



COLLEGE OF EDUCATION AND BEHAVIORAL SCIENCES

# THE STATUS OF TEACHERS' PROFESSIONAL COMPETENCE LICENSURE TESTING, TEACHERS' PROFESSIONAL COMPETENCE AND STUDENTS' ACADEMIC PERFORMANCE IN ETHIOPIAN PRIMARY SCHOOLS BASELINE SURVEY

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 DISSERTATION SUBMITTED TO DEPARTMENT OF PSYCHOLOGY IN FULFILLMENT OF THE  
REQUIREMENTS FOR DEGREE OF DOCTOR OF EDUCATION IN EDUCATIONAL ASSESSMENT

AND EVALUATION

JIMMA UNIVERSITY

OROMIA, ETHIOPIA, 2023

**DOCTORAL COMMITTEE:**

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**The Status of Teachers' Professional Competence Licensure Testing, Teachers' Professional Competence and Students' Academic Performance in Ethiopian Primary Schools. Baseline Survey**

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## Abstract

*This baseline survey of dissertation was aimed to assess the status of teachers' professional competence licensure testing, teacher's professional competence and students' academic performance in Ethiopian primary schools. The study was baseline surveys of positivist pragmatic worldview with quantitative research approach and descriptive surveys design. Data were collected from Ministry of education teachers' and school leaders' licensure directorate for teachers' three to five years' national teachers' professional competence licensure test results and national learning assessment and examination agency data base for students four consecutive years' data for EGRA and six consecutive years' data for ENLA results that used as the primary source of data in this baseline surveys. Data was analyzed by both descriptive and inferential statics. Accordingly, the followings were the main findings of the baseline survey. Based on the baseline surveys, from 2017 to 2019, among male 181, 804 and female 125, 960 with the total of 307, 764 senior primary school teachers involved in the teachers' professional licensure testing, 48, 743 males and 26, 029 females with the total of 74, 772 (24%) got the minimum requirement (62.5%). Out of these, those who set for portfolio practical assessment were male 14, 325 and female 2772 with the total of 17, 099 (6%). Therefore, 6% from the teachers who involved in the licensure test were licensed. Generally, the three years' results indicated that, the teachers who got the requirement (62.5%) were 24% in 2017, 22% in 2018 and 28% in 2019 respectively, which was very low against the intended golas by Moe*

to certify all teachers' and school leaders' (100%) by 2022. For all subjects, the mean scores for senior teacher were significantly greater than the mean scores of PGDT test takers due to their experiences and it also understood that less variation in scores was observed with in senior teachers than PGDT test takers. Generally, the teachers score was highly poor in pedagogical knowledge than content knowledge standards and the correlation coefficient between subject matter section and pedagogy section of the tests were generally positive and moderate. With regards to students' academic performance, the baseline surveys based on the six times (2000 to 2021) consecutive, NLA students' achievement in all subjects indicated that, students achieved 49.88% in mather tongue, 43.29% in environmental science, 40.19% in mathematics and 38.65% in English language. Among four subjects, grade four students' achieved low score in English subject in the consecutive six years' assessment. Concerning early grade reading assessment, only about 13% of students in grade 2 and 23% in grade 3 achieved the two highest levels, referring to "full or nearly full" and "increasing" reading proficiency known as functional reading level. On the other hand, about 68% and 51% of the grades 2 and 3 students were respectively categorized under zero readers in oral reading fluency subtask. Based on the baseline surveys, the following recommendations are given: it is helpful to develop a professional development program for on the job teacher that aligned with competency standards and curriculum modification for the candidate teacher in teachers' education college. For disparities among content knowledge and pedagogy knowledge which could be the consequence of the differences in training modalities or curriculum, it is essential to scrutinize and make some rearrangement in courses offering and modalities utilized in various training institutes. The baseline surveys outlined that there was still a difference in students' performance across gender, location, and regions. Therefore, the concerned bodies should provide and sustained interventions and harmonized efforts are required to improve students learning and take preventive measures which can minimize the existing gaps.

**Key Terms:** Baseline surveys, Primary School, Students' academic performance, Teachers' professional licensure test status, Teacher's professional licensure test, teacher's professional competence.

## 1. Introduction

A teachers' professional competence licensing is a teaching credential that an individual need to legally work as a teacher in particular area (Keller, 2016). According to Cowan (2016), teachers' professional competence licensure tests can have a major impact on the public sector teachers and their professional competences. The licensure testing can improve the quality of teachers and education, if the tests used are good measures of the competencies needed (Cowan, 2016). Teachers' professional competence licensure tests should be constructed align with specifications and standards. Standards should be set for performance on tests in order to differentiate competent and incompetent teachers.

The evaluation of teacher professional competence via licensure testing can serve as a method of both identifying high and low-performing teachers and making professional development more useful by identifying the specific areas in which teachers need help. Teacher with high competence is one of the most significant factors in improving student performance and serves the school to meet its objectives and missions (Varvel, 2013).

According to Vavral (2013), competent teachers are the most critical element in improving student performance and closing the performance gap. In fact, teachers' professional competence is an important factor that has a proven effect on student performance and in turn in educational quality. Over the past decade, research has confirmed that teachers have substantial impacts on their students' academic performance and life-long success (Chetty, 2014).

Current available evidence shows that teachers' professional competence influence students' academic performance (Chetty, 2014). This evidence reveals that teachers' professional competency licensure testing positively related to teachers' professional competence and students' performance (Kelcey, 2019). Metzler and Woesmann (2010), in their study found a significant effect and positive relation between teacher professional competence and student performance, drawing data on mathematics and reading achievement of sixth grade students and their teachers in Peru (Metzler, 2010). Student performance will increase if teacher's competencies and preparation are screened via professional licensure testing (Sultan, 2017).

Guskey (2009), refer to a Texas study of 900 districts found that, 40% of the difference in student achievement and most of the performance gap between students could be explained by teachers' professional competence. The authors claim that "effective professional competence through licensure testing makes the connection between

teachers' competence and students' performance" (Guskey, 2009). Research conducted in Nigeria by Akiri reveal the finding that effective teacher can generate students' higher performance (Akiri, 2013).

Status means, the relative position or standing of things or especially persons in a certain circumstance. The position or rank of someone or something when compared to others in a society, organization, group, etc. Concerning teachers' professional competence licensure test status, in Philippines teacher education are at the bottom in terms of licensure performance passing. It has consistently indicated a very distressing passing rate that is below the national standard from the past three years from 2014-2017. Specifically, in 2014 the passing rate was (33.50%), in 2015 (34.34%) and (32.37%) in 2016 respectively (Tarun, 2017). These statistics indicate that graduates from TEIs shortfall of the necessary pedagogic theories and competencies needed for the teacher education graduates to hurdle the BLEPT. The low passing rate of teacher education paints a bleak picture of Philippine's quality of teacher education programs and a much-needed stance to TEIs should be made so as for the national government investment would not just be put to waste.

In line to this, even though studies conducted on the role, effect and performance of teachers' professional licensure testing on teacher achievement, globally limited attention is being paid to teachers' professional competence licensure test status, potential and its contribution to teachers' professional competence and students' academic performance. The teacher's professional licensure testing status and its contribution for quality of teaching and learning, for the teacher professional competence improvement and students' academic performance have not been studied, which needed to be investigated for the overall enhancement of education quality.

