

A Correlational Study On Formative Assessment And Students` Learning At Public Secondary Schools In Sindh, Pakistan

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ABSTRACT

This paper aims to investigate the relationship between formative assessment and students` learning at public secondary schools in Sindh, Pakistan. Assessment as a part of classroom activity is a basic requirement for the process of better teaching and learning outcomes. Assessment which is conducted in perspective of detecting out the gaps and hurdles in smooth learning is useful for weak students to encompass the obstacles during the course of study. It helps students as well as teachers to redress it timely. Formative assessment in classrooms as a fragment of actions has always a reasonable positioning, all the activities that teacher and students get to know and bring into the practice repeatedly, results in better students` learning outcomes (Black & Wiliam, 2003).

Research Methodology; This study used explanatory survey type of research and quantitative approach was used as per the nature of data to reach the objectives, and to test the research hypothesis. The descriptive research vigilantly defines the situations which currently happened (L.R Gay, 2012).

Data Analysis; The Correlation Statistics with the help of SPSS 23 software was used to analyze the data.

Findings; It is found that the formative assessment has positive correlation with student`s learning at public secondary schools. It is also found that, more frequent formative assessments practices increase students` learning.

Keywords: Formative Assessment, Student`s learning, Secondary Schools. Teachers, Students.

INTRODUCTION

Present research intends to highlight the Role of formative assessment in classroom interaction and its correlation with student`s learning at public secondary schools, which is a dire need of time for the betterment of education in many areas of the study to find out the gaps which occur during the process of instruction to instruct and learning to learn to provoke the education in Sindh, Pakistan. It was also indicated that it (Formative assessment) does not happen in the end of the term which is the sign of summative rather than formative, while the term summative assessment is widely used in the end of the academic session to evaluate all the leaning process throughout the academic year. The research study based on continuous assessment practices predominantly indicate to perceive students` motivation and achievements in the teaching and learning respectively. (Wiliam, 2014).

For the purpose of quality education, it is necessary to collect the information to understand strengths and weaknesses in teaching and learning process which is the dire need of time. Tests and examinations are traditional trends to measure student educational development and achievement (Revelle & Michaels, 1976). The highly tracking form of educational development is known as “Summative Assessment”. The summative assessments are not to be an actual authentic form of assessment and it does not result in definite conclusions which is obvious that the summative form of assessment results incomplete measures of student`s understanding level and it is an insufficient tool to measure the students` capability in perspective of exact conclusion of the academic session throughout the academic year. In this respective case to be actual and definite, effective assessment should also be “Formative”, this kind of assessment not only judges the students` learning during the teaching and learning process but also it helps both students and teachers to encompass the gaps and hindrances which exist during their ongoing process of learning. It creates different ways to deal with their activities positively, for having a smooth way of teaching and learning process to avoid deficits of gain. It directly effects on students` learning and achievements, defining from the other angle, recognizing and retorting to the students` learning needs. In teaching space having more many qualities of Formative assessment, teachers undertake a sufficient and adequate, collaborative Assessments of students` picking up knowledge (Nirmala, 2021). It is a sufficient way that empowers them to bring closer to their conveying capabilities. It directs individuals` needs, and supports them in a better way to reach high morals (Heritage, 2008). Teachers who are well aware about the

benefits enhance students' involvement actively in the process in respect of their help to develop talents which actually make them potent to learn in a better way (Shaikh et al., 2016). It increases the curiosity of students' learning outcomes, and helps to improve students' ability to learn (Gerling & Regás, 1995). For better achievements in the field of education, assessment is considered as a central process and used as an agenda for facilitating the teachers (Gilar-Corbi et al., 2020). It is turned up with the ways by dividing into different techniques, by which they intermingle with learners. It helps them to understand that how they can schedule the learning circumstances and directs them toward learning goals (Ahmad et al., 1998). It also tends them, how to explain students' learning. Progressive assessment manufactures students' "figuring out how to learn" capacities by cantering the way toward educating and learning. It includes students, as accomplices in that all, through procedure (Uri, 2014). It additionally builds students' aptitudes in Peer-Assessment and self-assessment, and urges them to build up a scope of result situated learning methodologies. Individuals who are effectively expanding their dimension of seeing emphatically of new ideas, as opposed to only engrossing data and who are attempting to learn for making a decision about the nature of their own and their friends neutralize well-characterized criteria are created for principal needs and abilities for long lasting learning accomplishments (Black et al., 2005).

