

An inquiry about the formative use of assessment for the improvement of instructions at secondary level in District Quetta.

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Abstract

Assessment is considered the most important component of quality pedagogical process. It is important part of learning process which helps teachers to inform their instruction. Assessment can be applied to modify and improve the quality of instructional process. This research was conducted to discover about the formative use of assessment and its role in the improvement of instruction at secondary level in District Quetta. The main objectives of the study were, to explore the relationship between formative assessment and instructional methodologies at secondary schools, level in District Quetta. The other objective is to propose an achievable mechanism of assessment for schools. To discover suitable, strategies, tools and techniques for formative use of assessment for instructional design at secondary level. A parallel convergent mix design research method was used by the investigator for this study.

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Questionnaire and interview were developed and conducted in secondary schools of Quetta district. The Quantitative data was analyzed through descriptive analysis SPSS and qualitative data was analyzed through thematic analysis procedure. The researcher found that teachers have basic knowledge about assessment, its kinds, strategies, tools and techniques.

They have knowledge of the significance of formative use of assessment and its role in the improvement of instructions. The researcher recommended imperative proposals, which would be very helpful for educators, investigators, curriculum developers, planners and policy makers to introduce formative usage of assessment data to guide the instructions in right direction at secondary schools.

Key words:(Assessment, Formative Assessment, Formative use of assessment, Instruction)

Introduction

Assessment is the most important component of quality learning. It is considered the integral part of learning process which helps educators in the improvement of pedagogical skills. According to Dylan and Williams, 2004, assessment is considered key component for the improvement of learning. The first priority and objective of assessment is the planning, designing and practice of instructions, to promote learning process (Dylan & Williams, 2004).

Educational environment, system and mechanism can be informed through authentic assessment. The assessment is an important element of instruction and learning, which helps students to learn. Assessment also

helps students to conclude whether they comprehend the course contents or they are facing difficulty to understand. Assessment motivates the students to learn in a proper way. It also provides assistances to educator planning, designing instructions as well as helps them to improve the instructional strategies for effective learning (McMillan, 2011).

Literature Review

Assessment is always considered very vital for instructional process and it can be used for diagnosis of student's needs, interest, abilities and predictions about students learning style. It can also help teachers for the placement of students in evaluating, grading, guidance, selection, or administration purpose. In educational field, the assessment data findings are supporting teachers to decide instructional pedagogy about students' interest, needs, learning, and planer in the development of curriculum, and exam procedure (McMillan,2011).

Researchers are agreed about the important usage of assessment data. It is helpful to evaluate the educational objectives, the effectiveness of curriculum, the feedback mechanism, the use of effective instructional strategies, the planning process and use of instruction. It is find out that this role of assessment has been compromised and neglected in most institutions. Students performance observation and feedback on their strengths and weaknesses are totally ignored and the stress is only on product assessment. Researchers suggested that every effective and authentic assessment system is covering both process and product aspects (Popham, 2008).

The formative use or assessment for learning is very useful for the improvement of instruction. It supports educators to understand the students' learning growth, progress, styles, differences, needs, interest, and

cognition. It also helps to comprehend the effectiveness of instructional planning and teaching strategies. It provides information about the links between instructional planning and learning process. It also indicates the Pace of teaching, and students' successes in the achievement of outcomes. Different stakeholders use assessment in their areas for the improvement of overall instructions.

This research study, was planned and conducted to explore the role of, formative use of assessment, in the perfection of instruction. It is commonly considered that assessment is very significant aspect of pedagogical process. Without assessment an operative and useful instructional process is impossible.

Theoretical Framework

The theoretical lens of this study was sociocultural constructivist theory of learning which support the formative use of assessment. This theory elaborates formative assessment effectively (heritage, 2010). The sociocultural constructivist theory of Vygotsky elaborating that students construct knowledge on their previous learning (Brown, 2000). This understanding support the formative use of assessment and its role for the improvement of classroom pedagogical instruction. Vygotsky explain that students learn in interactive social context with the help of experts' guidance (Vygotsky, 1978). Classrooms are social places and teachers are the experts and guiders, and learning process is continuous process supported by continuous authentic assessment. Researchers find out that assessment and instruction relationship is very strong. Assessment is considered integral element of instruction by instructors. It is assessment which provide the data about the effectiveness and pacing of instructions.