In order to maintain the quality of education and to enforce all teachers and school leaders to be certified by 2022 in Ethiopia, the MoE determine and maintain the teachers' professional qualification standards, professional licensing guideline for the issuance and renewal of professional licenses with proclamation number 916/2015. However, neither the majority of teachers and school leader's assessed and certified nor study conducted that shows the success or failure of the program which fail to meet the intended purpose (MoE, 2021). Furthermore, the MoE focused on the analysis of licensure score raw data year after year, but not on the status, factors and barriers that affect the overall process, success and failure of National professional licensure test status.

As to the present researcher, if teachers have not been measured properly through effective licensure testing and their professional competence not meet with teachers' professional competence standards. Hence, suspecting the licensure test used and teachers' professional competence was logical. Thus, the baseline survey was aimed to assess the status of teacher's professional competence licensing testing, teachers' professional competence and students' academic performance in Ethiopian primary schools.

### **1.1. Statement of the problem**

As study conducted in America reveals, the teachers' professional competence licensure test is high cost and less benefits, licensure standards for any profession must strike a delicate balance: that means, set a clear and high standard but do not put up barriers that dissuade qualified people from even trying to clear them. With regards to teacher' licensure, a goal should be to create the minimum number of hurdles necessary to ensure prospective teachers have the skills they need to help students learn. Requirements that fail to provide valuable information about someone's teaching ability have no good reason to exist (Benjamin, 2012).

For instance, in USA, more than half of all prospective teachers fail licensure tests on their first attempt. Of those, one in five never retake them again (Chad, 2016). Many may have gone on to successful careers in the classroom to say nothing of the number who choose other professions due to concerns about licensure requirements. A barrier this substantial is only useful if it reliably predicts a teacher's ability to help students learn. Yet multiple studies have found that scores on licensure tests are weak predictors of success in the classroom and have little effect on student achievement (Chad, 2016). Most important, they cannot consistently predict teaching ability at the individual level, even when they point in the right direction overall, they produce far too many "false positives" (weak teachers who pass) and "false negatives" (strong teachers who fail) (Chad, 2016).

Basically, teacher professional competence licensing test is aimed to distinguish between competent and incompetent teachers in the context of competencies measured through the licensure testing. However, questions about licensure test validity, reliability, potential and robustness are key for measuring teachers' professional competence (Chen et al., 2019). In addition to concerns about biases in the selection and construction of individual items, the scope and quality of licensure testing requirements may also lead to disparities in score and passing rates. By design, licensure tests cover a subset of the skills that matter for teaching, and these teaching skills may disproportionately favor teachers with certain backgrounds. Therefore, the validity, reliability, potential and scope of the licensure test should be given great attention (Blomeke, 2017).



In order to minimize the rate of teachers' failure in the test, various directions have been addressed by different countries globally. For example, in America, the cut score pass rates for the licensure test range from 52% to 93%, (Walsh, 2019). The Australian cut score pass rates for their standardized teacher tests are 90% for first-time test takers (EQAO, 2019). In Philippines the passing rate is 75. In Ethiopian, the cut score passing rate for written test is 62. 5 and 10 in practical (portfolio) together 70 and above to be certified.

Aside from the dismal results of the national passing rate, Cepeda (2017), reported that, based on survey conducted, around 50% of the teachers have been performing inadequately in the licensure test from 2009 to 2017. The study showed that, 497 out of 1,024 teachers who took the LET (Licensure Examination for Teachers), achieved below the national passing rate (Cepeda, 2017).

According to Ethiopian Education Road Map (2018), though the licensing test for on the job teachers have been carried out since 2015, but it has not been effective (e.g. teachers develop the view that " teachers' professional licensing makes no difference whether you take the exam or not, whether you pass or fail..."), the teachers are logical, because the test results are simply recorded and have limited connection with recruitment or development processes. The experiences of the other countries reveal that, for example in Serra Leone, due attention given to the teachers' professional licensing test and if teachers fail initial licensing test and want to repeat the test, she or he shall pay a reset fee and take the test again at the earliest opportunity. If the teachers fail the test after two consecutive attempts, he or she shall be placed on probation for a minimum of one year (Nwokeocha, 2022).

In Ethiopia, some of the teachers' professional competence standards are too ambitious to be met by teachers as they are copied from abroad without much regard to the reality in the country (MoE, 2018). Again no resource availed (OER, Website) that help teachers update and enhance his/her competence (MoE, 2018). However, the experiences of various nations indicate that, if teachers intend to take the licensing test, in order to enable them to successfully undertake the licensing test, teachers are assisted with possible and compulsory materials via website. This has been done in the form of timely release of licensing test timetable and making online learning and open education resources (OER) available on the TSC websites by teacher resource centers (Nwokeocha, 2022). Where possible, past question papers and their answers availed online as well as practical lessons and videos by experts on how to prepare themselves for the TSC licensing tests are released, but there is no such access in Ethiopia.

In Ethiopian, concerning the teachers' professional licensing, there is no strong rule or incentives to motivate teachers to take the test (MoE, 2018). Except the teachers' and school leaders' professional licensing guideline and framework, no strategies and laws that lead the teachers' professional licensure test in Ethiopia. Though three should be requirements for progression and career path, but the teachers recruited and promoted without having the teaching license (MoE, 2018).

Internationally in most countries like America, UK and even in Serra Leone, the teachers' professional licensure test is computer-based, virtual and accessible from any part of the world, but in the case of Ethiopia, the test is paper pencil which makes difficult its test preparation and administration. In these countries, the results released as soon as the completion of the test and teachers' access their result using their test codes via any of the digital means available (TSC website, text messages, etc). Globally most countries have item bank and even publish frequently asked questions (FAQ) by the teachers on website and hard copies to articulate and answer common questions to give information about the licensure testing (Nwokeocha, 2022). In Ethiopia the release of the results may takes up to half a year and MoE has no item bank. Moreover, the subject matter experts at MoE level have no an assessment skill (qualification) to undertake analysis systematically (MoE, 2018).

Though the validity and reliability of any test is very important, teachers' professional licensure test has been prepared by external bodies of various public universities in the absence of the subject matter specialist from MoE with intention of making out source. The contribution of the test and the issues of validity and reliability may lay under questions, because the test process does not pass through expert's validation. No need assessment has been made and no cross check has been conducted by experts at MoE level (MoE, 2018). Concerning the contribution, validity and reliability of the licensure test, specifically for the first cycle primary schools' teachers, the MoE let universities to prepare master test in English at federal level and provide to the regions and cities to translate the English version licensure test to local language by experts and teachers. This might result in some mace and the issues of security in the test. The current status of the teachers' professional licensing test may be an indication of the difficulties and problems the program facing

For example, MoE (2015), stated that, all teachers and school leaders must be licensed as a legal teacher by 2022. However, the teachers' professional licensure test status of 2015 - 2021, indicated that only 6% licensed. The

program have been under taking since its beginning, however, the intended plan has not met and even it is in critical cases (MoE, 2021). With regards to the students' academic performance, it was also very low that might have relation with teachers' professional competence basically, which will be confirmed by quantitative study of the dissertation. As shown in ENLA and EGRA the students achievement was very low.

