

Research Article

Teaching Effectiveness of Postgraduate Diploma in Teaching and Integrated Curriculum Graduate Teachers: Investigating Students' and Teachers' Perceptions

Abdurahman Ahmed Endris ¹, Mohammed Hussen Seid ²,
and Khaled Ahmed Abdel-Al Ibrahim ^{3,4}

¹Department of English Language and Literature, Woldia University, Woldia, Ethiopia

²Department of Chemistry, Woldia University, Woldia, Ethiopia

³Educational Psychology, College of Education, Prince Sattam bin Abdulaziz University, Al-Kharj, Saudi Arabia

⁴Educational Psychology, College of Education, Sohag University, Sohag, Egypt

Correspondence should be addressed to Abdurahman Ahmed Endris; abduahmed64@gmail.com

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A new teacher education package has been introduced in Ethiopia by the Ministry of Education, which is called the Postgraduate Diploma in Teaching (PGDT), for secondary schools since 2011, replacing the integrated curriculum teacher education program with the purpose of equipping trainees with the knowledge and skills needed. However, little research has been carried out on the effectiveness of the PGDT in relation to the previous (integrated curriculum) programme in the actual practices in secondary schools yet. This study, therefore, aims to assess the students' and teachers' perceptions of the teaching effectiveness of the PGDT and integrated curriculum graduate teachers in secondary schools in North Wollo Zone, Ethiopia. Data were gathered from participant students ($n = 214$) and teachers ($n = 16$) using purposive sampling. To gather data, questionnaires were employed. The data were analyzed quantitatively using mean, standard deviations, and one-sample t -test. The findings of the study revealed that students and teachers show slightly more positive perceptions of the effectiveness of PGDT, especially in subject matter knowledge; the scores are also significant. However, the results indicated that both the PGDT and integrated curriculum graduate teachers use the lecture method of teaching. Recommendations were forwarded for teacher development, instruction, and research on PGDT. Limitations and future directions of the study are also summarized and discussed.

1. Introduction

Education has a pivotal role in the development of a nation. Education provides light for the globe [1]. It is the foundation for innovation and modernity. Consequently, people provide great emphasis on education. Improving the quality of education is hence mandatory for a nation's advancement. To do this, a minimum quality standard is required from the education system.

The education quality of a nation mainly relies on the quality of teachers. The effectiveness of educational programmes mainly depends on the quality of teachers [2]. That

is, to improve the education quality, proficient teachers who have the essential knowledge, attitudes, and skills are needed. Investing in teachers is the first priority to enhance the education quality (The Education Sector Development Program) [3].

Various educational reforms have been employed in different countries all over the world to enhance the teachers' quality. Similarly, a teacher education programme, which is known as Teacher Education System Overhaul (TESO), was introduced in 2003 in Ethiopia. The TESO programme was established based on the new Education and Training Policy, which was proclaimed in 1994, as the implementation

strategy of Ethiopia; it is proposed to bring a paradigm shift in the teacher education system of the country. It was proposed that TESO had brought a change in teacher education, underscoring mostly professional courses with lengthy practicum experience in a reflective approach [4].

However, as TESO was not effective, a new model of teacher education programme, which is called PGDT, has been introduced in 2011 by MOE to alleviate the weaknesses of the TESO programme in Ethiopia. The main purpose of the PGDT programme was to prepare learners with the required knowledge and skills, make them reflective practitioners, develop an understanding of the characteristics of the teaching profession, and offer trainees both theoretical as well as practical knowledge, etc. [5].

In PGDT, the amalgamated three-year bachelor's degree was reformed into a three-year degree course in major fields, and one more year for a professional teacher education programme, that is, a Postgraduate Diploma in Teaching. In other words, the four-year preservice secondary school teacher education was reorganized to three years to be licensed trainees for an applied degree, and later (after graduation), it is required for candidates to take courses related to pedagogy and practice for a year before the actual teaching in secondary schools. The foundations of education, pedagogy, and school-based practicum experiences are the main issues of the one-year professional education programme [5].

Therefore, most universities in Ethiopia have produced many teachers, who teach in secondary schools, in the PGDT programme beginning in 2011. Nevertheless, it seems that the PGDT graduate teachers are not effective in the actual practices in secondary schools. According to some researchers [6], PGDT graduates from different Ethiopian universities lack content knowledge related to the high school level. Likewise, other research findings [7] show that graduates of PGDT are underrepresented in pedagogical skills, subject matter knowledge, and professional commitment.

