

# Effectiveness of Postgraduate Diploma in Teaching Graduates in Utilizing Continuous Assessment: The Case of Eastern Ethiopian Preparatory Schools

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## ABSTRACT

This study examined the effectiveness of postgraduate diploma in teaching (PGDT) program graduates in utilizing various Continuous Assessment (CA) techniques to assess their students learning. Survey research design that incorporates both quantitative and qualitative data types was employed. The participants of the study comprised 261 teachers, 21 principals & supervisors each which were selected using stratified, purposive and available sampling techniques respectively. Questionnaire, key informant interview and document analysis were the data collecting tools. The finding of the study disclosed that, PGDT graduates were somewhat effective in utilizing various assessment techniques as the overall observed mean score of the respondents was 2.34 which is slightly above the expected mean value (2.0). Moreover, it was found out that, final exam (mean=3.5), group work, home work and paper-pencil test (mean=2.9 each) and classroom participation (mean=2.5) were the most repeatedly utilized techniques of CA. Furthermore, the association between teaching experience of PGDT graduate and their level of utilizing different assessment techniques was not significant ( $r = 0.09$ ,  $p=0.17$  which is  $>0.05$ ). T-test value  $t(256) = 1.42$ ,  $p=0.16 > 0.05$  indicated that, there was no significant mean difference between male and female PGDT graduate in utilizing CA techniques to assess their students learning. Therefore, the researcher suggested that, PGDT graduates need to include various CA strategies in their lesson plan and implement them as per their plan.

**Key words:** Continuous assessment; Effectiveness; Graduates; PGDT;

## INTRODUCTION

### 1.1. Background of the Study

Education plays a decisive role for the overall progress of a society. Balogun (2010) opined that, education is the light, without which, the whole world would be in darkness. It is the basis of scientific and technological breakthroughs and the basis of modernity, which have made all nations of the world accord immense priority to it. Access to good-quality education is thus, of central importance to national development. To play these roles, education needs to meet minimum quality standard.

The quality of education primarily depends on the quality of teachers available in an education system. According to Ibukun as cited in (Koye, 2014), the quality of human resources in the form of teachers, often dictates the extent of the effectiveness of educational programs. In order to achieve any socio-political, economic and scientific development in a country, there is the calamitous need for qualified teachers who are equipped with the desired knowledge, skills, competence and commitment, and who are empowered to perform their tasks professionally. This indicates that the

quality of education is maintained via sustaining the quality of teachers, as it is a very critical component in the realization of educational goals.

Considering its benefits, the Government of Ethiopia has developed Education Training Policy (ETP) and Education Sector Strategy in 1994 in which Education has been a development priority on the national program. The current Education Sector Development Program (MoE, 2010a) lists the development of teachers and school leaders first among its priorities for improving the quality of primary and secondary education (World Bank, 2013). This priority is consistent with international experience and evidence. It is also a task that has often been more difficult and challenging than expected. But, it must be addressed successfully if the education system is to effectively support the growth and transformation of the economy, as teacher performance is one of the major determinants of student learning achievement.

In line with this, the secondary teachers in Ethiopia are obliged to pass through different training programs. For instance, earlier to 2010, teachers were given training for four consecutive years in which applied, pedagogy, and practicum courses were offered simultaneously. Nevertheless, recently, the selection criteria and the training strategies of secondary school teachers are changed (Adugna, 2012). That is, starting from 2011, Post Graduate Diploma in Teaching (PGDT), which was a new system of secondary teacher education, came into effect. Consequently, the four years pre-service secondary school teacher education was reshaped to three years training period to qualify candidates for applied degree, and later on after their graduation, teacher trainees are required to attend pedagogical and practicum training for one year before they go to secondary schools for the actual teaching. The main aim of PGDT program was to fill the content and pedagogical gaps

that were observed in earlier secondary education teaching programs.

Consequently, starting from 2011, most of the universities produced many teachers in PGDT program and the trained teachers have been teaching in many schools. So far, few local studies as far as the knowledge of the researchers were conducted on this area. For instance, Adugna (2012) conducted a study on attitude of prospective teachers enrolled in PGDT program in Wollega University. Demis et al. (2015) also carried out their study on student-teachers' views about the practice of PGDT program by focusing on English major prospective teachers in Bahir Dar and Haramaya Universities. Koye and Yonas (2013) were also emphasized on practices and challenges of PGDT program in Haramaya University. Moreover, Sintayehu (2016) focused on challenges of PGDT program on summer modality students of Dire Dawa University. In sum, these studies were limited to address issues like practices, challenges and views or attitudes of prospective PGDT students. However, the effectiveness of PGDT program was not yet studied. Therefore, this study was aimed at investigating the effectiveness of the PGDT graduates in terms of utilizing various continuous assessment techniques in order to assess their students learning.

