

**ANALYZING SCHOOL TEACHERS' ASSESSMENT PRACTICES:
A DESCRIPTIVE ENQUIRY**

Farah Qadir Malik¹, Muhammad Waqas^{2§} and Maryam Barkat¹

¹ Department of Secondary Education, Lahore College for
Women University, Lahore, Pakistan.

Email: farahqadirmalik@gmail.com
maryamsaith518@gmail.com

² Department of Business Administration, Superior University,
Lahore, Pakistan.

[§] Corresponding author Email: waqas_epouch@yahoo.com

ABSTRACT

Assessment practices are heart of education system. The aim of the study is to explore teachers' self-perceived practices regarding different assessment procedure by using descriptive analysis. A sample of 290 teachers was selected by using simple random and census sampling techniques. Study reveals that teachers' self-perceived practices regarding assessment practices are at moderate level. Their professional competences to develop and use most of assessment practices are at moderate level, especially for developing rubric and portfolio. Special trainings on assessment are recommended for teachers to get valid and reliable information from participants.

KEYWORDS

Teachers' assessments, Teachers' perceptions, Descriptive, Assessment practices.

1. INTRODUCTION

Assessment is understood in different ways by the experts. Some of the experts' regard assessment as a process of information gathering about students' achievement (Dhindsa, Omar, & Waldrip, 2007) or a systematic process of information collection for making decisions concerning educational purposes (Airasian, 1994). Kubiszyn and Borich (2013) considered assessment more comprehensive process and viewed it as "a comprehensive evaluation made up of many testing and assessment components and relevant background and contextual information" (p. 9). The other group of educators does not considered assessment a process rather they think it as any of the procedures, techniques, tools, or methods used for data collection for discerning students' progress towards learning goals (Miller, Linn, & Gronlund, 2009). Even some other experts take assessment as all the activities encompassing assessment construction activities through conducting, scoring, interpreting and reporting the results for the purpose of making decisions (Zhang & Burry-Stock, 2003). In the same way, Black and William (1998) declare that all teachers' and students' activities, which provide feedback to teachers and students to improve teaching and learning, are called assessment.

Assessment is regarded as 20th century product (Mussawy, 2009) and is in the spotlight of researchers and academician for the past few decades (Chan, 2008). Assessment is not only considered as essential element of instruction (Rennie, Goodrum, & Hackling, 2001) but also a critical for the whole system of education (Centre for Educational Research and Innovation, 2008). There are many reasons for such importance of assessment. The assessment “enhances learning, provides feedback about student progress, builds self-confidence and self-esteem, and develops skills in evaluation” (Goodrum, Hackling, Rennie 2001, p. 2). They further describe that close relation between instruction and assessment is necessary for the effective assessment. In their exhaustive review, Black and William (1998) concluded that improving assessment entails in the improvement of teaching learning quality. Because of this close relation of assessment to teaching-learning process, its role becomes vital in the whole education process (Mussawy, 2009).

As mentioned above that there is evidence in the literature that there is link between improved assessment practices and improved learning and teaching, assessment practices become the crucial component of research and innovation. In 2009, National Professional Standards for Teachers were formulated by the Ministry of Education Pakistan. Assessment is the fifth standard in the prescribed standards. The standard describes that “Teachers assess students’ learning using multiple assessment strategies and interpret results to evaluate and promote students’ achievement and to modify instruction in order to foster the continuous development of students” (Ministry of Education, 2009, p. 13). In this standard two basic points are worth noting. First, multiple assessment strategies and the second, purpose of assessment to enhance students’ learning and improve teachers’ teaching. The standard has been developed as a benchmark for the practice of teachers in the class rooms. The standard expects from teachers to use variety of innovative assessment practices to provide feedback both to teachers and students in order to improve teaching-learning process for students’ development. But on the other hand, the real field situation does not corroborate with this standard (Christie & Afzaal, 2005; Khattak, 2012).

Most of the time the assessment procedures used by the teachers prepare students for testing. It is common in Pakistan that teachers teach only for the sake of success in exams (Rehmani, 2012). Moreover, the assessment is taken something quite a separate from teaching learning (Ahmad & Malik, 2011) despite of enhancing instructional process. The literature also reports that assessments do not evaluate higher order learning skills of students (Imran, 2011; Khattak, 2012; Shah & Saleem, 2010). The stunning aspect is that the assessment practices should be improved but there is evidence that assessment is on decline (Khan, 2006).

The scope and importance of students’ assessment is much more significant than ever before. Now the assessment results are not only used for the improvement of teaching learning process but also to inform policy makers for the improvement, amendment or revision of policy, for meeting or enhancing the standards, and for making teachers and schools, and other educational administrators accountable (Society for Advancement of Education, 2016). Whatever the assessment system is developed, the main actor of the system is always teacher because the teacher is an agent, who implements the assessment strategies and procedures. S/he is the person, who may apply the system or procedure fairly and in true spirit or vice versa. Therefore, the assessment practices practiced by teachers in the real classrooms are much more important than any other component of assessment. In

Pakistan, less research has been done involving teachers as the subjects of study for studying assessment practices of teachers.

Particularly, a single study investigating teachers' own perceptions about their assessment practices, their perceptions about validity, reliability, fairness, and effectiveness of assessment practices, is not available in the literature (At least up to researcher's knowledge). Hence, the present research felt a dire need to investigate the problem discussed above. This study is designed a study to explore teachers' perceptions about their assessment practices, self-perceived competence to develop assessment tools, validity, reliability, effectiveness, and fairness of their assessment practices.

The main purpose of the study was to Analyzing school teacher's assessment practices 'A descriptive enquiry. The present study also tries to find out frequently used school teachers' assessment practices; their self-perceived concept clarity and competence to develop assessment tools; assessment tools for which school teachers need training; perceived effectiveness, validity, reliability and fairness of school teachers' assessment practices.

Result of this study may be helpful for the policy makers both at higher and lower level in many ways. First, when they will be devising assessment policy for school level, the findings may help them to understand the current status and hence, they may incorporate the findings while developing new policy. The policy makers may take help from study findings regarding effectiveness, validity, and reliability of different assessment procedures. Planners of teachers' training may get help from study findings regarding perceived teachers' competence and need of training for developing different assessment procedures. On the basis of study, they may design and improve their training programs particularly for assessment. This may help the teachers and head teachers to develop a more productive instructional strategy, which may entail in better students' achievement.

2. REVIEW OF RELATED LITERATURE

A couple of researchers have been conducting on assessment practices that focused on teachers teaching skills and assessment practices that showed significant part for decision making process. Different research studies showed that teachers have less knowledge about the concept of measurement and testing procedures. Daniel and King (1988) agreed with the results of Schafer and Lissirz (1987) that supported that teachers' understanding of measurement and testing would be enhanced with the passage of time after spent a decade. Ten year later, Daniel and King (1998) described that mostly teacher's quiet information about the assessment concept. After passed long time various studies investigated that student's performance on established criteria of assessment and found that teachers disastrous to followed the modern ways of classroom assessment (Campbell & Evans, 2000).