Jones (2005) Explained that the assessment is an essential fact to evaluate the student's understanding level and skills, continuous assessment is a frequent way to encompass over the breaches which resist during the instruction and learning process (Jones, 2005). It is a classroom activity which emphasizes on students learning and enhances students' level of interest as well as confidence (Gerling & Regás, 1995).

The assessment enhances the students' abilities to achieve the desired goals in proper framework within time; this is also a cause of students' interaction with their subject work and repetition of work in perspective of assessment (Stetler et al., 2006). It also encourages the students' attraction towards achievements, which encompasses the gaps of learning and increases students' concentration towards their assigned tasks and let them move towards success smoothly (Boyatzis, 2016).

Statement of the Problem

Formative Assessment is a basic piece of teaching and learning process. It is more effective in making a decision about students' learning. It additionally measures the students' level of understanding and effects on students' learning outcomes. It is also a better way to know, how their learning improves as they go through various experiences of learning, many procedures of adapting affectivity are used to enhance the learning capacity of the students in and outside the classroom (Black et al., 2005). Thus, this research study aims to

investigate the relationship and impact of formative assessment on students` learning at public secondary schools.

Objectives of the Study

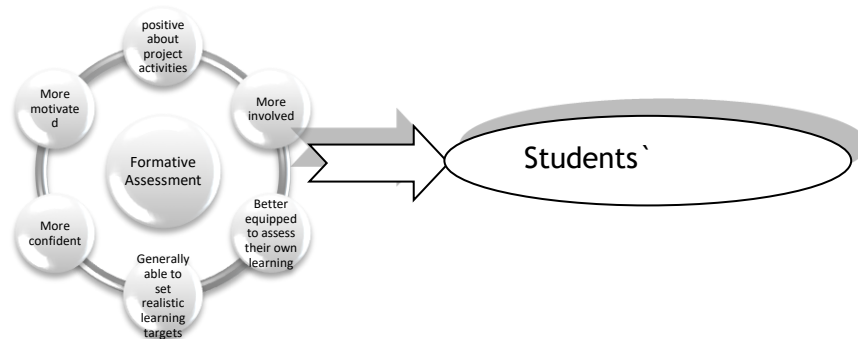
Generally, objective of this study was to investigate the relationship between formative assessment and students` learning at public secondary schools and specifically following objectives are focused.

1. To investigate the relationship between formative assessment and students` learning at public secondary schools.
2. To find out impact of formative assessment on students` learning at public secondary schools.
3. To enlist the suggestions for better implementation of formative assessment at public secondary schools.

Hypothesis of the Study

1. Ho: There is no significant relationship between the formative assessment and student`s learning at public secondary schools.
2. Ho: There is no significant impact of the formative assessment on student`s learning at public secondary schools.

Conceptual framework



Significance of the Study

1. It would be helpful in future for researchers, teachers and administrators.
2. It is trusted that, the data, evidence, and examination exhibited here will be useful to the pursuers who are keen on instructive assessment and further research.
3. This research will be beneficial for all the public schools in context of the assessment of the students and the recommendations of this study will help the

School Education and Literacy department to analyze the current and outdated system of assessment.

Delimitation of the Study

- 1) This study was confined to District Badin, Sindh, Pakistan.
- 2) This study was delimited to public secondary schools in District Badin, Sindh, Pakistan.

2 LITERATURE REVIEW

INTRODUCTION

This part of the study consists of review of relevant literature, intending to collect and assemble the material that supports the research study sufficiently.

Formative Assessment

Educators who utilize formative assessment techniques and methodologies are solid and steady to address random students' issues through inconsistency and adjustment of instructing to raise dimensions of student to triumph and to get a more prominent measure of students' learning results. In any case, there are significant deterrents to be routed to its additional common practices, alongside saw pressures between developmental evaluations, and high detectable quality of summative tests to consider schools in perspective of students' accomplishment (Clark, 2011), The Formative assessment techniques and methodologies might be actualized at the school and arrangement levels, to distinguish bearers and obstacles to advance successful and helpful societies of evaluation all through instructive frameworks (Havnes et al., 2012). It is just a path by which a predictable utilization of Formative assessment all through training frameworks may enable partners to deliver the deterrents to its more extensive practice in the classrooms (Revelle & Michaels, 1976). Paul, Black, (1998) found that assessments in the classrooms are usually found insufficient measures of learning. It encourages rote and superficial learning, which mostly results in surface learning. This type of learning has no mental growth and conceptual development that may help students to overcome the situations of upcoming assessments. There is no constant solution found in such type of involvements (Revelle & Michaels, 1976).