## **1.2. Objectives of the Study**

The general objective of this study was to assess the effectiveness of PGDT program graduates in utilizing continuous assessment to evaluate their students learning in preparatory schools of eastern Ethiopia. Specifically, its objectives were to;

1. Assess the extent to which PGDT graduates employ continuous assessment to evaluate their students learning
2. Identify assessment methods that are predominantly used by PGDT graduates
3. Find out the correlation b/n experience of PGDT graduates and their effectiveness in applying CA

4. Test whether significant mean difference exists between male and female PGDT graduates in applying CA?

To achieve the above objectives, the study employed the following research questions as a guide:

1. To what extent do PGDT graduates employ continuous assessment to evaluate their students learning?
2. What are the most predominant assessment methods used by PGDT graduates?
3. Is there correlation b/n experience of PGDT graduates and their effectiveness in applying CA?
4. Is there significant mean difference between male and female PGDT graduates in applying CA?

### 1.3. Scope of the Study

This study was conceptually delimited to the effectiveness of PGDT program graduates in utilizing continuous assessment strategies to evaluate their students learning. That means, the present study did not include issues like the effectiveness of PGDT graduates in planning their instruction and utilization of active learning approaches. Geographically, it was delimited to two zones (East and West hararghe), one administrative city (Dire Dawa), and one national and regional state (Harari). Moreover, the study was delimited to PGDT graduates working in second cycle secondary schools (preparatory schools) than first cycle secondary schools (grade 9 and 10). Furthermore, this study focused on BA/BSC plus PGDT graduates by excluding other teacher training programs like BED or MED.

## METHOD AND MATERIALS

### 3.1. Research Design

The main objective of this study was to investigate the effectiveness of PGDT graduates in utilizing various CA techniques to assess their students learning in preparatory schools of East Hararge, West Hararge, Dire Dawa City administration and Harari regional State. In order to attain this objective, the study adapted a survey design that involves both qualitative and quantitative research approaches. Survey involves acquiring information about one or more group of people, asking them questions and tabulating their answers (Jack, Norman & Helen, 2012).

### 3.2. Population of the Study

The population of this research were preparatory school teachers (846), principals 88, and supervisors (41) working in West Hararghe Zone, East Hararge Zone, Dire Dawa city administration and Harari regional state.

### 3.3. Sources of Data

Both primary and secondary sources of data were used to collect the required information. The primary data was collected from Teachers, Principals and Supervisors while secondary sources were weekly lesson plan reports, students mark list prepared by subject teachers, and Growth and Transformation Plan (GTP-II) of Ethiopia and other research works conducted on the area of PGDT.

### 3.4. Sample Size and Sampling Techniques

In this research, multistage sampling technique was used to select the required respondents. First schools were selected using different sampling techniques as indicated in table 1 below.

Table 1: Sample size and sampling technique for selecting schools

No	Study Area	No of Schools	No of Sampled Schools	Sampling Technique
1	East Hararge Zone	24	12	Stratified Random
2	West Hararge Zone	15	7	Stratified Random
3	Dire Dawa City	2	1	Purposive
4	Harari Region	1	1	Available

After selecting the required number of schools, selection of teachers was made through the combination of both purposive

and simple random sampling techniques. That means, purposive sampling was used to involve experienced teachers that serve as

mentors, department heads and unit leaders in to the sample. After that, less experienced teachers were included in the sample through stratified random sampling by using departments as strata. Additionally, principals were included in the sample through purposive sampling technique. That means only academic vice principals were

sampled as the purpose of this research was highly related to their responsibilities rather than the responsibilities of the main principal and administrative vice principal. Moreover, availability sampling was employed to include all the supervisors. Table 2 below shows the detail hereunder:

**Table 2: Sample size and sampling technique of selecting respondents**

No	Respondent		Study Area					Sampling Technique
			East Hararge	West Hararge	Dire Dawa	Harari	Total	
1	Teachers	Total	206	132	44	79	461	Purposive and Stratified Random
		Sample size	115	68	30	48	261	
2	Principals	Total	20	10	3	3	36	Purposive
		Sample size	12	7	1	1	21	
3	Supervisors	Total	12	7	1	1	21	Available
		Sample size	12	7	1	1	21	

### 3.5. Instruments of Data Collection

Questionnaires, semi-structured interviews, observation check list and document analysis were used to gather the required information.