On the other side the modern systems of education are more interested to change the old pattern of classroom assessment and improved the quality of test that teacher used in classroom for purpose of grading system in classroom" (Klenowski, Smith, & Colbert, 2014). Ohlsen (2007) explains that "policy makers recommend using the high level of assessment system and to evaluate the whole performance of educational system and schools. Through assessment school would be categorized and appreciate according to their

level of achievement that teachers used in classroom for assessment of students' performance in entire educational year." (p.4). Thomas and Barksdale (2000) found that in service teachers used traditional ways for assessment purpose and they should need to change the old pattern with innovative approach of assessment. They recommend that teacher need to: (a) properly informed the students with their current educational performance and motivate them to enhance learning abilities, (b) teacher continually observed students classroom (c) teachers practice the different types of assessment practices and aligned it with their teaching skills and national curriculum, (d) confirm that all assessment practices used in effective ways and able to measure low and higher order skills of students and (e) the use of numerous assessment approaches to estimate the learning of students. Vandeyar and Killen (2003) described that in educational environment, the best quality of assessment practices should gratify the basic elements of assessment such as legitimacy, consistency, equality, favoritism, and significance. Teachers should be clear their concept about the framework of assessment and used it for decisions making process in educational system. When teachers have showed lack of interest regarding these elements then gaps would be generated in between teaching and their assessment practices.

3. ROLE OF ASSESSMENT

It is not difficult to understand that both formal and informal assessment guides instructional decisions of the teachers on daily basis. From the first day of recruitment to the day of graduation or promotion to next grade the whole instruction takes guidance and help from assessment. Formal assessment procedures consist of external mandated tests, teacher constructed tests, checking of worksheets, home assignments, projects, portfolios, term papers etc. Informal assessment includes informal observation, questioning, discussion, interviews.

Informal assessment procedures may guide lot of instructional decisions. For instance, in an informal questioning teacher may discern that the class needs a review of the unit. In individual or group discussion teacher may come to know about a confusion or misunderstanding about a concept or topic and clear it at once. In observing the work of students individually, teacher may decide that one students need help in writing, other needs help in mathematics, and the third needs help counseling and so on (Miller, Linn, & Gronlund, 2009). In short all kinds of educational resolution like teaching decisions, diagnostic, grading, placement, selection, guidance and counseling and, curriculum or program, and policy decisions and administrative (Kubiszyn & Borich, 2013).

Formal assessment procedures may provide guidance and feedback for: Recruitment of students to a particular grade or class, teaching, making groups of students and readiness about a learning task achievement of learning objectives, students' progress up to minimum essential standard. Knowing when is review fruitful or essential. Understanding learning difficulties of the students, referral to counseling and remedial teaching, reporting students' progress to their guardians or parents and effectiveness of curriculum and instruction (Miller et al., 2009).

The result of different studies showed that the definite classroom practices really inspire by the mastery orientation and positively influence the achievement goals. Like that, in

study of, (Ryan & Pintrich, 1997) explored the students' views that the learning environment of classroom really affects the motivation level of student and actively involved them in learning activities. The findings of the study showed teacher appreciation and support really helpful for increase the learning level of students and positively influence on the achievement level of students' scores and grades. Kaplan, Gheen, and Midley (2002) also agreed that mastery and enactment areas in the classroom are directly affected to students' configurations of learning actions. While the argument of study was based on Kaplan and others results (2002) those also found that the students' behavior and their learning attitudes is another key factor which is connected with students learning settings those students have faced in classroom.

The higher level of students learning is rightly interlinked with the level of achievement the lower level of learning students is not perform in effective manner. On the contrary, individual performance and attitude as well as presentation escaping the goals those were connected to complex reports of disorder behaviors of students. So, the perceptions of students about practical approach of the goals were associated to occurrences of disturbing behavior. Anderman, Meece and Anderman (2006) in favor of opinions that raised by Pintrich and Ryan (1997) and Midley, Kaplan, Gheen (2002) noted that those students stated that those students received positive feedback from their teachers and focused on competition for their grades and social behavior with others to show good results and were more intelligent to adopt performance orientations. Though, the views of students declared that the environments of school as emphasized on appreciated level of students to attain the different leaning skill and achieve more objectives those are related to orientation goals of mastery.

All these are the indications that classroom objective assemblies that update positive put into practice may have more inferences on the students' attitudes and learning settings as they can form the variety of areas students are likely to accept. Davies et al., (2011) investigated the relationships amongst the teacher characteristics of gender, their educational and teaching experiences in educational institutions and the other factors that related to past history of teachers like, and socio psychological variables of three teachers. These factors were according to grade wise teacher prospects, teachers' efficiency, and goal orientation other etc.

3.1 Factors Affecting the Validity

The validity of an evaluation tool can be influenced by large number of factors. According to Gronlund (1981), the following factors influence the validity of the test:

As we know that the test is consists of items, we should check whether the test measures the subject matter, content and knowledge to be tested. The following factors lower the validity of the test items:

- Unclear Direction given to students reduces validity of instrument. Correct and clear directions should give to students about test items.
- Vocabulary and Sentences structure which are too difficult also have negative effect on validity of assessment tool.
- Inappropriate level of difficulty of the test items also reduces validity of assessment procedure. Items should be appropriate, not too much difficult or easy.

- Poorly constructed test items and unintentional clues to answer may also effects test validity (Freeman, 2006).
- Improper arrangement of items like, if test items are arranged in manner of easy to difficult then students will fail to reach difficult items and leave the test incomplete. Arrangement of items in a test influence validity.
- Ambiguous items lead toward confusion and students misinterpret test which lows the validity (Moss, Girard, & Haniford, 2010).
- Test administration and scoring procedures also influence validity for example teacher's biased behavior, limited time to complete the test and cheating reduces validity.
- Factors in pupil's response like disturbed students, lack of motivation, unsuitable test conditions and child's inner fear of test also negatively affect validity. • Nature of the students and the criterion like students' age, sex, intelligent level, family and cultural background also affect validity of tool (Freeman, 2006).

3.2 Factors Influencing the Reliability

There are some factors which affect the reliability of the test scores. The reliability of the test increases with the length of test if more homogeneous questions are included. The number of observations of a specific trait influence reliability in the sense that if there are more observation there will be found more accuracy and consistency. The test items should have certain difficulty level to maintain the reliability of the test. If test items will be very easy or difficult it reduces the reliability Type of test also increases or decreases reliability. Objective test will have higher reliability as compared to subjective type test. Variation with the testing situation also influence reliability unfavorable conditions during the administration of the test such as noise level and disturbance can cause test scores to vary, which affects the reliability of the test (Freeman, 2006).