As to researcher experiences, from the government side, every year since the announcement of teachers' professional licensing in 2015, the government expending big public resources to guarantee the program with the objective of ensuring quality of education. From the teachers' side, efforts have been made to get licensure certificate since the launching of the program. However, the intended goals have not been achieved due to many unknown problems in the program. There have been wastages of public resources and moral deterioration and psychological impact on teacher due to low achievement and failure of the test. The government accusing teacher for lacking of competence, while the teachers have been blaming the government for the difficulty of the licensure testing.

Thus, given these considerations and the contextual nature of licensure testing and its contribution to teacher's professional competence and students' academic performance, the researcher needed for a profound study on the status of teachers' professional competence licensure testing, teacher's professional competence and student's academic performance in Ethiopian primary schools.

## 1.2. Objectives of the study

### 1.2.1. The General Objective of the Study

The general objective of the baseline survey was to assess the status of teacher's professional competence licensing testing, teacher's professional competence and students' academic performance in Ethiopian primary schools, suggest intervention and measure to be taken for the improvement of teacher's professional competence and students' academic performance.

### 1.2.2. The Specific Objectives of the Study

The study aims at achieving the following specific objectives:

1. Was to assess the status of teachers' professional competence licensure testing and teachers' professional competence in Ethiopian primary schools.
2. Was to investigate the overall performance status of students' academic performance in Ethiopian primary schools.

## 3. REVIEW OF RELATED LITRATURE

In this chapter, literature associated with the topic of the teachers' professional competence licensure test status was reviewed to formulate a conceptual framework as well as to draw out the theoretical framework of the study. The chapter indicates a conceptual framework, empirical findings and research from the literature and model of the study.

### 2.1. Teachers Professional Competence Licensing Test

Teacher professional competence licensing test is a test or evaluation administered on prospective and serving professional teachers to check whether their general academic and professional knowledge and skills meet the required standards before their licensing. The licensing test is, therefore, termed licensure or licensing (used interchangeably) because it is the last bastion they must overcome to earn a license (Nwokeocha, 2022). A teacher license is a teaching credential that an individual need to legally work as a teacher with a given area (Toktamysov, 2021). In simple terms, a licensure test is a test offered by governmental organizations for the purpose of regulating a specific profession.

Currently, teachers' professional competence licensing test is used in most states in America (Goldhaber, 2017), across Australia, Europe and Asia, such as the United Kingdom and Saudi Arabia (Gibb, 2019). The teacher's professional competency licensure test can exist in either paper or digital form and is usually multiple-choice. The aim of the test is to evaluate the basic competency in the subject matter taught in public schools. These tests are therefore, designed to measure an aspiring teacher's knowledge and skills that they are qualified to teach.

These tests are separate from the exams or assessments within the college or university teacher education programs (EQAO, 2019).

## 2.2. Teachers' Professional Competence Licensure Test Status: Global context

In America, there were a study that examines changes in teacher licensure status from 1999 to 2006. The study specifically focuses on tests in the Praxis II series, because, these tests are the most widely used assessments across multiple states for purposes of measuring content knowledge for initial teacher licensure.

When analyzing mean scores by gender, passing status, and experience, they combined the two levels of experience due to small sample sizes in particular cells. Female candidates and white candidates who pass have higher scores than male candidates and African-American candidates respectively. Individuals without experience appear to have slightly higher scores than those individuals with experience. Those who pass have substantially higher scores than those who do not, on the order of approximately two standard deviations difference. The mean (and median) scores for those who pass and those who fail were 158 (157) and 135 (136), respectively (SD = 10.0). Further, the proportion passing was very high and the mean score for those who pass was substantially higher than the median passing score across states (Drew, 2010).

In the study, trends were analyzed using two regression models. The simple model examines mean score changes over year. The comprehensive model includes gender, race, and experience variables. In the comprehensive model they consider only two levels of experience, experience vs. no experience. For each of these models, they first consider only candidates who pass and then all candidates. The analysis confirms that there was a small, but significant decline in scores between 2000 and 2005 for the seven states included in the analysis. Additionally, there were statistically significant race, gender, and experience differences. The pattern across years was stable across simple and more comprehensive models (Drew, 2010).

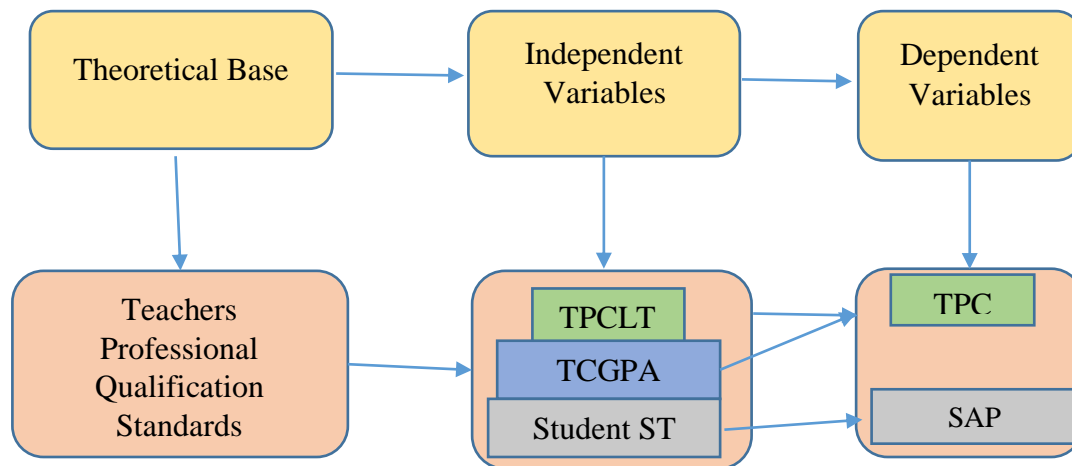
In the simple model, the proportion of variance accounted for by testing year was very small. Statistical significance was achieved due to the very large sample of candidates. Data from eighteen states were included. However, because of the adoption of this test was relatively recent, only three years of data were analyzed. Across the three years, there were no obvious demographic trends and passing rates hover around 90%, while there was also an increase in the absolute number of test-takers. There appears to be a small increase in the proportion of African-Americans taking the tests, but additional years of data would be needed to determine if this is a stable trend (Drew, 2010).

## 2.3. Teachers' Professional Competence Licensure Test Status: Ethiopian context

In Ethiopia, the teachers and school leader's professional competence licensing and relicensing guideline has promulgated with proclamation number 916/2008 with aim of giving professional licensure for all teachers and school leaders by 2022. The purposes are: to support the assurance of quality education in the country; to attract teachers into the system and retain individuals with better capacity in subject area knowledge, pedagogical skills and professional discipline and to support teachers and school leaders in the system to raise increasing their capacity and become competent thereby giving higher status to the profession (MoE, 2021). Concerning the provision of licensing system, there are two types of licensing system, which are initial professional license and permanent professional license system. **Initial professional license**: is a type of license issued to teacher', teachers trainers or school leaders who have been trained as teachers and have qualified for the profession. The initial professional license is valid for only two years. **Permanent professional license**: is a professional license issued for teachers who have completed their first professional license and met the qualifications required to obtain a professional license. It is the final stage of professional licensing and will be renewed through portfolio evaluation (MoE, 2021).