#### 3.5.1 Questionnaires

A questionnaire was employed as a major instrument to collect information from the primary source of the data particularly from teachers. The questionnaire had two parts. The first part of the questionnaire consisted of 6 items that focused on biographical information about respondents. The second part consisting of 16 items was designed to secure information about the effectiveness of PGDT graduates in terms of utilizing various assessment techniques to assess their students learning. Before dispatching the questionnaire a pilot test was conducted in Adele Preparatory School and the internal consistency of the items was calculated using Cronbach's alpha and found to be 0.83 which is acceptable according to (Deniz & Alsaffar, 2013).

#### 3.5.2. Interview

In addition to the questionnaire, interview was also considered as means of securing important data. To get detailed information, 4 items of semi-structured interview guides were designed to supervisors. The main purpose of interview was to obtain detail information about the effectiveness of PGDT graduates in

applying different assessment techniques. This procedure helped the researchers to triangulate and strengthen the information obtained through the questionnaire.

#### 3.5.3. Document Analysis

Documents prepared by teachers like students mark list, annual and daily lesson plan reports were critically evaluated to see how much PGDT graduates are effective in employing various assessment techniques.

#### 3.5.4. Observation

To see the extent in which PGDT graduates apply varieties of assessment techniques in classroom, direct classroom observation was conducted in about 11 sections (4 west Hararge, 3 east Hararge, 2 Dire Dawa and 2 Harari)

### 3.6. Method of Data Analysis

After collecting the necessary information, the data was tallied, tabulated and processed separately for each item in line with the basic research questions. Both quantitative and qualitative data analysis methods were used in this research. The data collected through close-ended questionnaire was analyzed quantitatively by using mean. The data secured through interview and document analysis was analyzed qualitatively by thematic description and narration. Moreover, correlation was employed to see the association between experience of PGDT graduates and their level of utilizing different CA techniques while t-test was

used to test whether male and female PGDT graduates are different in using CA techniques.

### 3.7 Ethical Considerations

As this study involved the acquisition of personal information, ethical principles during the data collection process were considered. Ethical guidelines were followed to ensure that all the participants of the study were treated with respect and consideration. Before proceeding with data collection and analysis, approval was sought from the University Research Vice-President for Research Affairs. Moreover, permission was obtained from the school principals of the sampled schools. The participants were informed about the nature and procedures of the study. They were informed that their participation is voluntary and they had the right to withdraw from the study at any time. Effort was made to ensure the confidentiality and anonymity of the participants, including removal of names and details from quotes and descriptions that might reveal the identity of an individual,

and by using numeric labels when quoting the participants' statements. After the completion of the interviews, participants were given opportunity to review their responses and to make any changes to their statements.

## RESULT AND DISCUSSION

Questionnaire consisting 16 items on five likert scale: (0- almost never; 1-rarely; 2-sometimes; 3-Usually; and 4-almost always) was dispatched to teachers having different background (BED, MED, only BA/BSC and BA/BSC + PGDT) to determine the extent to which PGDT graduates use various assessment techniques and their effectiveness in CA. Table 3 below shows the summary of it. Again, the expected mean value (2) was used as a reference to judge the effectiveness of PGDT graduates. Hence, observed mean score above the expected mean value (2) is considered as effective while below was interpreted as ineffective.

**Table 3: PGDT graduates extent of using CA for evaluating their students learning**

Descriptive Statistics				
It. No	Type of assessment technique	N	Mean	Std. Deviation
1.	Individual studies	260	2.5808	1.17454
2.	Oral presentations	260	2.4115	1.06790
3.	Quiz	260	2.2500	.92821
4.	Group work	260	2.8615	.97263
5.	Portfolio	260	2.1192	1.31123
6.	Project work reports	260	1.7731	1.17176
7.	Practical work /laboratory works	260	1.7962	1.35595
8.	Attendances	260	2.1115	1.09925
9.	Experiments	260	1.8231	1.37527
10.	Mid examinations (Paper and pencil tests)	260	2.9154	1.16933
11.	Demonstrations	260	2.4346	1.18532
12.	Field works reports	260	1.5115	1.24734
13.	Home works	260	2.9346	1.22062
14.	Term papers	259	1.9768	1.29379
15.	Informal classroom observations or Classroom participations	259	2.5220	1.11018
16.	Final exam	259	3.4826	.83683
<b>Overall mean score</b>			<b>2.34</b>	

Scales of interpretation <0.5-almost never; 0.5-1.49-rarely; 1.5-2.49-sometimes  
2.5-3.49-usually; 3.5-4-almost always

As indicated in table 3 above, the mean score of item number 1, 4, 10, 13, 15 and 16 is between 2.5 and 3.49. This indicates that, the assessment techniques indicated in these items such as individual studies, group works, paper pencil tests, home works, classroom participations, and final exams were usually utilized by PGDT

graduates of the study area. Similarly, Gemechu (2013) found out that, individual works and paper & pencil tests were frequently used types of CA by instructors of Rift Valley University College (RVUC). Research conducted in Jimma University by Kassahun (2013) also confirmed that, final examination was the most frequently used

type of assessment with the rate of 65.7% while group activity was rarely frequented by instructors' of Jimma University which is the opposite of the present finding. In slightly different way, Gemechu's research also indicated that, field works and demonstrations were the most frequently used methods of assessment while they were not frequently used by PGDT graduates of this study. Oppositely, Gemechu concluded that classroom participation was found to be negative and non-frequently utilized types of assessment techniques by instructors of RVUC.