3.3 Fairness

Fairness is an important concept, since it is often understood in too narrow and technical way. We talk fairness in our social context and observe at what this means in relation to different groups and cultures. Similarly, we are using fairness in educational assessment in a more comprehensive way than is normally the case; we include examinations, tests, teachers' judgments and evaluations of student learning and their performance. We then examine bias in measurement and assessment how it relates to validity, as well as the larger concept of equity and justice (Gipps & Stobart, 2009).

In our view, fairness in measurement and assessment cannot be considered separately from access problems and issues in the curriculum and the educational opportunities offered to the students' fairness in access opportunities both to schooling and to the curriculum provide the 'level playing field' that must precede a genuinely fair assessment situation (Gipps & Stobart, 2009).

3.4 Grading Practices in Classroom

It is an old practice the system of grading is not new in ancient it was also used to assigned grades according to performance of students. The grading system also support the teachers to provide clear picture of students' performance in form of measurement and

assigned the grades to students on the basis of students' achievement in classroom. However, the grading practices also facilitate the students about their educational performance. It can be said that grades play vital task in student assessment. Students consider that their good grades provide them clear direction for decision making process and enable them to select the right approach for set targets in future. The validity of grades is completely relying on teachers' competencies about assessment system (McMillan, 2008; Reynolds, Livingston, & Willson, 2009). McMillan (2008) explains that grading system provides feedback about students' performance and to keeps the students in helping of how to study and master over the skills. The role of teacher is considered very important in grading system and expectations were also examined using a theoretical framework which reflects grading processes in terms of truth, worthwhile, faith, and intellectual and moral attentiveness.

3.5 Measuring Achievement in Changing Students' Behavior

The basic reason of education is to modify and change the behavior of students and prepare the students to behave like a good and responsible citizen in society (Green & Johnson, 2010). Therefore, teacher must not only to concentrated on students' academic performance but also emphasis on character building of their students and focused on moral social behavior of students (Guskey, 2009). Assessment experts also agreed that non-academic achievement also influence on student's behavior but they also emphasis on grading system (2009, p. 21). Though, teachers are tentative to use these aspects those deliberate the positive change in human behavior through compensation and castigation. "Teachers used different tricks for implement the non-achievement factors like that teachers took attendance on daily bases and make students responsible and punctual to perform all activities those assigned in classroom to regulate student's behavior regarding learning point of views." (Marzano, 2000, p. 37).

4. DATA AND METHODS

4.1 Research Design

The study used quantitative approach that has underpinnings in post-positivistic philosophical paradigm. Among the quantitative designs the researcher used cross-sectional descriptive survey to investigate the current problem. Because this study explores the opinions of the participants about the current status of the phenomenon understudy, hence descriptive study is deemed an apt research design. The data was collected through a closed ended questionnaire.

Pakistan has five provinces; the Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan, and Gilgit Baltistan including FATA. Among all the provinces, only Punjab province alone has more than 60% of total population of the country. The target population of the study consists of all the school teachers working in the public schools of Punjab province. There are 36 districts in the Punjab. There is a uniform policy of recruitment requirement (required academic and professional qualification) and process (test by National Testing Service etc.), training (induction & in-service by QAED), administration, and assessment for teachers throughout the province. It means same characteristics are required in a teacher throughout the province; almost the teachers receive same kind of pre-service teacher education, uniform type of in-service training, and same criteria for teachers' assessment.

Therefore, the teachers of every district have almost typical characteristics. Hence, every district may be taken as a typical unit of the province. The researcher took Kasur district as a typical unit to study the problem for the convenience of data collection. So, the accessible population of the study consists of all the teachers teaching in the Kasur district of the Punjab province.

At the first stage, one tehsil was being selected as unit of analysis using random sampling technique. At second stage, all the school that is standalone secondary schools (the secondary school that have primary and middle section as their constituent parts) were be selected using census sampling technique. According to Punjab Government website for school department, there are 37 public secondary schools; 18 boys' and 19 girls' schools. Because these schools have classes from first to tenth grade, hence, teachers teaching in the schools comprise three levels; primary school teachers (PSTs & ESEs), elementary school teachers (ESTs & SESEs), and secondary school teachers (SSTs & SSEs). At third stage, all the teachers, both males and females, teaching in these selected schools was included in the study sample using census sampling technique.

All the 37 schools were contacted to distribute the questionnaires but five girls' and two boys' schools did not agree to participate in the study. Hence, the 30 schools were given 300 questionnaires. From 300 participants 290 responded and gave back the questionnaires to the survey team.

4.2 Instrument of the Study

Questionnaire is used as data collection tool for the study. The five-point Likert Scale form of the questionnaire was used, that is the most widely used instrument in research. It is easy to administer and easy to respond by the respondents. According to the eight variables of the study, the instrument was developed and administered for data collection. All the questionnaires were distributed to all the sampled teachers (of three level; primary, elementary, secondary). Two questionnaires were developed by the researcher herself after a critical and intensive review of the literature. The questionnaire consisted of two main parts; first and second. The first part sought demographic information from the participants i.e. gender, designation, locality of school, qualification, and experience etc. The second part was subdivided into further different parts according to different eight variables; A, B, C, D, E, F, G, and H. All these sub-parts consisted of statements along with five options given against each statement. Options ranged from "strongly disagree" to "strongly agree" for part A and C; from "Not at all" to "To full extent" for part B, E, F, G and H; and from "Never" to "Always" for part D.

Each questionnaire was validated through expert opinion and pilot testing. First of all expert opinion was sought by five experts. These experts were at least Ph.D. in education. The opinion was taken about the content relevance to objectives, language, structure and vocabulary used in the instruments. After incorporating the suggestions by experts, the tools were pilot tested. The instruments were piloted on at least 30 respondents. The respondents were asked whether they found any word or statement confusing or unclear.

After piloting the instrument, the reliability of the instrument was checked through reliability analysis. The Cronbach's Alpha was calculated by using SPSS (Statistical Package for Social Sciences). The cut-point for reliability measure has been determined as

0.70 by the experts (Field, 2012). Therefore, the researcher also took Cronbach's Alpha as criterion for the acceptance of the instrument.

Data has been analyzed at item level. "Questionnaire for teachers" was used to collect data from participants. It has eight parts, so data have been analyzed with respect to these parts. Criteria for the interpretation of descriptive analysis are given below.

Level of Teachers' Assessment Procedure	Criteria for Mean
Lower level	= 1.00 –3.00
Moderate level	= 3.01–4.00
High level	= 4.01 and above

5. RESULTS AND DISCUSSION

5.1 Descriptive Analysis

The demographic data were analyzed through frequency and percentage. Demographic information about the participants has been given in Table 1. Half of participants (50.4%) were secondary school teachers followed by primary school teachers (27%) and elementary school teachers (22.4%). More than two third (69%) were from rural locality. Majority of participants (56%) were female. More than three fourth (76%) participants had master degree qualification among participants, and more than half (53%) had B.Ed., followed by M.Ed. (33%) and CT (9%) as their professional qualification.