However, the effectiveness of the PGDT in relation to the previous (integrated curriculum) programme in the actual practices in secondary and preparatory schools has not been studied yet as far as the reading of the researchers is concerned.

Therefore, a study to investigate the students' and teachers' perceptions of the teaching effectiveness of the PGDT and integrated curriculum graduate teachers has practical implications to examine gaps, identify areas of intervention, and recommend some interventions.

1.1. Statement of the Problem. Although there are significant achievements in access and equity of education in Ethiopia, the education quality in general and secondary school in particular has become low. This has been confirmed by the National Learning Assessment report. That is, the score of grade 10 students who recorded above 50% in five core subjects (English, mathematics, physics, biology, and chemistry) was 23% [8]. This indicates that there is a

problem with the quality of education in secondary schools in Ethiopia.

One of the causes might be the structure and nature of teacher education programmes [9]. In line with this, researchers [7] indicated that graduates of PGDT are not well-equipped in subject matter and pedagogical knowledge. This shows that the PGDT programme is not likely to be effective as proposed, and this affects the quality of education.

Even though the issue is critical, it has not gained significant attention from scholars, and only a little local research, according to the researcher's reading is concerned, has been conducted. For instance, a study on the attitude of prospective teachers enrolled in a postgraduate diploma in teaching at Wollega University, Ethiopia, was conducted [10]. Studies on student-teachers' views about the practice of the postgraduate diploma in teaching, focusing on English major prospective teachers in Bahir Dar and Haramaya University were also carried out [11]. Both of the above studies are limited in that their focus is at the teacher training college level, and they have not examined the effectiveness of PGDT at the school level, where it is practised. On the other hand, a study on the role of PGDT to improve the quality of teaching in Eastern Ethiopian secondary schools was conducted [12]. This study also did not compare the effectiveness of PGDT in relation to the earlier teacher training program, i.e., the integrated curriculum. The present study, however, attempted to investigate the students' and teachers' perceptions of the teaching effectiveness of the PGDT and integrated curriculum graduate teachers in secondary schools. It differs from the previous studies in focus and scope.

The main purpose of this study was, therefore, to investigate the students' and teachers' perceptions on the teaching effectiveness of the PGDT and integrated curriculum graduate teachers in secondary and preparatory schools in North Wollo Zone, Ethiopia.

In line with the above objective, this research has attempted to answer the following research questions:

- (1) How do students perceive the teaching effectiveness of PGDT and integrated curriculum graduate teachers?
- (2) What are the teachers' perceptions on the teaching effectiveness of PGDT and integrated curriculum graduate teachers?

2. Methodology

2.1. Research Design. This research was carried out to assess the secondary school students' and teachers' perceptions on the teaching effectiveness of the PGDT and integrated curriculum graduate teachers in North Wollo Zone, Ethiopia. For this purpose, a descriptive survey design was used. It is because a descriptive survey is used to describe a phenomenon under study as it is and no effort is made to change, or influence it [13].

2.2. Sampling Procedures. The population of the study was all secondary school students and teachers in North Wollo Zone. There are nine woredas and 3 town administrations in North Wollo Zone. The researchers, thus, selected some secondary schools from these areas using a purposive sampling technique. This is because, as the North Wollo Zone Education Office, the PGDT graduate teachers are not available in all schools in the zone (e.g., in town administrations due to the lack of experience). Based on the Zone Education Office information on the availability of PGDT graduate teachers, Gidan Woreda (Mujamariam secondary school), Lasta Woreda (Kulmesk secondary school), MeketWoreda (Flakit secondary school), and WadlaWoreda (Kon secondary school) were selected purposefully. Raya Kobo Woreda (Robit secondary school) was also included in the pilot study. Regarding the grade level, grades 9 and 11 were included in the study, and grades 10 and 12 were excluded from the study as the researchers believed that it is difficult to get rich data from them because of the national exam. Therefore, 214 students were included in the study.

Furthermore, all the PGDT and integrated curriculum graduate teachers (i.e., 16 teachers) in the selected grade levels have participated in the study.