Assessment is essential element of teaching learning process which is helpful to improve the educational system. Assessment helps learner how to learn and make them able to assess about their own learning and determine whether they are learning about the contents or they are unable to understand. (Williams & Dylan, 2004)

The National Council of Teachers, of English, (NCTE) executive committee, (2013) explored that assessment can be used for the improvement of planning, designing and implementing instructions. Assessment can provide data to educators about the overall learning process and they can immediately give useful feedback to improve the process. Assessment will help educators to focus on the growth and progress of learning process for the improvement of next step. Assessment can help the student to know about responsibilities and encourage them to monitor and support their learning. Assessment can also assist teacher to think about several kinds of evidence and variety of strategies, and well use all these evidence for his pedagogical improvement. The process of assessment makes available the data to diagnose the student's interests, needs, strengths and weaknesses which will be helpful for teachers to cover these gaps. The progress of the students towards achieving objectives is only possible to monitor them continuously.

The theory of the formative use of assessment provides data that assessment determine instruction and the exercise of formative use of assessment in our schools is needed to explore.

The Formative use of Assessment

Assessment practices contributed in many ways for learning progression. It is helpful for planning, instructions. gauging students' performance and evaluating syllabus and curriculum (Herman & Dorr-

Bremme, 1982; Stiggins, 1991). Teachers often assess their students' knowledge and skills as well as student's social interaction, participation and collaboration (Cizek, Fitzgerald & Rachor, 1996). This kind of data is very important contribution in the decision process of teachers for planning lessons, organizing instructions for students, diagnosing the weaknesses and strengths of students and arranging instructional groups for their class (Stiggins & Bridgeford, 1985). It is up to teachers that how and when they use the assessment data e.g. for evaluative purposes, instructional improvement for both in same time.

Assessment can be categories differently due to its nature but still it can be considering formative as William and Black (1996) and more comprehensively William and Leahy (2006) described that "formative" should be describe practically, means use of assessment rather than kind of assessment. This definition elaborate that different types of assessment or data may be formative if teacher use it formatively to inform the instructions rather than for administrative or policy purposes. It is up to teachers that how they are using assessment data.

It is generally understood that assessment information comes from varied and numerous sources including tests, exams, activities, questioning and teacher observation. It is depended on teacher belief about assessment that how much weightage a teacher assign to different kinds of data. The teacher educational philosophy influences the overall learning process. The teachers always ignore the new idea about assessment which is incompatible with his philosophy (Borko et al., 1997). The educationist and psychologist are investigating in the field of learning and assessment now a day. They are working to link assessment with learning pragmatically and give some influential intuitions about the role of

informative use of assessment, for the perfection of pedagogical skills and learning environment. (William, 2000).

The formative use of assessment now a day is considered very important for learning. The assessment supports learning on every aspect from the very beginning to end. Assessment can be criterion referenced, or students referenced, but its aims must be to overcome the weak areas, and sustenance learning. Assessment is continuous process, adopting by the students and teachers to enhance and promote instruction. Assessment help teachers to decide about continuous learning and next phase. In formative use of assessment, the planning phase and implementation phase, all activities are designing to understand students, teachers and learning process, strengths and weaknesses. The data obtained through assessment provides information about students can be used for giving feedback for the improvement of process. This kind of assessment is more useful to understand the needs and interests of students and help them (Black & William, 1998).

The research finds out that assessment is continuous process to collect data, interpret the data for decision making. It supports educators and learners in the learning p and provide evidence about, where they are, where the teachers want to go and how can teachers attain the desire outcomes. The decision about the responsibilities of learners and teachers for the process of instructions can be classified through continuous use of assessment. There are two phases of assessment, first phase is process based and the other is judgmental phase both needs to be carefully workout. (Assessment Reform Group, 2002).

Research Objectives

Following is the research objective

1. To explore the relationship between formative assessment and instructional methodologies at secondary level in District Quetta.

Research Questions

The main research questions of the study are:

- To what degree formative use of assessment is correlated with improved instructions at secondary level in District Quetta?
- How do the secondary school teachers improve their instructions with the help of formative assessment in District Quetta?