Table 1
Demographic Characteristics of Sample of the Study

S#	Variable	Levels	Frequency	%age
1	School Level	Primary	79	27.24
		Elementary	65	22.41
		Secondary	146	50.35
2	School Locality	Rural	199	69
		Urban	91	31
3	Gender	Male	127	44
		Female	163	56
4	Academic Qualification	Matric	5	2
		Intermediate	6	2
		Bachelor	34	12
		Master	221	76
		M.Phil.	23	8
		PhD	1	3
5	Professional Qualification	Nil	5	2
		PTC	9	3
		CT	25	9
		B.Ed.	153	53
		M.Ed.	97	33

5.2 Analysis of Participants' Training Information for Assessment Practices

Information regarding participants' situation of training is described in Table 2. The above table reveals that more than half of the participants (50.35%) were secondary school teachers. Among other half, more than one fourth (72.24%) were primary school teachers and more than one fifth (22.41%) were elementary school teachers. Locality wise analysis discovered that more than two third participants (69%) belonged to rural schools and near to one third participants (31%) was from urban schools. Gender wise analysis illustrates that number of female participants (56%) was greater than male (44%) participants.

The qualification of the participants was asked about two aspects. First, they were asked about academic qualification and second, they were asked about professional qualification. Academically three fourth of the participants were master's degree holders (76%) followed by bachelor degree holders (12%). Among the participants eight percent had M.Phil. degree, other four percent had matric and inter level qualification.

Table 2
Analysis of Participants' Training Information for Assessment Practices

S#	Variable	Category	Frequency	%age
1	Training	Yes	140	48
		No	150	52
2	Training of Subjects	No	6	2
		English	35	12
		Urdu	9	3
		Science	15	5
		Math	15	5
		Social Studies	3	1
		Islamiyat	8	3
		Multiple	157	54
		3	Subjects Teaching	English
Urdu	15			6
Science	11			4
Math	14			5
Social Studies	2			1
Islamiyat	5			2
Multiple	183			71

5.3 Teachers' Perceived Clarity of Concept about Different Assessment Procedures

Table 3 shows the results for teacher' perceived clarity regarding different concepts related to assessment. It is found that teachers' perceived clarity for the "concept of essay-type questions" was at higher level ($M = 4.48$, $SD = 0.90$), followed by "concept of oral tests" ($M = 4.34$, $SD = 0.76$), and by "concept of home assignment" ($M = 4.20$, $SD = 0.90$). It was also found that teachers' perceived clarity regarding concept of projects was at moderate level ($M = 3.4$, $SD = 1.07$), followed by concept of portfolio ($M = 3.08$, $SD = 0.96$) and by concept of rubric ($M = 3.09$, $SD = 1.14$).

Result: It was concluded that teachers' self-perceived clarity about most of assessment procedures was at higher level.

Table 3
Perceived Clarity of Concept about Different Assessment Procedures

S#	Variable	Mean	SD
1	Concept of MCQs	4.11	0.80
2	Concept of Short Answer Questions	3.93	0.97
3	Concept of True False Questions	4.01	0.67
4	Concept of Completion (fill in blanks)	4.08	0.88
5	Concept of Essay-type questions	4.48	0.77
6	Concept of Matching Columns Test	4.06	0.55
7	Concept of Oral Test	4.34	0.76
8	Concept of Home Assignment	4.20	0.90
9	Concept of Checklist	4.01	0.91
10	Concept of Portfolio	3.08	0.96
11	Concept of Projects	3.04	1.07
12	Concept of Practical assessments for experiments of Science	3.33	1.10
13	Concept of Authentic Assessment	3.98	0.96
14	Concept of Reading assessment	4.17	0.86
15	Concept of Rubric	3.09	1.14

5.4 Teachers' Perceived Competence in Developing and Using Assessment Procedures

This section is related to second objective of the study “to find out school teachers’ self-perceived competence to develop different assessment procedures at school level” has been analyzed. Table 4 reveals that teachers’ perceived competence for developing and using true/false questions was at higher level ($M = 4.10$, $SD = 0.88$), and followed by competence in short answer questions ($M = 4.06$, $SD = 0.90$). It was also revealed that teachers perceived competence in rubric for assessing portfolio was at moderate level ($M = 3.19$, $SD = 1.24$), followed by competent in rubric for assessing performance of religious rhymes ($M = 3.25$, $SD = 1.15$), and by competent in rubric for reading assessment ($M = 3.26$, $SD = 1.06$). Importantly, teachers’ perceived competence for most of assessment procedures was at moderate level.

Result: It was concluded that teachers’ self-perceived competence in developing and using most of assessment procedures was at moderate level.

Table 4
Teachers' Perceived Competence in Developing
and Using Assessment Procedures

S#	Variable	Mean	SD
1	Competent in Multiple Choice Questions (MCQs)	3.90	1.06
2	Competent in Short Answer Questions	4.06	0.90
3	Competent in True False Questions	4.10	0.88
4	Competent in Completion (fill in blanks)	3.91	1.11
5	Competent in Essay-type questions	3.87	0.88
6	Competent in Matching Columns Test	3.98	0.87
7	Competent in Oral Test	3.86	0.94
8	Competent in Home-Assignment	3.90	0.95
9	Competent in Checklist	3.50	0.98
10	Competent in Portfolio	3.32	1.05
11	Competent in Projects	3.44	1.02
12	Competent in Practical assessments for Experiments of science	3.56	1.23
13	Competent in Authentic Assessment	3.54	1.23
14	Competent in Rubric for assessing Essay type questions	3.56	1.24
15	Competent in Rubric for evaluating performance doing science experiments	3.49	1.26
16	Competent in Rubric for assessing home assignments	3.46	1.21
17	Competent in Rubric for assessing Portfolio	3.19	1.24
18	Competent in Rubric for assessing projects	3.30	1.30
19	Competent in Rubric for assessing Arts and Craft work	3.28	1.25
20	Competent in Rubric for assessing performance of speech	3.35	1.23
21	Competent in Rubric for assessing performance of Naat / Religious Rhymes	3.25	1.15
22	Competent in Rubric for reading assessment	3.26	1.06

5.5 Perceived Need of Training for Using Different Assessment Procedures

Table 5 identifies particular assessment procedures for which school teacher's need special training" has been analyzed and interpreted. Table 5 reveals that teachers' perceived need for all assessment procedures used in this part of the questionnaire was at moderate level.

They were ranked with respect to mean. Table revealed that teachers' need of Training for Practical assessments for experiments of science was at moderate level ($M = 3.79$, $SD = 1.03$) and was ranked first in this part, followed by need of training for projects ($M = 3.64$, $SD = 1.00$) and followed by need of training for checklist ($M = 3.62$, $SD = 1.00$). It was also revealed that teachers' perceived need of training for essay-type questions was at moderate level ($M = 3.31$, $SD = 1.19$), followed by need of training for multiple questions ($M = 3.32$, $SD = 1.42$), and followed by need of training for matching columns test ($M = 3.33$, $SD = 1.24$).