2.3. Data Collection Instruments and Procedures. Questionnaires were used to collect data about the students' and teachers' perceptions on the teaching effectiveness of the Postgraduate Diploma in Teaching and Integrated Curriculum graduate teachers.

2.3.1. Questionnaires. A perception questionnaire on the teaching effectiveness of PGDT and integrated curriculum was designed based on issues drawn from the literature regarding teacher education programmes. The questionnaire used a 5-point scale of strongly agree to strongly disagree. There were two questionnaires: one for the students and the other for the teachers. The questionnaires consisted of items that intend to examine the students' and the teachers' perceptions on the effectiveness of the PGDT and integrated curriculum graduate teachers.

2.4. Validity and Reliability. To check the validity of the instruments, the researchers employed the subsequent procedures: before the data gathering, the instruments were provided to Woldia University teachers to obtain comments about the items. Hence, revisions, according to the comments, were made on the items.

It is also significant to obtain some evidence of reliability to check whether the questionnaire items generate the data required for the study or not. The reliability of the items was checked by using internal consistency through Cronbach's alpha reliability coefficient. Hence, the instruments were piloted in Robit secondary school. Thus, the internal consistency coefficient was 0.71, which is reliable.

2.5. Data Analysis. The data gathered using questionnaires were analyzed quantitatively using the Statistical Package for

Social Sciences (SPSS) version 20. Both descriptive (mean and std.) and inferential (one-sample *t*-test) statistics were used for different purposes. Mean and std. were employed to analyze the distribution of scores. The one-sample *t*-test was employed to check if there is a statistically significant mean difference between the expected and the actual level of respondents' perceptions on the effectiveness of PGDT and integrated curriculum graduate teachers.

3. Results and Discussion

3.1. Results. The main aim of the study was to assess the students' and teachers' perceptions on teaching effectiveness of PGDT and integrated curriculum graduate teachers. This chapter will discuss the findings and discuss the issues with respect to the research questions.

3.1.1. Students' Perceptions on the Effectiveness of PGDT and Integrated Curriculum Graduate Teachers. Concerning the first research question, an attempt has been made to assess the perceptions of students on the effectiveness of PGDT and integrated curriculum graduate teachers. That is, the learners were asked to express their degree of agreement with 13 statements that could elicit their perception. As all 13 items were constructed to measure one construct, item-by-item analysis was not good. The one-sample *t*-test was used instead. The mean scores of responses to each item are given in Table 1.

As presented in Table 1, the results confirmed that the participant students' perceptions about the teaching effectiveness of PGDT and integrated curriculum graduate teachers were positive, with an average mean of 3.67 for PGDT and 3.65 for integrated curriculum, an above satisfactory level for all the items. This shows that the students have positive perceptions for the effectiveness of both PGDT and integrated curriculum graduate teachers. Nevertheless, they show slightly more positive perceptions for the PGDT graduate teachers, particularly in providing adequate subject matter knowledge (mean = 4.64), using different question types in the exam (mean = 4.27) and good role model (mean = 4.24).

The above results, nevertheless, do not show whether the mean scores are significantly higher than the expected mean. Therefore, to check for statistical significance, the one-sample *t*-test was used and the results are given in Table 2.

Table 2 reveals that there is a significant difference between the perceptions on the PGDT response mean score (47.53) and the expected mean or test value (39), $t(213) = 19.66$, $P < 0.001$. There is also a significant difference between the perceptions on the integrated curriculum response mean score (47.36) and the expected mean (39), $t(213) = 17.08$, $P < 0.001$. Their scores on perceptions on teaching effectiveness of PGDT and integrated curriculum graduate teachers are also significant.

However, the students provided a higher score for the item "use lecture method." That is, as indicated in Table 1 above, the PGDT graduate teachers score is (mean = 4.15), and the integrated curriculum graduate teachers score is (mean = 4.27).

TABLE 1: Mean score of students' perceptions on teaching effectiveness of PGDT and integrated curriculum.