Significance of this Research Study

This significance of this research study are:

- This research finding will improve the visualization of teachers, administrators, curriculum developers, of relevance, significance and implications of formative assessment to improve instructions.
- It will increase links between assessment and instructions.
- It will help to improve the strategies and approaches regarding the integration of formative use of assessment practices and instructions.
- The research will be useful to update all stake holders (professionals, school management, student, teacher's parents) about the importance of the formative use of assessment data, and its role for pedagogical improvement.
- The research study will be supportive in promoting the existing standard systems of assessment in government and private institutions.

Hypothesis of the Study

Simple Hypothesis

The relationship of formative use of assessment data and instructional pedagogy is very strong. the formative use of assessment data helps in instructional improvement.

Null Hypothesis

H0. Formative use of assessment data has no any influence on instructional pedagogy.

Alternative Hypothesis

H1. The formative use of assessment data have strong influence instructional pedagogy

other, both assessment and instruction are the key elements of pedagogical process and supportive to each other.

Research Methodology

Research Design

This research study was Convergent parallel mixed method design in nature. Two kinds of tools interview for qualitative data and five point Likert scale questionnaires for quantitative data collection was used for this research study. “The mixed research designed is research method to collect, analyze, interpret data and mixing both qualitative and quantitative data in a single research study or series of studies to comprehend a research problem” (Creswell& Plano Clark, 2011). Convergent (or parallel or concurrent) mixed method research design is to collect both quantitative and qualitative data simultaneously, merge the data and use the result to understand a research problem (Creswell, 2011).

Data Collection & Variables of the Study

The researcher used two tools Likert scale for quantitative and interview for qualitative data. “Over the years, several methods have been used to measure character and personality traits” (Likert, 1932). “Likert scale is in practice as one of the utmost important and commonly used psychometric tools in educational and social sciences research. (Ankur Joshi, Saket Kale, Satish Chandel & D. K. Pal, 2015)

Ethnographic interviews have become a generally used qualitative methodology for collecting data, thematic analysis is one such way (Aronson, 1992). Thematic analysis has been called (Benner, 1985; Leininger, 1985; Taylor & Board, 1984), Thematic Analysis (TA) is an manageable, flexible, and progressively popular method of qualitative data analysis. (Braun & Clarke, 2012).

The five point Likert type questioner for survey was used in 20, (10 boys and 10 girls) secondary schools. The numbers of participant from each school was ten.

The questionnaire and Interview protocol were developed by the researcher. For the validity of questionnaires, the researcher got it checked by two Ph.D. scholars and 5 educational subject specialists, of Bureau of curriculum and extension center Quetta Balochistan. The experts' comments and suggestions were incorporated. Pilot testing for reliability was conducted in 2 schools, 20 teachers were the sample for the purpose.

The questionnaire was practiced and completed by teachers in front of investigator. Twenty interviews, one from each school, were conducted with school staff. The survey Likert scale questionnaire was consisting on 19 statement. These statements were about the teachers' concept of formative use of assessment, for the perfection of instruction. The survey

tool was used to determine the formative use of use assessment. The interview was consisting important questions about teachers' perception of assessment, tools strategies and techniques about assessment used by teachers and formative use of assessment in practice in schools. Teachers were interviewed face by face. Interviews were recorded and described. Qualitative data was organized and analyses through SPSS. Every statement was analyzed through tables and graphs. Teachers responsive were noted and then data was interpreted thematically. The qualitative data, was evaluated and interpreted through thematic analysis by using micro, macro coding and themes procedure. It was interpreted against interview questions as well as thematically, keeping in mind research objectives and questions. Results were inferred from both quantitative and qualitative data by triangulation procedure. Discussion was elaborated by triangulating both quantitative and qualitative data and related research in the same nature as well as other literature.

Population of the Study

All 98, 41 males and 57 female government secondary schools' teachers of Quetta district were the population of this research study.

Sampling Technique and Sample Size

Stratified sampling technique and convenient was applied to conclude the sample of the research study. In first strata, 20 schools, 10 boys and 10 girls, was selected through simple random sampling procedure. At second strata using non random sampling 10 teachers from each school was selected who are teaching secondary level. Overall 20 interviews were conducted. With each school staff one interview was conducted, face to face.