**Licensing assessment requirement**: there are written and functional (portfolio practical) assessments, which include professional knowledge and skills, serve as a testament to the professional competence of teachers, trainers and school leaders. Accordingly, the weights given for the evaluation tools are, 80% for written test and 20% for portfolio practical assessment together that constitutes 100%. **Measurement passing rate**: an individual teacher or leader is required to obtain an average of 70% or more of for both the written and practical portfolio assessment. Professional qualification assessment for new teachers, school leaders and supervisors entering the profession is based on a written evaluation of 100%. The Evaluation of the portfolio practical assessment is conducted in the institution where the evaluation is located or in an institution designed for that purpose (MoE, 2021). **Re- evaluation system**: teachers, teacher trainers, principals, and supervisors who do not pass the required assessments will be reassessed by following year by identifying the gaps in their careers. If one does not get the desired result on the

second chance, he/she will be assessed for the third time the following year. If he/she fails to pass the assessment for the third time, he/she will not be able to continue in the profession, which will be decided in accordance with the civil service proclamation. Teachers, teacher trainers, principals and supervisors who have achieved the expected results in the assessment will be given a certificate of competency (MoE, 2021).



**Figure 1. The conceptual Framework TPCLT, TPC and SAP**

#### 2.4. Summary of Review of Related Literature

Teachers' professional qualification standards are statements of a teachers' professional attributes, professional knowledge, skills and understanding that guaranteed via licensure testing. Teacher professional competence licensing test is a test administered to screen teachers, who have general academic and professional knowledge and skills as well as meet the required standards before their licensing. Teachers' professional competence licensure tests should be constructed align with specifications and standards. The assessment of teacher competence via licensure testing can serve as a method of both identifying high and low-performing teachers and making professional development more useful by identifying the specific areas in which teachers need help. Teacher with high competence is one of the most significant factors in improving student performance and serves the school to meet its objectives and missions. Competence can be defined as the skills, knowledge, attitudes, and motivational variables that form the basis for mastery of specific situations. Professionals in the field are aware of best practices that help prepare candidates/ teachers for success on this high stakes exam. A study by Goodman, found that participating in practice test-taking sessions greatly increased the probability of the candidate/ teachers passing the exam. Students' Academic performance, is defined as "performance outcomes that indicate the extent to which an individual has accomplished specific goals that were the focus of activities in instructional environments, specifically in school Student performance in the academic area, can be referred to acquiring skills and giving some benefits to their society with a sense of responsibility. One of the factors that determine the quality of education and the quality of students is the quality of teachers in the learning process.

### 3. THE RESEARCH METHODOLOGY

A research methodology is a philosophical structure and crucial suppositions directing the research (Olugboyega., 2022). Thus, the chapter discussed the research paradigm, research approach, research design, methods and methods of sampling, data collection tools and data analysis to address the research problem for this dissertation.

#### 3.1. Research Paradigm

The current dissertation used Positivists paradigm to the other three (Pragmatism, Constructive and Transformative/Critical) since the research approach was a quantitative research. The reason to restrict to the positivism approach was that post-positivism paradigm was usually promoted the triangulation of qualitative and quantitative methods that explores the diversity of facts researchable through various kinds of investigations. However, this study was typically focused on the quantitative aspect. Thus, positivism was in a better position to conduct this study.



### 3.2. The Research Approaches

The current dissertation was quantitative research of baseline survey. It is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data and documents were analyzed using statistical procedures. Here the researchers try to work under the assumption of objectivity. The quantitative researcher believes that there is a truth to be observed and that rational observers looking at the same phenomenon will agree on its presence and characteristics. They try to remain as impartial or value-free as they can, and the effort to avoid human tendency at whatever point plausible. In a sense, quantitative researchers attempt to study the phenomena that are of interest to them “from a distance.” For example, standardized questionnaires and other quantitative measuring tools are often used to measure carefully what is observed in reality. This method is particularly useful to quantify attitudes, opinions, behaviors, and other defined variables by way of generating numerical data and generalize results from a larger sample population. For these reasons, to assess the status of teachers’ professional licensure testing, teachers’ professional competence and grade four students’ academic performance using a quantitative research approach is appropriate (Creswell, 2018)

### 3.3. Research Design

In this study, a survey research design was involved in order to assess the status of teachers’ professional competence licensure testing, teachers; professional competence and students’ academic achievement. Particularly, a survey research design is used to capture information based on data gathered for a specific point in time. The data were gathered from a group of participants with varied characteristics and demographic variables such as age, gender, subject, and geographical locations. It is a widely used type of non-experimental research. Survey research design is a research design that applies to a wide range of problems. Survey research is also commonly used to test theoretical models constructed by researchers based on past literature, experimental results, and other factors (Ponto, 2015). This research design is especially useful when one needs to make direct statistical generalizations about attitudes, opinions, and beliefs from a single sample to a population (Christensen, et al 2013).

### 3.4. Method

This baseline surveys utilized document analysis to analyze the five years of teachers’ professional competence licensure test, six times consecutive ENL and four consecutive EGRA students’ data from. 2017-2021 for teachers and 2000- 2021 for ENLA 2014 -2021 for EGRA students. However, some factors like COVID-19 pandemic, internal conflicts in northern part of Ethiopia and drought in certain areas has implication on getting continuous data. Therefore, due to these factors, though five years’ data was planned for analysis, three to five years’ data were analyzed. To obtain the required information for the proposed gap analysis of the primary school teachers and students’ academic performance, document analysis of quantitative research approach was used. In this baseline survey study, five years’ teachers’ professional licensure test scores obtained from the written test from Ethiopian ministry of education data base and six to four times ENLA and EGRA results from Ethiopian National Examination and Assessment Agency’s’ (ENEAA) from data base were used. The baseline surveys premised that examining the status of TPCLT, TPC and SAP would offer policymakers, curricularists, teachers’ education colleges, universities, and government regulating agencies an empirical data on enhancing teacher teachers’ professional licensing and re- licensing system, teachers’ education programs of the country.

### 3.5. Description of the Study Area

Ethiopia is one of eastern African nation located in 9.1450° N and 40.4897° E, in the northern hemisphere above the equator. It has a total area of 1,100,000 square kilometers, and its current population is 122,684,346 (UN, 2023). The population density in Ethiopia is 115 per Km<sup>2</sup> (298 people per m<sup>2</sup>). The 2022/2023 academic primary school students’ enrolment is around 16,300,000 (76%) that are learning in more than 32,000 primary schools in eleven regions and two city administration (MoE, 2023). The study conducted in Ethiopian primary schools from nine regions (the three newly emerged regions are not included) and two city administrations.