Result: It was concluded that teachers' self-perceived need of training in developing and using all assessment procedures in above table was at moderate level.

Table 5
Perceived Need of Training for using Different Assessment Procedures

S#	Variable	Mean	SD
1	Need of Training for Multiple Choice Questions (MCQs)	3.32	1.42
2	Need of Training for Short Answer Questions	3.52	1.34
3	Need of Training for True False Questions	3.34	1.24
4	Need of Training for Completion (fill in blanks)	3.51	1.27
5	Need of Training for Essay-type questions	3.31	1.19
6	Need of Training for Matching Columns Test	3.33	1.24
7	Need of Training for Oral Test	3.37	1.20
8	Need of Training for Home Assignment	3.47	1.19
9	Need of Training for Checklist	3.62	1.00
10	Need of Training for Portfolio	3.58	0.98
11	Need of Training for Projects	3.64	1.00
12	Need of Training for Practical assessments for experiments of science	3.79	1.03
13	Need of Training for Authentic Assessment	3.54	1.11
14	Need of Training for Rubric for assessing Essay type questions	3.53	1.07
15	Need of Training for Rubric for evaluating performance doing science experiments	3.53	1.13
16	Need of Training for Rubric for assessing home assignments	3.56	1.07
17	Need of Training for Rubric for assessing Portfolio	3.60	0.99
18	Need of Training for Rubric for assessing projects	3.53	1.04
19	Need of Training for Rubric for assessing Arts and Craft work	3.59	1.07
20	Need of Training for Rubric for assessing performance of speech	3.58	1.09
21	Need of Training for Rubric for assessing performance of Naat/Religious Rhymes	3.52	1.17
22	Need of Training for Rubric for reading assessment	3.56	1.13

5.6 Perceived Frequency of Using Assessment Procedures

This section presents the fourth objective of the study “to determine frequently used assessment practices by school-teachers”. Table 6 reveals that teachers’ responses for using most of assessment procedures listed in above table were at moderate level. It was also revealed that teachers’ self-perceived frequency of using observation as assessment procedure was at moderate level ($M = 4.00$, $SD = 1.19$), followed by teachers’ self-perceived frequency for using written test as assessment procedure was also at moderate level ($M = 3.87$, $SD = 1.05$), followed by teachers’ self-perceived frequency for using MCQs frequency as assessment procedure was also at moderate level ($M = 3.85$, $SD = 0.92$). It was also revealed that teachers’ self-perceived frequency for using portfolio as assessment procedure was at lower level ($M = 2.96$, $SD = 1.05$), followed by teachers’ self-perceived frequency for using projects as assessment procedure was also at lower level ($M = 2.97$, $SD = 1.20$).

Result: It was concluded that teachers’ self-perceived frequency of using all assessment procedures listed in table was at moderate level.

Table 6
Perceived Frequency of Using Assessment Procedures

S#	Variable	N	Mean	SD
1	Frequency of using written test	290	3.87	1.05
2	Frequency of using MCQs test	289	3.72	0.86
3	Frequency of using Short-Answer Type test	289	3.85	0.92
4	Frequency of using completion test (Fill in the Blanks)	289	3.44	1.06
5	Frequency of using Matching Columns Test	289	3.35	1.05
6	Frequency of using Essay Type Test	289	3.65	1.10
7	Frequency of using Any Combination from the above five options	289	3.54	1.04
8	Frequency of using Oral Test	289	3.77	1.00
9	Frequency of giving assignments	289	3.47	1.03
10	Frequency of using Checklist	289	3.04	0.99
11	Frequency of using Use Portfolio	289	2.96	1.05
12	Frequency of making students keep journals (writing diary by students)	289	3.18	1.25
13	Frequency of using Projects	289	2.97	1.20
14	Frequency of using practical experiments	289	3.31	1.22
15	Frequency of evaluating students while doing practical work	289	3.35	1.23
16	Frequency of using observation	289	4.00	1.19

5.7 Perceived Effectiveness of Assessment Procedures

Table 7 explores the perceived effectiveness of assessment practices at school level” of the study have been analyzed and interpreted. Study reveals that teachers’ self-perceived effectiveness for short-answer type test was at moderate level ($M = 3.97$, $SD = 0.81$), followed by teachers’ self-perceived effectiveness for observation was also at moderate level ($M = 3.87$, $SD = 1.13$), followed by teachers’ self-perceived effectiveness for essay type test was also at moderate level ($M = 3.86$, $SD = 0.95$). From bottom side, it was revealed that teachers’ self-perceived effectiveness for the use of portfolio was at moderate level ($M = 3.27$, $SD = 1.18$), followed by teachers’ self-perceived effectiveness for the use of checklist was also at moderate level ($M = 3.32$, $SD = 1.06$), followed by teachers’ self-perceived effectiveness for matching column type test was also at moderate level ($M = 3.35$, $SD = 0.94$).

Result: It was concluded that teachers’ self-perceived effectiveness for all assessment procedures listed in table was at moderate level.

Table 7
Perceived Effectiveness of Assessment Procedures

S#	Variable	Mean	SD
1	Effectiveness of Written Test	3.83	1.01
2	Effectiveness of MCQs Test	3.82	0.87
3	Effectiveness of Short-Answer Type Test	3.97	0.81
4	Effectiveness of Completion Test (Fill in the Blanks)	3.64	0.95
5	Effectiveness of Matching Columns Test	3.35	0.94
6	Effectiveness of Essay Type Test	3.86	0.95
7	Effectiveness of Any Combination from the above five options	3.63	0.95
8	Effectiveness of Oral Test	3.66	1.03
9	Effectiveness of Give Assignment	3.69	0.95
10	Effectiveness of Use Checklist	3.32	1.06
11	Effectiveness of Use Portfolio	3.27	1.18
12	Effectiveness of Projects	3.65	1.16
13	Effectiveness of Practical experiments	3.76	1.06
14	Effectiveness of Evaluate while doing practical work	3.67	1.10
15	Effectiveness of Observation	3.87	1.13

5.8 Validity of Assessment Practices

Table 8 presents perceived validity of assessment practices at school level” of the study have been analyzed and interpreted. Study reveals that teachers’ self-perceived extent of validity for almost all assessment procedures listed in above table was at moderate level except last assessment procedure. It was revealed that teachers’ extent of perceived validity for observation as assessment procedure was at higher level ($M = 4.07$, $SD = 1.12$), followed by teachers’ extent of perceived validity for short-answer type test as assessment procedure was at moderate level ($M = 3.98$, $SD = 0.88$), followed by teachers’ extent of perceived validity for MCQs test as assessment procedure was also at moderate level ($M = 3.98$, $SD = 1.03$). It was also revealed that teachers’ extent of perceived validity for the use of portfolio as assessment procedure was at moderate level ($M = 3.46$, $SD = 1.04$), followed by teachers’ extent of perceived validity for use of checklist as assessment procedure was also at moderate level ($M = 3.48$, $SD = 0.96$), followed by teachers’ extent of perceived validity for giving assignment as assessment procedure was also at moderate level ($M = 3.58$, $SD = 0.97$).