The researcher collected data from 200 secondary schools' teachers and interviewed 20 schools staff. participants. N= 200

Research Instruments/tools

Two types of tools were used to collect the data. questionnaire and interview were the research tool of the study. Questionnaire was consisting on five Likert scale to collect quantitative data. Interview schedule was consisting important questions to collect qualitative data.

Data collection Procedure

The researcher collected the data personally from the schools. Tools were administrated face to face for quantitative data. 5 Likert scale questionnaires was used to collect data from government high school boys' and girls' teachers personally. Interview was conducted in 20 schools face to face.

Research data Analysis procedure

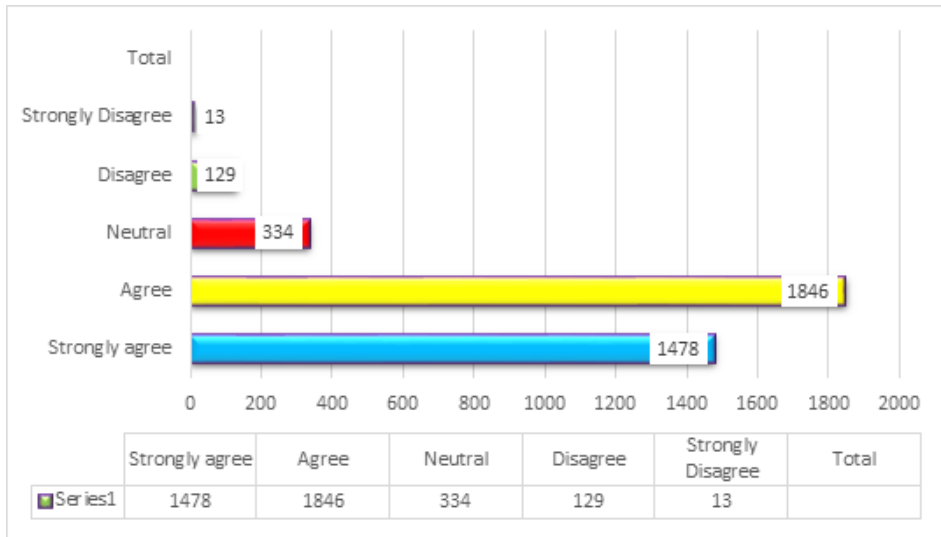
The Quantitative data collected from the respondents was analyzed using SPSS, descriptive statistics analyzing procedure was used. Each and every statement was analyzed separately and then thematically. The Qualitative data collected from the respondents was analyzed using thematic analysis. Parallel mixed designed research data analyses involves two separated analysis procedures. To analyze quantitative data descriptive / inferential statistics are being used and for qualitative data analysis's thematic analysis, related to the relevant narrative data was used. The analysis is linking/ combined or integrated into meta- inferences. (Teddle, C., & Tashakkori, A, 2009, p.266). Parallel mix designed and data analysis techniques remain popular alternative for mixt research, as indicated by recent examples (Bernardi, Keim, & Lipps, 2007. P.368).

All statements of Likert scale questionnaire were positive and organized from strongly agree to strongly disagree. The participant responses strongly agree was considered participant knowledge of the formative use of assessment.

Assessment system for the improvement of instruction.

Likert scale	Participant responses	Percentage
Strongly agree	1478	38.89 %
Agree	1846	48.57 %
Neutral	334	8.78 %
Disagree	129	3.39 %
Strongly Disagree	13	0.34 %
Total	3800	

Table. 1



The above table, 1, shows that majority of teachers' responses are either strongly agree or agree. Out of 3800 there are 1478, 38.89 % strongly agree, 1846, 48.57 % agree responses which showed the teachers perception about formative use of assessment for the improvement of

instruction. only 334, 8.78 % teachers responded neutral very little numbers 129, 3.39 % are disagree and 13, 0.34 % are strongly disagree response.

Findings

The important findings of Teachers' perceptions about formative use of assessment are: Teachers have basic information about assessment. They know about the definition of assessment. Most teachers have rudimentary knowledge about the basic types of assessment, the formative assessment, placement assessment, summative assessment, and diagnostic assessment as for as other kinds of assessment concern, very little numbers of respondents have the basic knowledge, some are just aware only about their names.

The data shows that teachers have some basic information about teaching strategies tools and techniques. Observation, Questioning, written test, examination are the common assessment strategies using by teachers in schools.