### 3.6. Population of the Study

#### 3.6.1. Target Population

Specifying the sample frame of potential respondents in the population is important as it helps researcher to make decisions on sampling and resources to use (Creswell, 2018). The target populations of the baseline surveys were PGDT and senior primary school teachers' test participants from 2017 to 2021 to see the status of candidate teachers of PGDT course takers in teachers' education college and senior teachers for five consecutive years' data via document analysis and students six and four times continuous ENLA and EGRA results analysis. The participants of the baseline surveys were PGDT and senior primary school teachers' from nine regions and two city administrations (the newly emerged region are not involved), that were 181, 804 females and 125, 960 males with total of 307, 764 senior primary school's teachers involved in the teachers' professional licensure test since its beginning and 91869 males and 56302 females with total of 148,171 candidate teachers from three consecutive PGDT graduates who took the college/ University exit test. In all students ENLA assessment that conducted between 2000 to 2021, the samples that involved for grade 4 were 2,856 schools, 107, 982 students, 9264 teachers, and 2,718 principals from both government and private schools found in the nine regions and the two-city administration Again the participants in four consecutive EGRA students' assessment of 2014- 2021) about 1,560 primary schools' principals, 3872 teachers and 77,440 students, which were selected by agency through two-stage cluster sampling techniques from seven regions and nine languages.

### 3.7. Phases of the Study

#### 3.7.1. Phase one: Baseline surveys

Baseline surveys was focused on gathering and analyzing data for selected independent variables of teacher's professional licensure test score of five years' (2017- 2021) from MoE database to indicate the overall status of teacher's professional competence licensure test and primary school (grade four) students' four times EGRA and six times ENLA results from NEAEA to indicate the status of students' academic performance. It had two aims: collecting teachers and students' data as well as analyzing it to determine its status. The baseline surveys covered the first study of the dissertation. This baseline survey will have followed by quantitative and qualitative phases (phase two and three).

### 3.8. Methods of Data Collection

In this three-phase study, the first phase of baseline surveys involved gathering five years (2017- 2022) national teacher's professional competence licensure testing score and four times; students EGRA and six times students' ENLA raw scores and analyzing them using statistical tools to indicate its status. Collection of data took over a period of one month. Ministry of education teachers' and school leaders' licensure directorate for teachers' five years' results and national learning assessment and examination agency data base for students four years' data for EGRA and six years 'data for ENLA results were the main source of data in this baseline surveys. Raw data on Teachers' Professional Licensure Test (TPCLT) results of PGDT candidate and senior primary school teachers sampled from 2017- 2021, students' ENLA assessment six consecutive years of 2000 - 2021 and students EGRA assessment of four consecutive years of 2014- 2021 were collected by researcher personally. This would provide a more accurate analysis of the current status of TPCLT ad students' academic performance in the country.

#### 3.8.1. Data Collection Procedures

Upon the approval of the research proposal by the examining panel (Promoters and Research Committee), the researcher had let Jimma University department of psychology to prepare a letter to be addressed to the MoE, and all other concerned regions and city administrations. Upon the approval of request, the questionnaire was personally prepared and the quantitative questionnaire distributed to the respondents in theme to MoE, regions and city administrations. The completed questionnaires were retrieved personally by the researcher and checked to ensure completeness of the answers. The data gathered were computed to get the teachers' professional licensure test status as basis for determining their proficiency/ competence. The collected data encoded in to SPSS, the output was sort them by them and analyzed by using both descriptive and inferential statistics.

### 3.8.2. Data Collection Instruments

Research revealed that complex experiences in educational settings are assessed better through mixed tools (Creswell, 2018). This means employing at least one instrument quantitative and the other qualitative. Thus, in this baseline surveys of dissertation, to articulate the quantitative data collection, questionnaires were prepared to collect five years' teachers professional licensing test score and students four times EGRA and six times ENLA data for baseline surveys. The baseline surveys' utilized the questionnaire to gather data on the subject wise, regional based and personal teachers and students' scores by analyzing documents) to indicate the status of the teachers' professional competence.

### 3.9. Method of Data Analysis

After collecting the teachers' professional competence licensure tests score data and students national learning assessment score data, the researcher encoded to the computer to make them manageable. Then the responses analyzed using SPSS version 25 for quantitative data. As part of the analysis prepared for this baseline surveys, the data comprised of frequency distributions and cross tabulations and the data were disaggregated on the following: PGDT, subjects, gender, region, and senior teachers who took licensure tests from 2017 onwards to 2021. Descriptive and inferential statistics were used to analyze test scores for subject (content and pedagogy), regions and gender based on scores gained by teachers on various subject areas. Accordingly, mean, standard deviation, correlation, bar graph and line graph were used to describe the teachers' professional competence licensure test status. Pearson Product Moment Correlation was utilized to test the relationship between subjects by content and pedagogy, adopt a quantitative data, in document analysis of EGRA performance subtasks and independent t-test, one-way ANOVA, and multiple regression were used. Accordingly, the followings were the main findings of the document analysis.

## 4. FINDINGS

This chapter focuses on the findings of the study concerning the status of teachers' professional licensure test, teachers' professional competence and students' academic performance. The first part discusses the background Characteristics of Respondents. In the second part, the status of teachers' professional competence licensure testing and teachers' professional competence in Ethiopian Primary Schools was discussed. In the third part, the status of students' academic performance in ENLA and EGRA was discussed. In Ethiopia, teachers' professional competence licensure test has been held from Jan 2013 until 2022 (it is paused for structural case in 2023). The first was held in 2013 for secondary school teachers and graduates of the post graduate diploma training (PGDT) program and elementary teachers who graduated in 2012 all over the country. The program includes senior teachers volunteered to sit for the exam; (so that those with better score would be selected as an assessor for performance assessments that held for the consecutive years). The main objective of the baseline surveys was to assess the status of teachers' professional competence licensure test, teachers' professional competence and students' academic performance in Ethiopian primary school.

### 4.1. Background Characteristics of Respondents

**Table 4. Description of PGDT and Senior Teachers Background Characteristics**

Years	PGDT candidate teachers			Senior teachers		
	M	F	T	M	F	T
2017	13940	8624	22564	28284	20980	49264
2018	26840	16282	43122	53590	38327	91917
2019	51089	31396	82485	99650	72464	172114
Total	91, 869	56,302	148,171	181,524	131,771	313,295

The participants of the baseline surveys were PGDT and senior primary school teachers from the nine regions and two city administration (the newly emerged region were not involved). They were 91869 males and 56302 females with total of 148,171 candidate teachers from three consecutive PGDT graduates who took the college/ University exit test and senior primary school teachers from 2017 to 2021. Concerning the PGDT candidate

teachers' background, their number increases from 22, 564 in 2017, 43,122 in 2018 and 82, 485 in 2019 respectively. The number of male were 91,869 (63) where as the number of PGDT female candidate teachers were 56, 302 (37%). The senior primary school teachers were 181,524 males and 131,771 females with total of 313,295 primary schools involved in the teachers' professional licensure test since its beginning. Complete enumeration was utilized. The number of senior primary school teachers' participation increases from 2017 to 2019 in 49, 264 in 2017, 91, 917 in 2018 and 172, 114 in 2019 respectively. With regards to their gender of senior primary school teachers, 181, 524 (58%) were male teachers while 131, 771 (42%) were female teachers.