No	Statements	PGDT		Integrated	
		Mean	Sd	Mean	Sd
1	Adequate subject matter knowledge	4.64	0.60	4.46	0.85
2*	Don't use active learning methods	2.36	1.32	2.23	1.20
3	Encourage students to become active participant	4.24	1.06	4.44	0.94
4	Enhance student participation	4.21	1.05	4.20	1.16
5	Use books out of textbooks	2.31	1.33	2.09	1.24
6*	Use lecture method	4.15	1.14	4.27	1.02
7*	No responsibility	2.11	1.24	1.91	1.22
8	Role model	4.24	1.03	4.21	1.20
9	Use different question types in exam	4.27	1.08	4.23	1.08
10	Consider students' knowledge level	3.82	1.35	3.81	1.33
11	Teach contextually	3.79	1.15	3.87	1.32
12	Show exam results	3.71	1.37	3.71	1.40
13	Assess students' work continuously and provide constructive feedback	3.86	1.35	4.05	1.29

*Reverse coded.

TABLE 2: One-sample t-test result of students' perceptions.

	N	Mean	Sd	Test value = 39		
				t	df	Sig. (2-tailed)
Perceptions on PGDT	214	47.53	6.34	19.66	213	0.001
Perceptions on integrated curriculum	214	47.36	7.15	17.08	213	0.001

3.1.2. *Teachers' Perceptions on the Effectiveness of PGDT and Integrated Curriculum Graduate Teachers.* The participant teachers were asked about their perceptions of the teaching effectiveness of PGDT and integrated curriculum graduate teachers. Hence, the mean scores of responses for each item are given in Table 3.

As presented in Table 3, the results confirmed that the participant teachers' perceptions about the teaching effectiveness of PGDT and integrated curriculum graduate teachers were positive, with the average mean of 4.12 for PGDT and 4.11 for integrated curriculum, an above satisfactory level for all the items. This indicates that the teachers perceived that both the PGDT and integrated curriculum graduate teachers are effective. However, they show slightly more positive perceptions for PGDT graduate teachers, especially in subject matter knowledge.

Nonetheless, the results do not show whether the mean scores are significantly greater than the expected mean. Therefore, the one-sample *t*-test was employed to check for statistical significance, and the results are given in Table 4.

Table 4 indicates that there is a significant difference between the perceptions on the PGDT response mean score (28.88) and the expected mean or test value (21), $t(7) = 2.44$, $P < 0.044$. There is a significant difference between the perceptions on integrated curriculum response mean score (28.75) and the expected mean or test value (21), $t(7) = 3.22$, $P < 0.015$. Their scores on perceptions on teaching effectiveness are also significant.

3.2. *Discussion.* The purpose of this study was to assess the students' and teachers' perceptions on the teaching effectiveness of the PGDT and Integrated Curriculum graduate

teachers. The findings of the study indicated that both students and teachers have favorable perceptions on the effectiveness of PGDT and integrated curriculum graduate teachers. Nevertheless, they show slightly more positive perceptions for the PGDT graduate teachers, especially in subject matter knowledge (see Tables 1 and 3); the scores are also significant (see Tables 2 and 4).

The results of this study were consistent with the research finding of [12], which indicated that PGDT graduates have had better knowledge on the subject matter and use it properly in their teaching. This shows that training teachers through PGDT might be important to enhance the subject matter knowledge of secondary school teachers. The improvement of the mean score of the PGDT graduates in subject matter knowledge is likely to be due to the training that they learned in the different major courses in the three-year bachelor programme.

The findings also showed that both the PGDT and integrated curriculum graduate teachers' perceptions toward the use of active learning methods were positive (see Tables 1 and 3). However, both PGDT and integrated curriculum graduate teachers use the lecture method of teaching (see Table 1). The results were consistent with previous research findings of Sisay et al. [12], which reported that although most PGDT graduates in Eastern Ethiopian secondary schools responded that they apply active learning methods, and most of the classroom activities are dominated by teacher-centered methods. The findings of this study also agree with Dejen and Song's [14] research. They conducted a study to investigate the preservice teachers' conceptions of teaching and learning and teaching approach preferences in a teacher education programme. The subjects did not show significant differences in the teaching approach preferences

TABLE 3: Teachers' perceptions on the effectiveness of PGDT and integrated curriculum.