Result: It was concluded that teachers’ self-perceived validity of all assessment procedures listed in table was at moderate level except of observation.

Table 8
Indicating to What Extent the Given Assessment Procedure Is Valid

S#	Variable	Mean	SD
1	Validity of Written Test	3.72	1.12
2	Validity of MCQs Test	3.98	1.03
3	Validity of Short-Answer Type Test	3.98	0.88
4	Validity of Completion Test (Fill in the Blanks)	3.75	1.01
5	Validity of Matching Columns Test	3.74	0.98
6	Validity of Essay Type Test	3.91	0.91
7	Validity of Any Combination from the above five options	3.74	0.93
8	Validity of Oral Test	3.77	0.96
9	Validity of Give Assignment	3.58	0.97
10	Validity of Use Checklist	3.48	0.96
11	Validity of Use Portfolio	3.46	1.04
12	Validity of Projects	3.71	1.13
13	Validity of Practical experiments	3.84	1.09
14	Validity of Evaluate while doing practical work	3.98	1.10
15	Validity of Observation	4.07	1.12

5.9 Reliability of Assessment Practices

Perceived reliability of assessment practices at school level” of the study have been analyzed in Table 9. Results of the study reveals that teachers’ self-perceived extent of reliability for all assessment procedures listed in above table was at moderate level. It was revealed that teachers’ extent of perceived reliability for short-answer type test as assessment procedure was at moderate level ($M = 3.99$, $SD = 0.86$), followed by teachers’ extent of perceived reliability for evaluating while doing practical work as assessment procedure was also at moderate level ($M = 3.96$, $SD = 1.09$), and followed by teachers’ extent of perceived reliability for observation as assessment procedure was also at moderate level ($M = 3.94$, $SD = 1.18$). It was also revealed that teachers’ extent of perceived reliability for the use of portfolio as assessment procedure was at moderate level ($M = 3.28$, $SD = 1.00$), followed by teachers’ extent of perceived reliability for the use of checklist as assessment procedure was at moderate level ($M = 3.47$, $SD = 0.95$), and followed by teachers’ extent of perceived reliability for the use of portfolio as assessment procedure was at moderate level ($M = 3.28$, $SD = 1.00$), and followed by teachers’ extent of perceived reliability for matching columns test as assessment procedure was at moderate level ($M = 3.48$, $SD = 1.09$).

Result: It was concluded that teachers’ self-perceived reliability for all assessment procedures listed in table was at moderate level.

Table 9
Indicating to what Extent the Given Assessment Procedure is Reliable

S#	Variable	Mean	SD
1	Reliability of Written Test	3.66	1.14
2	Reliability of MCQs Test	3.93	0.97
3	Reliability of Short-Answer Type Test	3.99	0.86
4	Reliability of Completion Test (Fill in the Blanks)	3.64	1.08
5	Reliability of Matching Columns Test	3.48	1.09
6	Reliability of Essay Type Test	3.83	0.94
7	Reliability of Any Combination from the above five options	3.74	0.96
8	Reliability of Oral Test	3.68	0.96
9	Reliability of Give Assignment	3.62	0.91
10	Reliability of Use Checklist	3.47	0.95
11	Reliability of Use Portfolio	3.28	1.00
12	Reliability of Projects	3.53	1.04
13	Reliability of Practical experiments	3.76	1.14
14	Reliability of Evaluate while doing practical work	3.96	1.09
15	Reliability of Observation	3.94	1.18

5.10 Indicating to What Extent the Given Assessment Procedure is Fair

Table 10 presents the perceived fairness of assessment practices at school level which shows that participants' perceived fairness for most of assessment procedures listed in table were at moderate level. It was also revealed that teachers' perceived fairness for asking questions from the students in class was at higher level ($M = 4.19$, $SD = 0.86$), followed by teachers' perceived fairness for scoring practical activities and/or science experiment was also at higher level ($M = 4.04$, $SD = 1.03$), followed by teachers' perceived fairness in supervising promotion/annual tests was at moderate level ($M = 3.93$, $SD = 0.97$). It was also revealed that participants' perceived fairness in assigning home work to students ($M = 3.73$, $SD = 1.16$), followed by teachers' perceived fairness in checking home work was also at moderate level ($M = 3.73$, $SD = 1.02$), followed by teachers' perceived fairness in developing practical activities and/or science experiments was also at moderate level ($M = 3.76$, $SD = 0.99$).

Result: It was concluded that teachers' self-perceived fairness for most of assessment procedures listed in table was at moderate level.

Table 10
Indicating to what Extent the Given Assessment Procedure is Fair

S#	Variable	Mean	SD
1	Fairness in assigning home work to students	3.73	1.16
2	Fairness in assigning class work to students	3.92	1.00
3	Fairness in asking questions from the students in class	4.19	0.86
4	Fairness in developing class tests	3.92	0.85
5	Fairness in developing practical activities and/or science experiments	3.76	0.99
6	Fairness in developing promotion/annual tests	3.78	0.96
7	Fairness in ensuring secrecy of questions of class tests	3.78	0.92
8	Fairness in ensuring secrecy of questions of promotion/annual tests	3.81	0.94
9	Fairness in supervising class tests	3.80	1.00
10	Fairness in supervising promotion/annual tests	3.93	0.97
11	Fairness in scoring class tests	3.84	1.01
12	Fairness in scoring promotion/annual tests	3.88	1.03
13	Fairness in checking class work	3.89	1.00
14	Fairness in checking home work	3.73	1.02
15	Fairness in scoring practical activities and/or science experiments	4.04	1.03

5.11 Difference between the Perceptions of Male and Female Teachers about Teachers' Assessment Practices in Schools

The present study also measures the difference between male and female participants' perceptions regarding assessment practices. An independent sample *t*-test was utilized for testing following hypothesis on significant level of Alpha 0.05.