**Table 5. Description of primary school students' Characteristics**

No	Pillars	Years	Students	Teachers	Principals	Schools
1	ENLA	2000- 2021	107, 982	9264	2718	2856
2	EGRA	2014- 2021	77, 440	3872	1560	1246
Total			185,422	13,136	4278	4102

In six times consecutive students ENLA assessment that conducted between 2000 and 2021, the samples that involved for grade 4 were 2,856 schools, 107, 982 students, 9264 teachers, and 2,718 principals from both government and private schools found in the nine regions and the two-city administration. Concerning the students who involved in six consecutive (from 2000 – 2021) ENLA assessment, 53,991 (50%) were female and 53, 991 (50%) were male since the number of male and female were equally selected purposively. The number of male teachers were 7,264 (78%) and 2,112 (22%) were female teachers. Among the school principal' participated in ENLA 2218 (81%) were male and 500 (19%) were female principals. Again the participants in four consecutive EGRA students' assessment of 2014- 2021 were about 1,560 primary schools' principals, 3872 teachers and 77,440 students, which were selected by agency through two-stage cluster sampling techniques from seven regions and nine languages. With regards to students' participants in four consecutive (2014 -2021) EGRA reading assessment, 41, 440 (54%) were male students' and 35, 502 (46%) were female students.' In general, 185, 422 students, 13,132 teachers, 4278 principals and 4102 schools were involved in both assessments.

## 4.2. Question 1. The Status of Teachers Professional Competence Licensure Testing and Teachers' Professional Competence in Ethiopian Primary Schools

### 4.2.1 2017- 2019 PGDT Candidate Primary School Teachers those who took TPCLT

**Table 6. 2017- 2019 PGDT Candidate Primary School Teachers those who took Afan Oromo language licensure test**

Time (years)	Male	Female	Total Test Takers(Got > 70%)
2017	695	589	1284 (64 %)
2018	558	323	881 (35%)
2019	15	2	17 (18%)
Total	1298	916	2212 (48%)

Among 2006 PGDT candidate primary teachers those who took Afan Oromo licensure test in 2017, 1284 (64.01%) had scored more than 75% subject wisely. Despite a 29% rise in the number of candidates who took the licensing exam in 2017 compared to 2018, only 35.1% of test takers achieved a score of > 75%. Both the number of candidates who registered for the test and those who scored more than 75% substantially decreased to 18% (17/95) in 2019. (Figure 4 left).



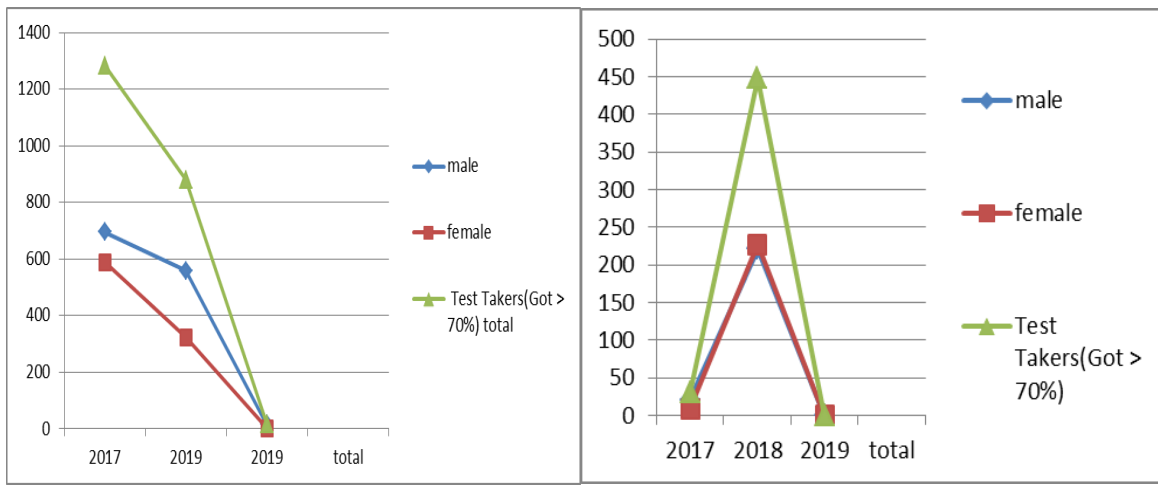


Figure 3. line graph of candidate sat for Afan oromo and Amharic licensure test three continuative years.

**Table 7. PGDT Candidate primary school teachers those who took Amharic language licensure test**

Time(years)	Male	Female	Test Takers (Got > 70%)
2017	21	9	30(3.2%)
2018	221	227	448 (11%)
2019	0	0	0
Total	242	236	478 (9.33%)

Only 30 (3.2%) of the 931 PGDT candidate primary school teachers who took the Amharic language licensure exam in 2017 received a score of at least 75%. In 2018, there were more applicants who took the license exam and scored above 75% than there were in 2017, which were 448 (11%). No one had achieved a score higher than 75% despite 91 candidates enrolling for the Amharic license exam in 2019. (Figure 4 right).

Out of 2828 PGDT candidate primary school teachers who sat for the English licensure test in 2017, 133 achieved a score of more than 75%, with almost 80% (106), males, as the highest scorers. In 2018, there were 4649 test takers, however only 249 (5.4%) of them passed, and only 27 of them were female candidates. Out of 411 applicants, just 3 (0.73%) test takers in 2019 received a score of more than 75 %. (Figure 5).

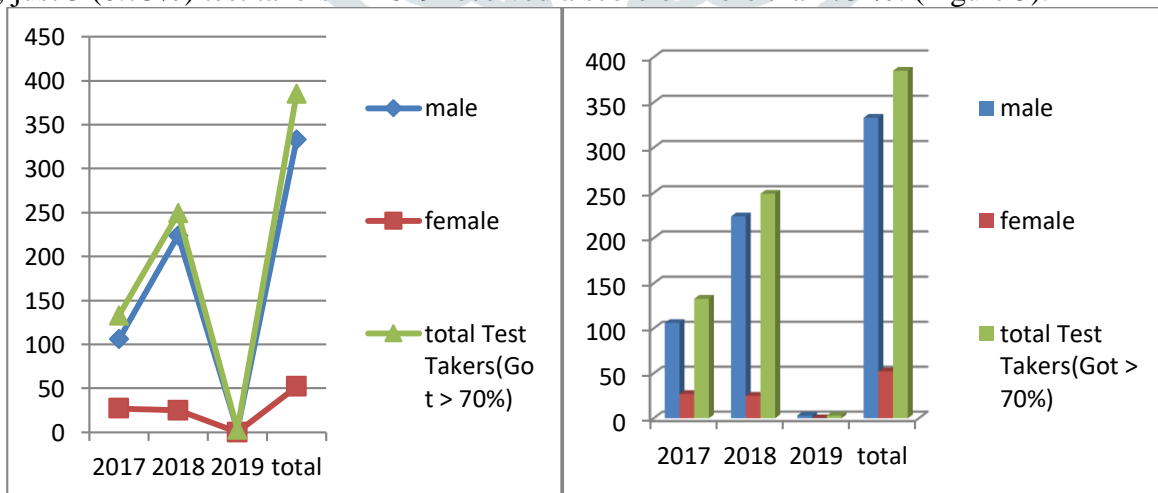


Figure 4. Line and bar graph of English licensure test for those candidates scoring more than 70%

As discussed above, more applicants took the test in 2018 and that the subjects with the top three highest scores were HPE 5108 (76.8%), civic 3483 (58.2%), and natural science 2406 (26.4%), respectively. In addition, 1407 (20%) teachers passed the math licensing exam, as opposed to 57 (2.5%), and 15 (9%) in 2017 and 2019, respectively.