Edward Lee Thorndike Theory of learning

According to Edward Lee Thorndike there are three main laws of learning consisting of

1. Law of Readiness
2. Law of Practice/Exercise
3. Law of Effect

- 1) Law of Readiness: according to law of Readiness the individual needs to be well prepared and mentally, physically and emotionally ready for learning (Singh, 2011).
- 2) Law of Practice: according to the law of practice individual needs to put learning material into the practices repeatedly until he/she encompasses over it (Islam, 2010).
- 3) Law of effect: according to the law of effect the individual needs to be admired/praised about his/her worth doing or reinforcement is a basic need of an individual to polish and enhance learning abilities (Gerling & Regás, 1995)

Edward Lee Thorndike laws of learning give a clear concept of practices which make individual more effective in assessment. Teachers having assessment skills may help each other in such a way that they may be capable to know about the assessment techniques and may apply these practices properly. This skill of assessment can be helpful for them to grasp over the gaps which they face during teaching and learning process and also in applying assessments practices. They can help and guide each other is a better way to develop the skills of assessing in a suitable way, which may result in better outcomes. The teachers who frequently highlight the no of assignments over high quality, is main obstacle in smooth teaching and learning process (Revelle & Michaels, 1976). It creates hindrance in actual quality education and now it is a dire need of time to address such type of hindrances. The teachers should prefer quality rather than quantity. In this case the assessment practices are harmful on some extent which mostly stress on numbering and categorizing, are exaggerated. This often causes a great loss rather than a big achievement and tends towards negative approach (Hussain et al., 2012). This way of assessment while sharing valuable ideas and advices are underrated and linking students` competitively tends their intentions towards disappointment. It causes low-achieving students to be certain of that, they cannot be better learner. A teacher is one who is a good motivator. The motivating skills are the key factors which constantly effect on students` reinforcement. It plays an important role in students` throughout career in his/her mental development and encourages them to take many decisions of life with confidence but it is rarely found in many fields of life (McMillan et al., 2013). These are key factors which effect on individuals` overall career in each and every field of life. The teachers might have the capability to motivate them and try to repeat regular tests in their own assessment practices so, it lacks behind the sufficient information about their students (Association, 2020). The current wave of test-based "accountability" seems to be that all kind of assessments could be converted to "difficult tests" which definitely tend learners to dissatisfaction and would be proved great losing practice. It is proved that the formative assessments produce real improvements in student learning better than do other educational methods that are found null and void (Black & Wiliam, 2003).

3 RESEARCH METHODOLOGY

This section of the research study describes the research design, sources of data, the data collection methods, the sampling procedure and data analysis techniques used in this research study.

Research Design

This study used explanatory survey type of research and quantitative approach, due to the nature of data was used to achieve the objectives, and to test the research hypothesis. The descriptive research study helps the researchers to explore and define the events, attitudes, behaviors, and opinions easily. It also carefully describes the circumstances which currently happened (Gay 2012).

Area of the study

District Badin, Sindh, Pakistan was the area of the study.

Population of the study

The group of interest of the researcher on which the results can be generalized (Shukla, 2020). The population of the present study was consisting of,

1. All Boys Public Secondary Schools, of District Badin.
2. All Teachers of the Boys Public Secondary schools of District Badin
3. All the students of the Boys Public` Secondary schools of District Badin.

Taluka	No. of Schools	No. of Teachers	No. of Students
Badin	11	135	3,128
Tando Bago	08	70	1196
Tallhar	09	90	1,201
Matli	18	160	3,477
S.F Raho	04	44	1,024
Total	50	498	10026

Source: Semis Census, 2016-17

Sampling according Rule of Thumb

Rule of Thumb by John curry professor of educational research was used to determine the sample size for survey research (Jones, 2005).

Population	Sample
10-100	100%
101-1000	10%
1001-5000	5%
5001-10000	3%

10000+	1%
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(Jones, 2005)

Determined Sample Size:

DISTRICT	No. of Teachers	No. of Students
BADIN	50	100
TOTAL	n = 50	n = 100

Research Tools: 5-point Likert Scale Questionnaire, was used to collect the response. Questionnaire, is a tool used more expediently to conceal a large no of respondents (Brown, 2010).