No	Items	PGDT		Integrated	
		Mean	Sd	Mean	Sd
1	Subject matter knowledge	4.39	1.30	4.38	1.06
2	Use active learning methods	4.11	1.41	4.38	1.06
3	Be responsible	4.00	0.46	4.00	1.30
4	Good role model	4.25	0.49	3.75	1.30
5	Consider students' knowledge level	4.13	1.35	3.88	0.83
6	Enhance student participation	4.00	1.41	4.00	1.41
7	Use various continuous assessment techniques	4.00	1.41	4.38	0.74

TABLE 4: One-sample *t*-test result of teachers' perceptions.

	N	Mean	Sd	Test value = 21		
				<i>t</i>	df	Sig. (2-tailed)
Perceptions on PGDT	8	28.88	9.09	2.44	7	0.044
Perceptions on integrated curriculum	8	28.75	6.79	3.22	7	0.015

and beliefs about teaching and learning. That is, the subjects preferred a teacher-controlled teaching approach and were more traditional in beliefs about teaching and learning. This might be because teachers were inclined to implement the traditional method, and they lack the awareness on how to implement active learning methods.

The findings of this study also agree with the research results of Ayetenew [15]. That is, the practice and outcome of the PGDT policy reform and the programme are not successful in Ethiopia, while a similar programme was effective when practised in other nations. One of the major factors of the problem was teacher educator variables related to attitude, commitment, and competence. On the other hand, the findings of this study do not agree with the results of Ayetenew [17]. The results of their study indicated that PGDT graduates were a bit more effective in employing several assessment techniques.

To sum up, the findings of this research indicated that although both students and teachers have positive perceptions on the effectiveness of the PGDT graduate teachers, particularly in subject matter knowledge and use of active learning methods, they do not practice the active learning methods they have learned during their PGDT training. Regarding this, researchers indicated that traditional teacher-centered methods control most classes in Ethiopia [16]. He further explained the common hindrances to the implementation of modern methods as follows: "the Ethiopian tradition of teaching and child upbringing, lack of institutional support and learning resources, teachers' lack of expertise, inappropriate curricular materials, and students' lack of prior experience to actively participate in the teaching and learning process."

4. Conclusion and Implications

4.1. Conclusion. Based on the main results of the research, the following conclusions were suggested. The results of this research conclude that secondary school students and teachers in North Wollo Zone, Ethiopia, have slightly more positive opinions concerning the efficacy of PGDT graduate

teachers, especially in subject matter knowledge and the use of active learning methods. In spite of their favorable perceptions, the lecture method of teaching is the dominant one. Since it has been evident that the PGDT has not been implemented properly yet, it is likely to conclude that there is a disparity between their perceptions and actual practices. Teachers' tendency to the traditional methods and lack of their awareness on how to implement active learning methods might be among the major factors that affect the implementation of active learning.

4.2. Implications. Based on the results of the research, the succeeding recommendations were suggested:

- (i) Continuous on-job training about active methods of teaching should be given to both the PGDT and integrated curriculum graduate teachers through the cooperation of various stakeholders, such as the MoE, Regional Education Bureaus (REBs), and the higher learning institutions.
- (ii) Active learning methods should also be underscored during in-campus training.
- (iii) It is important to organize events related to teacher education that improves the knowledge, skills and attitudes of teachers to implement active learning methods. Hence, it is expected from the MoE, REBs, and higher education institutions to integrate teacher education programmes like mentoring and induction to support beginner teachers' professional development.

4.3. Limitations. This study, however, like most survey studies, depends on self-report and participants' understanding of the questions and their familiarity with the ideas. Besides, only the quantitative method was employed; thus, it is difficult to understand the details. Moreover, the sample was not large for intrasample inferential analysis. Thus, findings should be interpreted carefully. Despite the limitations, this study brings preliminary insights by indicating

the effectiveness of the PGDT graduate teachers compared with the integrated curriculum in the actual implementation. However, future researchers conduct their research on more secondary schools (i.e., a bigger sample) and explore qualitative features of the issue [17].

Data Availability

The statistical data (in .doc form) used to support the results of the current research are incorporated in the supplementary materials files.

Conflicts of Interest

The authors declare no conflicts of interest regarding the content of this article.

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Supplementary Materials

The first table includes the descriptive statistics of students' perceptions on teaching effectiveness of PGDT and integrated curriculum. The second table includes descriptive statistics of teachers' perceptions on the effectiveness of PGDT and integrated curriculum. The details are included in the Supplementary Materials section. (*Supplementary Materials*)

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