**Table 8. PGDT candidate primary school teachers those who took licensure test and score > 75% by subjects**

Year	2017			2018			2019		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
A/O	695	589	1284	558	323	881	15	2	17
Amharic	21	9	30	221	227	448	0	0	0
English	106	27	133	224	25	249	3	0	3
Mathes	51	6	57	1038	369	1407	15	0	15
Physics	0	0	0	262	40	302	44	2	46
Chemis.	8	2	10	13	2	15	162	4	166
Biology	0	0	0	1	1	2	140	3	143
Social	475	221	696	400	134	534	0	0	0
Natural	699	267	966	1771	635	2406	0	0	0
Civic	166	68	234	2030	1453	3483	106	8	114
HPE	76	22	98	2000	3108	5108	7	3	10
Aesth.	6	3	9	135	102	237	0	0	0

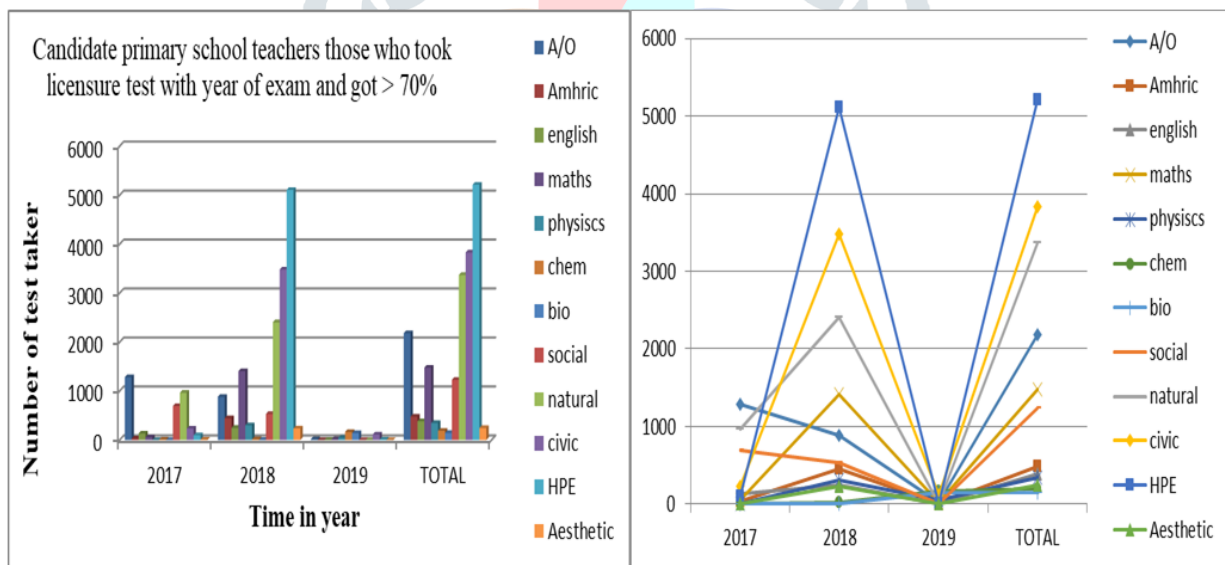


Figure 5 A.& B. Bar and line graphs of PGDT candidate primary school teacher those who took licensure test with year of test and got more than 75%.

No candidate who applied for and took the physics and biology licensing exams in 2017 scored higher than 70% on either test. Similar to 2017, there was no pass mark among the 37 applicants who sat the social science exam in 2019. No candidates registered to take the natural and aesthetic exams in 2019.

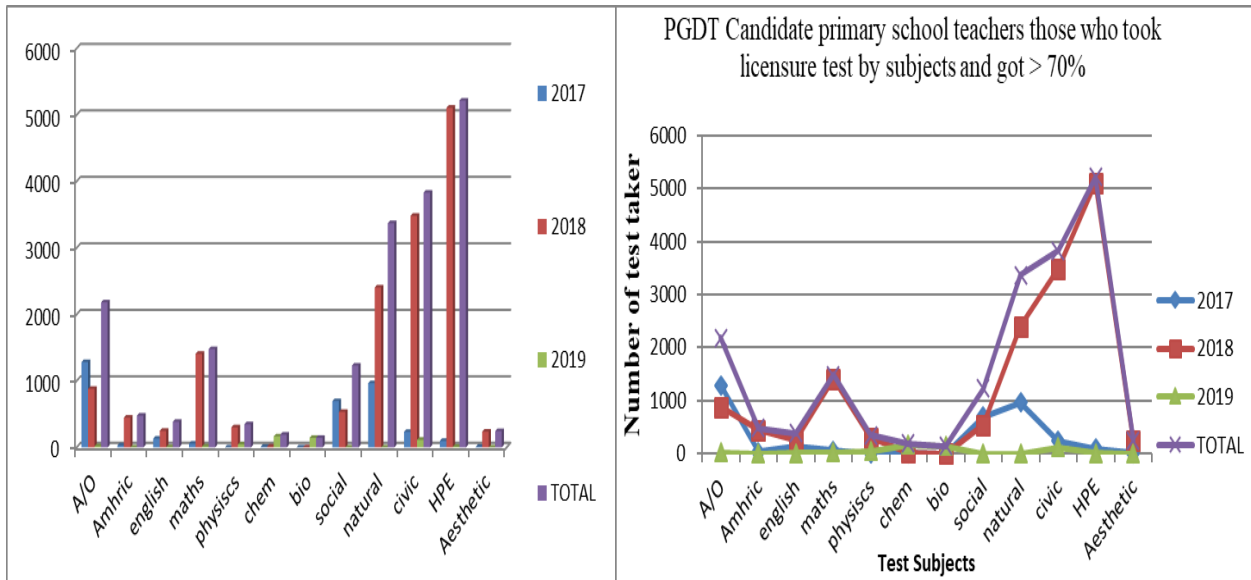


Figure 6A and B. Bar and line graphs of candidate teacher those who took licensure test and got more than 70% for each subjects

In the past three years, only 43.8% (914/2088) of female candidates who took the Afan oromo licensure test had achieved a score of greater than 70%. There was a gradual decrease in the number of candidates who received the pass mark from 2017, 2018, and 2019 with scores of 61%, 29.3%, and 10.5% respectively. Male candidates were more likely than female candidates to pass their licensing test in the most of the subjects although on the HPE exam, female candidates scored higher than male candidates did in 2018, with 3108 (60.9%) as opposed to 2000 (39.1%).