The information of existing use of formative assessment strategies for the perfection of instructions indicated that, Teachers considered Classroom Observation, classroom discussions, questioning, Quizzes, test and exams are the very common assessment techniques of assessment in schools. Copies writing indicates the weaknesses and strengths of students and by the completion of copies and their checking students get knowledge about their writing skills, mistakes, then they can improve. Assignment is assessment strategy to understand students' creativity their strengths and weaknesses. Teachers considered the classroom observation, Quizzes, questioning, Students attention and listening teachers, rising questions by

students, exam, assignments, completing copies, concept maps, group work the strategies to know about student's degree of learning.

The teachers' perception about formative use of assessment for improvement of instruction, data shows that:

Assessment and pedagogy have very strong relationship. Assessment is integral part of instruction. Assessment data indicated gaps for continuous feedback for the progress of instruction. To evaluate the instructions of teacher's assessment help them to choose appropriate teaching strategies and teachers can teach accordingly what they observe in the classroom. This shows that assessment provide data to link previous learnings of students to new planned learning. Teachers construct their learning process on student's previous level of knowledge and their degree of understanding. The examination data shows which subject needs more importance and where students lose their scores so that the particular subject could be given more concentration and importance for improvement.

Discussion

Assessment is systematic process to understand qualitative and quantitative achievements of teaching learning process. Assessment data can be used to improve instructions. The focus of this research study was the formative use of assessment data in secondary level classroom. The findings of the current study are mostly in consistency with the dominant literature of the field. However, at some places, the findings illuminated the existing literature.

Both the Qualitative and Quantitative data indicates that teachers are cognizant about the importance of assessment for the improvement of instruction. They have basic knowledge of assessment tools strategies and

techniques and using some common strategies in their teaching learning process. Most of the participants considered assessment as supportive feedback for decision making in improving instruction. This pattern can be found in the prevailing literature, about assessment, where it is highlighted how assessment can support teachers improve their instruction using feedback received through student assessment. Assessment process is the gathering, interpreting, and use of information, to support teacher decision making (McMillan, 2011).

Comparing qualitative and quantitative data about teachers' perception of formative use of assessment, it has been concluded that, teachers have knowledge about assessment definition, relationship of assessment and students' involvement. Most teachers have rudimentary knowledge about basic types of assessment such as formative assessment, placement assessment, summative assessment and diagnostic assessment as for as the other kinds of assessment concern, very little numbers of respondents have the basic knowledge or only knew about their names. The data provided information that, Observation, Questioning, written test, examination, student's assignment, "copies" are the common assessment strategies using by teachers in schools.

Data shows that teachers considered that assessment helps to expand learning, improve academic achievement, increase knowledge, enhance student's motivation, escalate student's engagement, diagnose student's needs, interests, and capacity level and provide information for giving feedback. Here the findings of the current study illuminate the literature and transcend the way that student can even improve themselves with the help of assessment results. This could be an illusion to the concept of self-directed learning.

The data also provide information of the current use of formative assessment strategies for the progress of instructional pedagogy, at secondary level. Almost all teachers are agreeing that test and quizzes, observation, question answers are the tools of assessment and the observation is the most common tool of assessment using for inclusive learning. Similarly, qualitative data proved information that teachers believed that Observation helps teachers to know about student behavior, interest, learning abilities, student capabilities, cognitive and psychomotor skills as well as the outcomes of planning, and teachers are planning and adopting teaching accordingly.

They agreed that writing copies is the integral part of learning in schools and students can be assessed on copies. In the same way the qualitative data also signposted that copies indicates the weaknesses and strengths of students. By the completion of copies and their checking students get knowledge about their writing skills, mistakes such as spelling mistakes and grammar skills and then they can improve them in next classes. The findings of the current study illuminate the literature and transcend the way that teachers considered copies writings and assignments as assessment strategy to know about student critical and creative writings. This could be an illusion to the concept of continuous assessment strategy.