H_0 1= There is no statistically significant difference between the perceptions of male and female teachers about teachers' assessment practices in schools.

$$M_m = M_f \quad (i)$$

M_m = mean scores of male teachers' perceptions about teachers' assessment practices

M_f = mean scores of female teachers' perceptions about teachers' assessment practices

H_a 1 = There is significant difference between the perceptions of male and female teachers about teachers' assessment practices in schools.

$$M_m \neq M_f \quad (i)$$

M_m = mean scores of male teachers' perceptions about teachers' assessment practices

M_f = mean scores of female teachers' perceptions about teachers' assessment practices

Results of the Table 11 reveals that for, most of assessment practices male teachers' perceptions were significantly different from female participants. It was revealed that male teachers' perceptions ($M = 3.47$, $SD = 0.79$) regarding competence of assessment procedures was lesser than that of female participants ($M = 3.74$, $SD = 0.67$) and it was statistically different, $t(290) = -3.16$, $p = 0.001$ at Alpha level of 0.05. It was also revealed that male teachers' perceptions ($M = 3.59$, $SD = 0.70$) regarding need of training for assessment procedures was higher than that of female participants ($M = 3.46$, $SD = 0.83$),

and it was not statistically different, $t(290) = 1.38, p = 0.17$ at Alpha level of 0.05. It was also revealed that male teachers' perceptions ($M = 3.38, SD = 0.61$) regarding frequency of use of assessment procedures was lesser than that of female teachers ($M = 3.53, SD = 0.60$), and was statistically different, $t(290) = -2.06, p = 0.04$ at significance level at 0.05. It was also revealed that male teachers' perceptions ($M = 3.53, SD = 0.65$) regarding effectiveness of procedures was lesser than that of female teachers ($M = 3.77, SD = 0.53$), and was significantly different, $t(290) = -3.29, p = 0.001$ at Alpha level 0.05. It was also revealed that male teachers' perceptions ($M = 3.64, SD = 0.70$) regarding validity of procedures was lesser than that of female teachers ($M = 3.90, SD = 0.56$), and was significantly different, $t(290) = -3.47, p = 0.00$ at Alpha level 0.05. It was also revealed that male teachers' perceptions ($M = 3.60, SD = 0.65$) regarding reliability of procedures was lesser than that of female teachers ($M = 3.78, SD = 0.53$), and was significantly different, $t(290) = -2.51, p = 0.001$ at Alpha level 0.05. It was also revealed that male teachers' perceptions ($M = 3.71, SD = 0.73$) regarding fairness of procedures was lesser than that of female teachers ($M = 3.99, SD = 0.62$), and was significantly different, $t(290) = -3.45, p = 0.001$ at Alpha level 0.05. It was also revealed that male teachers' perceptions ($M = 3.84, SD = 0.39$) regarding concept of procedures was lesser than that of female teachers ($M = 3.90, SD = 0.41$), and was not significantly different, $t(290) = -1.39, p = 0.001$ at Alpha level 0.05. Overall results supported our alternative hypothesis.

Result: Male teachers' perceptions regarding most of assessment practices were better than that of female teachers and were statically different as well ($M_m \neq M_f$).

Table 11
Difference between the Perceptions of Male and Female Teachers
about Teachers' Assessment Practices in Schools

Variable	Gender	Mean S. D.		<i>t</i> value (df = 366)	<i>p</i> value ($\alpha = 0.05$)
Competence in Procedures	Male	3.47	0.79	-3.16	0.001
	Female	3.74	0.67		
Need of Training	Male	3.59	0.70	1.38	0.17
	Female	3.46	0.83		
Frequency of use	Male	3.38	0.61	-2.06	0.04
	Female	3.53	0.60		
Effectiveness of Procedures	Male	3.53	0.65	-3.29	0.001
	Female	3.77	0.53		
Validity of Procedures	Male	3.64	0.70	-3.47	0.000
	Female	3.90	0.56		
Reliability of Procedures	Male	3.60	0.65	-2.51	0.01
	Female	3.78	0.53		
Fairness of Procedures	Male	3.71	0.73	-3.45	0.001
	Female	3.99	0.62		
Concept of Procedures	Male	3.84	0.39	-1.39	0.17
	Female	3.90	0.41		

6. CONCLUSION

Assessment is the most important feature of educational system. The whole system revolves around assessment. Historically, it was seen that teachers' concept, knowledge, mastery for making classroom test and usability of different assessment procedures is not up to standard level. So, there was a dare need for exploring teachers' knowledge for assessment procedures. Therefore, this research designed for above said purpose. This study uses descriptive techniques to explore assessment practices of teachers for their self-perceived; clarity of the concept, competency for developing assessment procedures, for need of training for using different assessment procedures, their frequency of using assessment procedures, effectiveness of assessment procedures, validity of assessment practices, reliability of assessment practices, and fairness of assessment procedures.

It is found that teachers' self-perceived clarity of concept of projects are at moderate level and lowest in this factor. It is also found that teachers' competence in rubric for assessing performance of Naat and religious Rhymes, teachers' self-perceived frequency of using portfolio as assessment procedure, teachers' self-perceived frequency of using portfolio as assessment procedure, teachers' self-perceived effectiveness of portfolio as assessment procedure, Teachers' self-perceived validity of using portfolio as assessment procedure, teachers' self-perceived reliability of using portfolio as assessment procedure, teachers' self-perceived fairness in assigning homework to students as assessment procedure are at moderate level and were least ranked in this factor.

It is revealed that male teachers' perceptions regarding competence of assessment procedures, frequency of use of assessment procedures, effectiveness of procedures, validity of procedures, reliability of procedures, fairness of procedures and concept of procedures are lesser than that of female participants, and statistically different. As teachers' self-perceived perceptions regarding different assessment procedures are at lower moderate level, so it is strongly recommended that they should be trained adequately for assessment procedures. Teachers' self-perceived clarity and concept regarding portfolio is at lower and moderate level. Therefore, they must be sensitized with these assessment procedures. Refresher courses are recommended for male teachers, as their competence for assessment procedures is lower than female teachers.

REFERENCES

1. Ahmad, S.I. and Malik, S. (2011). Examination scheme at secondary school level in Pakistan: composite vs split. *Canadian Social Science*, 7(1), 130-139.
2. Barksdale-Ladd, M.A. and Thomas, K.F. (2000). What's at stake in high-stakes testing: Teachers and parents speak out. *Journal of teacher Education*, 51(5), 384-397.
3. Calveric, S. (2010). *Elementary teachers' assessment beliefs and practices*. <https://doi.org/10.25772/OXTP-8W56>
4. Campbell, C. and Evans, J.A. (2000). Investigation of preservice teachers' classroom assessment practices during student teaching. *The Journal of Educational Research*, 93(6), 350-355.