Reliability of the research Tools: The reliability score of this research study tool having Cronbach's Alpha value .811, was acceptable hence the tool used in this study was reliable to conduct further research.

Research instrument	Cronbach's Alpha	N of items	N Respondents
Questionnaire for teachers	.761	12	30
Questionnaire for students	.841	13	30

4. DATA ANALYSIS AND INTERPRETATION

The inferential statistics was used to analyze the data, with the help of SPSS 23 software. The regression analysis was undertaken to know the impact of Formative Assessment on Students` learning, whereas, the correlation analysis was also taken place to know the relationship between Formative Assessment and Students` learning, at public secondary schools.

Problem/Objective

1. To investigate the relationship between formative assessment and students` learning at public secondary schools.

Hypothesis

Ho: There is no significant relationship between formative assessment and student`s learning at public secondary schools.

Correlation Analysis Table

		FA	S. L
FA	Pearson Correlation	1	.628**
	Sig. (2-tailed)		.000
	N	50	50
S. L	Pearson Correlation	.628**	1
	Sig. (2-tailed)	.000	
	N	100	100

Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis showing results Pearson correlation .628 and Sig- .000 revealed that the null hypothesis is rejected hence, the alternative hypothesis, there is a significant relationship between formative assessment and student`s learning at public secondary schools is approved.

Problem/Objective

1. To find out the impact of formative assessment on students` learning at public secondary schools.

Hypothesis

Ho: There is no significant impact of formative assessment on student`s learning at public secondary schools.

Regression Analysis Table

Hypotheses	Regression Weight	Beta Coefficient	R Square	F	p-value	Hypotheses Supported
Ho	FA → SL	3.815	.381	74.425	.000	No

P<0.05 FA: Formative Assessment, SL: Students` Learning

Table showing the summary of the findings.

The dependent variable SL was regressed on predicting variable FA to test the hypothesis Ho. While the FA significantly predicted SL, $F = 74.425$, $P < 0.001$, which indicates that FA can play a significant role in shaping SL ($B = 3.815$, $p < .001$) these results clearly direct positive effect of the FA. Moreover, the R square= .381 depicts that the model explains 38.1% of variance in SL. Hence the null hypothesis according to the results of the analysis was rejected. Henceforth, the alternative hypothesis tests, there is a significant impact of formative assessment on student`s Learning at public secondary schools was accepted.

Findings

It is found that the formative assessment has positive correlation with student's learning at public secondary schools. It is also found that, more frequent formative assessments practices increase students' learning. Formative assessment is taken for many reasons including, finding out the gaps of learning, to encompass over the hesitation of attempting examinations and to make students habitual to be examined repeatedly, which helps students to be confident enough to attempt annual/final examinations. Assessments are useful in improving teaching and learning, many activities can have a formative nature. This investigation revealed that the formative assessment is a massive source of acquiring knowledge and skills better for students' Learning outcomes.

The results of this study also match with the findings of (Jones, 2005) that by formative assessment practices Teachers can built proficient decisions on students' learning in each and every session undertaken during the instructional process. Using these proficient decisions and converting into response that best represents the assessment advantages. It is also revealed that the reinforcement on achievement in formative assessment increases students' confidentiality to overcome different situations pertaining to multiple examinations in different fields of life.

Conclusions

It was concluded on the basis of the statistical findings, that the formative assessment is correlated with students' learning moreover, the Formative Assessment has a positive impact on Students' learning as well. It shows that the formative assessment practices are the most important factors for effective learning. If the formative assessment practices are undertaken judiciously and appropriately, the students' learning will rise with adequate content knowledge.

Recommendations

It is recommended that the formative assessment practices should be undertaken properly and timely, as it results in definite conclusion in perspective of students' effective learning. The regular practices of formative assessment during the teaching and learning process enhance students' learning sufficiently, which has positive impact on students' academic achievements as well. The heads of the institutions should interact with teachers and facilitate them to conduct formative assessment practices in their respective context uninterruptedly. simultaneously the teachers should plan to conduct formative assessment practices with respect to their content of the study to avail better students' learning outcomes. Policy makers should also plan to enlist formative assessment practices in scheme of the studies so, that proper implantation of formative assessment could be possible in future.

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