Research findings about the relationship between formative use of assessment and instructional indicated that teachers have knowledge and they considered, that assessment is integral part of instruction and without assessment quality instruction is impossible. Teachers always teach accordingly, what they observe in the classroom. These findings of teachers' responses are consistency with the literature of current

assessment studies. “The first priority and objective of assessment is the planning, designing and practice of instructions, to promote learning process” (Dylan & Williams, 2004). And “assessment is systematic and continuous procedure of gathering, establishing, examining and inferring data for the quantitative and qualitative development of instructional pedagogy”. Assessment is the procedure of inquiring. Knowledge, attitude, skills, and believes of the students (McMillan, 2011).

They are agreeing that test and quizzes, exam results can be used for perfection of instruction and assist teachers’ in the selection of content and strategies for next class. Teachers have knowledge about using examination data for grading, pass fail, promotion of the students as well as using examination to categories students learning, their knowledge, skills and capacity. The examination data is helpful for the selection of subject in the higher classes. The examination data shows which subject needs more importance and where students lose their scores so that the particular subject could be given more concentration and importance for improvement which shows formative use of assessment of summative data on one hand, on the other hand teachers does not explain about the use of summative data for formative purposes in responding the interview questions. in post interview discussions the replayed that they are not using summative data formatively in formal way but there is impact informally.

Summary

This study provides information about the formative usage of assessment data of the instructional improvement. Almost all the educators are using assessment for the perfection of instruction to some extent. Some teachers are using it consciously, planned and scientifically and others are

using it unconsciously. Some techniques of assessment such as exam, observation, test and questioning are very common in classes the other tools are using by very low percent of teachers. Assessment is considering the process for grading, pass fail, promotions of students as well as using for the improvement for instructions to some extent. The culture of traditional summative assessment is strong rather than the use of assessment for learning. The teachers are aware about the importance of assessment role as they are using it for involvement, encouragement of students and trying to overcome the problems and weaknesses of students.

Conclusions

The following conclusions are drawn from the research study findings.

- 1) Assessment is very incorporated with teaching and learning and has strong effect on the progress of learning.
- 2) Continuous assessment techniques and multiple tools of assessment are very important to apply for the progress of pedagogical process.
- 3) Assessment has linkages with instructions continuously so that continuous assessment is more useful than old-style exam-based assessment.
- 4) It has been explored that assessment is the significant and integral part of pedagogical process so it is necessary to adopt the formative use of assessment.
- 5) Traditional assessment such as exam cannot provide opportunity for self-assessment.
- 6) Assessment is the process which show the current judgement, learning position and provide the pathway for next step.

- 7) Assessment provides suitable and authentic feedback for the improvement of students' individual and overall learning process improvement.
- 8) Assessment assist teachers for choosing the appropriate authentic and variety of teaching method.
- 9) The modification of instruction level and selection of appropriate teaching methods selection is only possible if there are indicators provided by assessment.
- 10) Assessment helps teachers in the field of lesson planning, appropriate teaching techniques and reliable teaching techniques can be plan on the bases of previous classroom data. Successful instructional methods and weak strategies can be classified through assessment.
- 11) Assessment provide data about the classroom management, child psychology and social behavior of students. Classroom environment, student's interaction and linkages between learning and planning can be judge through continuous assessment.

Recommendations

The researcher recommended the following, in the light of this research study findings and conclusions.

- 1 The formative use of assessment culture must be adopted instead of traditional exams which will motivate the students and teachers and help to improve the learning process.

- 2 Students must provide the opportunities of self-assessment so that they observe and judge their own motivational level, abilities, achievements and quality of their performance.
- 3 The “formative use of assessment” is more effective than the traditional exams so it is very necessary to shift the traditional teacher centered and narrow assessment system to authentic and alternative assessment system.
- 4 Multiple assessment techniques must use instead of one-dimensional techniques.
- 5 Students assignments, copies, classroom activities must be considering for the weightage of final examinations so that the students take more interest to develop.

Further research

- 1 A single study is not sufficient for the whole picture of “formative use of assessment data for the perfection of instruction”. Thus, there should be different studies using different approaches about different levels in different context.
- 2 This research study was piloted in government schools at secondary level of. One study of the same nature about the private schools must be conducted.
- 3 A study of the same nature is suggested about the comparison of private school and public-school.
- 4 Assessment is an important component of curriculum process. A study is needed to conduct about the assessment planned in curriculum and the practice of assessment in the field.

- 5 There must be a study about students' perception and role in the formative role of assessment.

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