5. Centre for Educational Research and Innovation. (2008). Assessment for Learning: Formative Assessment. *OECD/CERI International Conference "Learning in the 21st Century: Research, Innovation and Policy"*. <http://www.actedu.in/wp-content/uploads/2016/03/Assessment-for-Learning.pdf>
6. Chan, Y.C. (2008). Elementary school EFL teachers' beliefs and practices of multiple assessments. *Reflections on English language teaching*, 7(1), 37-62.
7. Christie, T. and Afzaal, M. (2005). Rote memorization as a sufficient explanation of secondary school examination achievement in Pakistan: An empirical investigation of a widespread assumption. In *international conference on Assessment and the Future Schooling and Learning*. International Association for Educational Assessment, Abuja, Australia.
8. Crooks, T.J. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research*, 58, 438-481.
9. Daniel, L.G. and King, D.A. (1998). Knowledge and use of testing and measurement literacy of elementary and secondary teachers. *The Journal of Educational Research*, 91(6), 331-344.
10. Dhindsa, H.S., Omar, K. and Waldrip, B. (2007). Upper secondary Bruneian science students' perceptions of assessment. *International Journal of Science Education*, 29(10), 1261-1280.
11. Gibbs, G. and Simpson, C. (2004). Conditions under which assessment supports students' learning. *Learning and Teaching in Higher Education*, 1, 3-31.
12. Green, S.K., Johnson, R.L., Kim, D.H. and Pope, N.S. (2007). Ethics in classroom assessment practices: Issues and attitudes. *Teaching and Teacher Education*, 23(7), 999-1011.
13. Guskey, T.R. (2009). *Practical solutions for serious problems in standards-based grading*. Thousand Oaks, CA: Corwin Press.
14. Hewson, M.G. and Little, M.L. (1998). Giving feedback in medical education: verification of recommended techniques. *Journal of General Internal Medicine*, 13(2), 111-116.
15. Hammons, J.O. and Barnsley J.R. (1992). Everything you need to know about developing a grading plan for your course. *Journal on Excellence in College Teaching* 3, 51- 68.
16. Imran, K. (2011). Reading assessment techniques among selected secondary school teachers in Pakistan: Current trends and practices. *International Journal on New Trends in Education and Their Implications*, 2(4), 58-141.
17. Kaplan, A., Gheen, M. and Midgley, C. (2002). Classroom goal structure and student disruptive behavior. *British Journal of Educational Psychology*, 72, 191-211.
18. Khan, S. (2006). *An evaluation of the exercises provided in the English compulsory textbook for class X (Unpublished MA Thesis)*. Karachi: University of Karachi.
19. Khattak, S.G. (2012). Assessment in schools in Pakistan. *SA-eDUC Journal*, 9(2), 1-13.
20. Kubiszyn, T. and Borich, G.D. (2013). *Educational Testing and Measurement* (10th Ed.). Wiley.
21. Lekoko, R.N. and Koloi, S. (2007). Qualms in marking university students' assignments by teaching staff: Does correlation of student's expectations and teacher's feedback matter? *Botswana Institute of Administration & Commerce Journal*, 4(1), 34-45.

22. Meece, J.L., Anderman, E.M. and Anderman, L.H. (2006). Classroom goal structure, student motivation and academic achievement. *Annual Review of Psychology*, 57, 487-503.
23. Marzano, R.J. (2000). *Transforming classroom grading*. Alexandria, VA: Association for Supervision and Curricular Development.
24. McMillan, J.M. (2008). *Assessment essentials for student-based education* (2nd Ed.). Thousand Oaks: Crown Press.
25. McMillan, J.H. and Nash, S. (2000). *Teacher classroom assessment and grading practices decision making*. Paper presented at the 2000 annual meeting of the National Council on Measurement in Education, New Orleans.
26. Miller, D.M., Linn, R.L. and Gronlund, N.E. (2009). *Measurement and Assessment in Teaching* (10th Ed.). Prentice Hall Higher Education.
27. Mussawy, S.A.J. (2009). Assessment practices: Student's and teachers' perceptions of classroom assessment. *Master's Capstone Projects*, 9. Retrieved from https://scholarworks.umass.edu/cie_capstones/9
28. Nitko, A.J. (2001). *Educational assessment of students* (3rd Ed.). Upper Saddle River, NJ: Merrill.
29. Ohlsen, M.T. (2007). Classroom assessment practices of secondary school members of NCTM. *American Secondary Education*, 36(1), 4-14.
30. Black, P. and Wiliam, D. (2010). Inside the black box: Raising standards through classroom assessment. *Phi delta kappan*, 92(1), 81-90.
31. Rehmani, A. (2003). Impact of public examination system on teaching and learning in Pakistan. *International Biannual Newsletter ANTRIEP*, 8(2), 3-7.
32. Rehmani, A. (2012). Changing assessment practices in Pakistani schools : A case of AKU-EB middle school assessment framework. *In Search of Relevance and Sustainability of Educational Change : An International Conference at Aga Khan University Institute for Educational Development, November 1-3*, 285-295.
33. Rennie, L.J., Goodrum, D. and Hackling, M. (2001). Science Teaching and Learning in Australian Schools: Results of a National Study. *Research in Science Education*, 31(4), 455-498. <https://doi.org/10.1023/A:1013171905815>
34. Reynolds, C., Livingston, R.B. and Willson, V. (2009). *Measurement and assessment in education* (2nd Ed.). Ohio: Pearson.
35. Rogers, J. (2001) *Adults Learning*. Buckingham: Open University Press.
36. Rubie-Davies, C.M., Flint, A. and McDonald, L.G. (2012). Teacher beliefs, teacher characteristics, and school contextual factors: What are the relationships? *British Journal of Educational Psychology*, 82(2), 270-288.
37. Ryan, A.M. and Pintrich, P.R. (1997). "Should I ask for help?" The role of motivation and attitudes in adolescents' help seeking in math class. *Journal of Educational Psychology*, 89, 329-341.
38. Shah, S.M.H. and Saleem, S. (2010). Factors conducive for the purposeful use of libraries among university's students in Pakistan. *International Journal on New Trends in Education and their Implications*, 1(2), 46-57.
39. Schafer, W.D. and Lissitz, R.W. (1987). Measurement training for school personnel: Recommendations and reality. *Journal of Teacher Education*, 38, 57-63.
41. Schunk, D.H. (2008). *Learning theories: an educational perspective*, (5th Ed.). Greensboro. Person Education, Inc.

42. Wyatt-Smith, C., Klenowski, V. and Colbert, P. (Eds.). (2014). *Designing assessment for quality learning* (Vol. 1). Springer Science & Business Media.
43. Society for Advancement of Education. (2016). *Assessment systems in Pakistan: Considerations of quality, effectiveness and use*. Lahore: Society for Advancement of Education.
44. Vanderyar, S. and Killen, R. (2003). Has curriculum reform in South Africa really changed assessment practices, and what promise does the revised National Curriculum Statement hold? *Perspectives in Education*, 21, 119-134.
45. Wormeli, R. (2006). Accountability: teaching through assessment and feedback, not grading. *American Secondary Education*, 34, 14-27.
46. Zoeckler, L.G. (2007). Moral aspects of grading: A study of high school English teachers' perceptions. *American Secondary Education*, 35, 83-102.
47. Zhang, Z. and Burry-Stock, J.A. (2003). Classroom assessment practices and teachers' self-perceived assessment skills. *Applied Measurement in Education*, 16(4), 323-342.