Table 3 also indicated that, assessment techniques like oral presentations, quizzes, assignments, attendances, portfolios, project work reports, laboratory works, experiments, field works, and term papers were sometimes used by PGDT graduates to assess their students learning. In opposite to this, Gemechu (2013) reported that, portfolios and experiments were negative and non-frequently used types of assessment techniques.

Moreover, table 3 indicated that, final exam (mean=3.5), group work, home work and mid exam (mean=2.9 each) and

classroom participation (mean=2.5) were the most repeatedly utilized techniques of CA. supporting this, the result of interview held with supervisors confirmed that mid & final exams and group works were the most frequently applied techniques of CA. Here is the voice of supervisor taken as an excerpt. "In our school PGDT graduates predominantly use exams and group work assignments to assess their students". The other interview also expressed "Know days our students are achieving better due to teachers interest to use different CA strategies like home works, tests, assignments and final exam". However, analysis of documents like weekly lesson plan reports showed that; questioning and answering, class work, home work, assignments and group works were the most frequently planned assessment techniques to be used by PGDT graduates.

Furthermore, the overall observed mean score of all items in table 3 above (2.40) indicated that, PGDT graduates are slightly effective in utilizing continuous assessment techniques as it is relatively higher than the expected mean score (2.0).

Correlation between teaching experience of PGDT graduates and utilization of CA.

**Table 4: Correlation test between teaching experience and CA**

		Teaching Experience	Continuous Assessment
Teaching Experience in school	Pearson Correlation	1	.086
	Sig. (2-tailed)		.167
	N	265	259
Continuous Assessment	Pearson Correlation	.086	1
	Sig. (2-tailed)	.167	
	N	259	259
**. Correlation is significant at the 0.01 level (2-tailed).			

In table 4 above, the sig value that corresponds teaching experience with the application of continuous assessment was 0.17 which was greater than 0.05. This indicates that, the relationship between teaching experience of the PGDT graduate and the application of various continuous assessment techniques to assess his/her students learning was not significant. Moreover, the value of correlation coefficient that corresponds teaching

experience with the utilization of different CA techniques ( $0.086 < 0.3$ ) showed that the correlation between the two identified variables was negligible (Mukaka, 2012). Thus, it is possible to conclude that the association between teaching experience and utilization of CA strategies was not significant.

Is there significant mean difference between male and female teachers in applying CA

Table 5: t-test result

Independent Samples Test					
	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Applying Equal variances assumed	0.01	0.973	1.42	256	0.158
Continuous Equal variances not assumed Assessment			1.37	26.15	0.181

As indicated in table 5 above, t-test ( $p=0.16 > 0.05$ ) indicated that, there was no significant difference between male and female PGDT graduate teachers in applying continuous assessment to assess their students learning even if the mean score of male teachers was slightly higher than their counterparts (male=39.5, female=36.1). Similarly, Adugna (2012) found out that, there was no evidence shown statistical significant difference among prospective teachers in their attitude towards teaching profession in terms of gender, family income and parent's education level.

## CONCLUSIONS AND IMPLICATIONS

The overall mean score of all items prepared to determine the extent to which PGDT graduates use CA to measure their students learning was 2.34. This indicates, PGDT graduates sometimes use various assessment techniques indicated in table 3. This implies that, the indicated assessment techniques were not appropriately used by PGDT graduates of the study area. Thus, it would have been good if educational psychologists are actively involved in offering trainings related with CA in general and less utilized CA strategies in particular.

Assessment techniques like final exam, group work, home work, mid exam, and classroom participation ranked first to fifth with the highest mean scores indicating that they were the most frequently utilized techniques of CA. Additionally, assessment techniques like oral presentations, quizzes, assignments, attendances, portfolios, project work reports, laboratory works, experiments, field works, and term papers were less frequently utilized by PGDT graduates. Therefore, strict follow up should be taken upon teachers and encouraging them to use less frequently utilized assessment techniques need to be

emphasized to improve the implementation of CA.

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