68$  and  $SD = 5.56$ . Consequently, female teachers used both formative and summative assessment techniques.

The female teachers as compared to male teachers show that male teachers used formative classroom assessment technique mostly in their teaching learning process while female teachers use formative and summative classroom assessment techniques mostly in their classrooms to assess the learning of students. It is also found that classroom assessment techniques at secondary and elementary level varied. It is initiated that there is a very small difference in them. Both elementary and secondary school teachers use summative assessment in their classrooms to assess students' ability. Elementary schools use mostly the summative assessment through which they analyze the learning of the students and give feedback. In elementary schools also, summative assessment is used by the teachers.

### **Discussion, Conclusion and Recommendations**

The study concludes that the most frequently used classroom assessment techniques among all the categories are formative assessment and summative assessment. The study of Mussawy (2009), however, does not support to this findings. Another study found that the effectively used classroom assessment techniques include projects, portfolios, self-assessments, peer evaluations, and weekly assignments which had provided with at the spot response (Gaytan & McEwen, 2007). While analyzing in specific dimensions, it has been found that public and private schools used almost the same techniques. In male and female teachers, there is a very small change that is almost negligible. Both of them have used the summative assessment mostly in their teaching process whereas male teachers had also used formative assessment. In elementary and secondary schools, they both also use summative assessment. However, our results varied from the research that peer assessment is classroom assessment technique which students gave instant response (Christopher, Thomas & Tallent-Runnels, 2004). Nevertheless the importance of self-assessment is most inconsistently used to tackle with higher order skills that is missing (Sarwar, Yousaf & Ranjhas, 2011) has supported in the way that self-assessment is found at almost lowest used classroom assessment technique. However, the findings are somewhat supported by the Ministry of Education (2009) as stated that formative and summative are mostly used in classrooms by language teachers. However, the findings may vary in the other city of Pakistan. As this research surveys only the opinions of teachers of district Lahore, future studies may be conducted on higher education system to find the classroom assessment techniques used and it may also conducted on the comparison of any two cities rather than domains e.g., male/female, public/private. It may also be conducted on analyzing the classroom assessment techniques to evaluate teachers teaching.

Based on the findings and conclusions, the study recommends that teachers should use formative assessment more effectively for their holistic development. They should be trained to use diagnostic assessment that enables them to diagnose the problems of the students and make them more accurate in their teaching and learning process. Teachers should use portfolio assessment as it is very useful tool which enhances the capability of students' self-learning. They should also use peer assessment and self-classroom assessment techniques as these are useful in enhancing the students self confidence in completion of any task and developing competition among students.

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