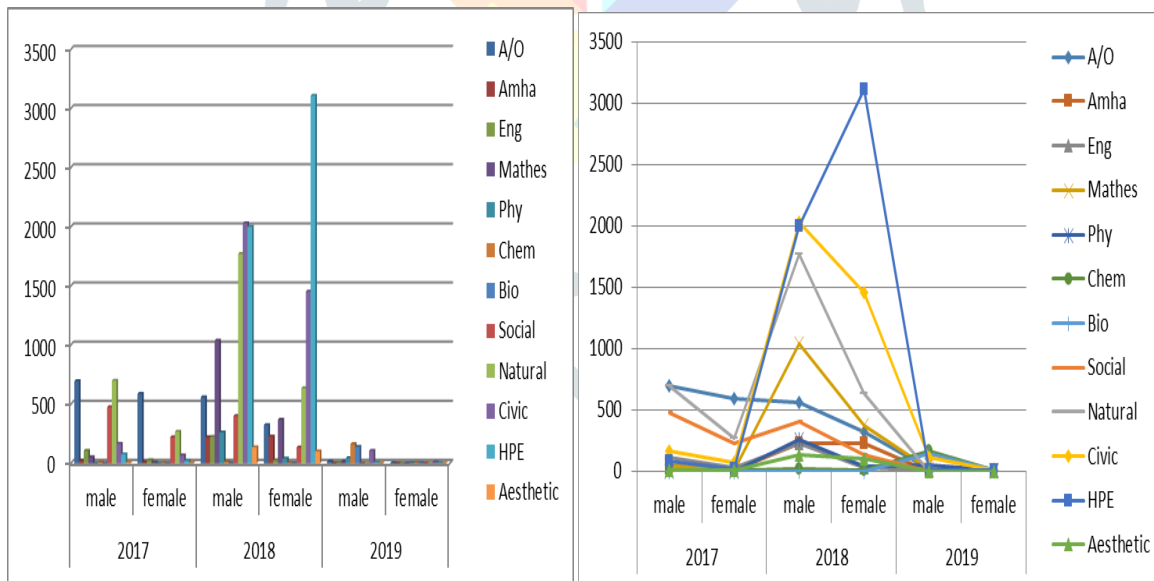


Figure 7A and B. Bar and line graphs of candidate primary school teacher those who took licensure test got pass mark with regard to gender of candidates.



**4.2.2. Senior primary school teachers who took licensure test got 62.5%**

**Table 9. Senior primary school teachers who took licensure by Subjects from 2017 -2019**

Year	2017 to 2019												Total
Subject	A/O	Amhari	Eng	Mathes	Phy	Chm	Bio	Geo	Hist	Civic	HPE	Aesthetic	
Male	2645	2213	5700	6818	670	1111	992	453	304	4736	8968	4733	39,343
Female	2273	3209	2438	3327	196	339	606	177	93	3824	6470	3628	26580
Total	4918	5422	8138	10145	866	1450	1598	630	397	8560	15438	8361	65,923

From 2017 to 2019 total of 65,923 senior primary school teachers were registered to take licensure tests for all subjects among which 59.6% (39,343) was male candidate (Table 9). With regard to subjects HEP (15,438) and History (397) was the subject with highest and lowest number of candidates sat for licensure tests (Figure 9A and B).

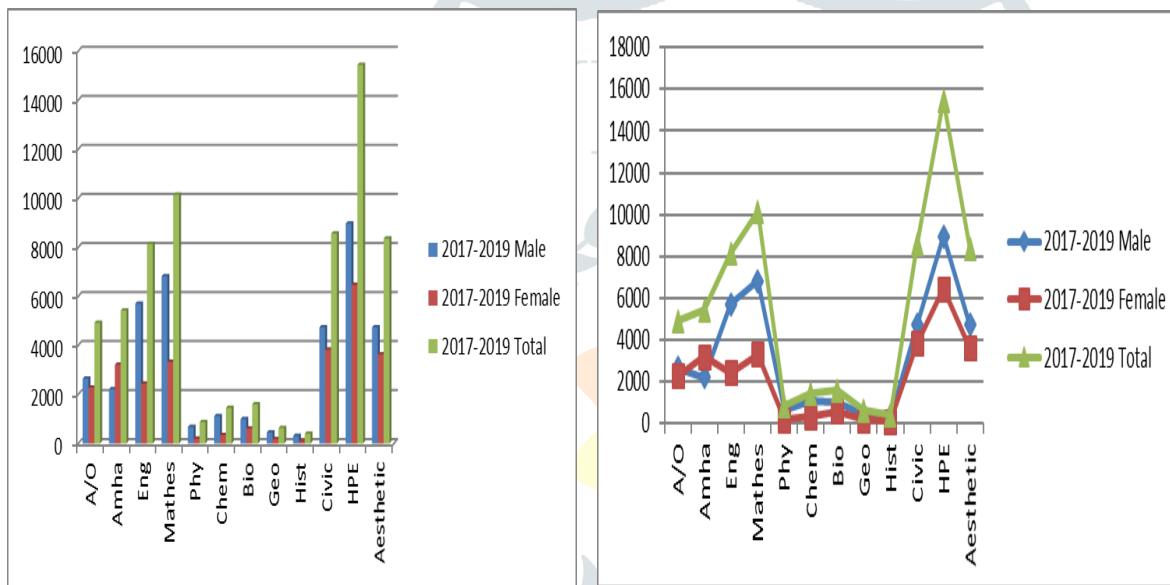


Figure 8 A and B. Bar and line graphs of senior primary school teachers who took licensure by subjects from 2017 - 2019.

As shown in graph 8A and B, in 2017 teachers had achieved good score like Civics 79%, Mathematics 77%, Afan Oromo 73%, and chemistry 70%. Some subjects were found between 50% to 60% (History and ICT). The rest subjects were under 50% that lies between 5% to 40%, which were Aesthetics, English, General art, Somali language and Integrated Science. In 2018, good results recorded in Afan Oromo language 90%, Af Somali 86%, Civic 80%, and Amharic 79% respectively. Some subjects lie between 50 to 60% which were, Geography. 56%, Integrated Science 52% and Af Somali 50%, the remaining all subjects were below 50% found between 6% 45% including English.

**Table 10. Mean Scores of Language subjects of PGDT and Senior primary school teachers**

Subject	N	Range	Mean	Std. Deviation
English	872	62.5.	55.70	11.38
Amharic	540	52.00	65.98	10.14
Afan Oromo	136	44.00	78.52	7.95

The above table (Table 10) indicated that, the descriptive statistics for English, Amharic and Afan Oromo test taker (N=1542). It is evident from the table that, the mean score for the three languages ranges from 55.7 to 78.5 where the mean score obtained for Afan Oromo was by far better than the other two languages namely English

and Amharic. With regard to ranges calculated from the scores for the 3 subjects, a range as high as 62.5 was recorded for English and a bit lesser ranges for Amharic and Afan Oromo 52 and 44 respectively.

**Table 11. Mean Scores of Natural Science and Mathematics PGDT and Senior Teachers**

Subject	N	Range	Mean	Std. Deviation
Physics	1132	72.33	48.51	11.84
Biology	963	58.00	51.80	10.54
Mathematics	1254	76.00	56.25	15.94
Chemistry	1046	66.75	58.62	12.56

As can be seen from table 11 above, the mean scores for the combined group are above the minimum requirement to pass the licensing written test. However, the performance for physics test takers were below this minimum. As in the above cases, the standard deviations were high which again tells us that the variation in scores among this combined group was also high. The differences between the highest scorers and the lowest scorers in the above table was larger for all the four subjects. Thus, for all the four group of test taker, we may conclude that the performance in general was not up to the expected level. Moreover, there was significant difference among the test takers' performance.

**Table 12. Mean Scores of Social Science PGDT and senior school teachers**

Subjects	N	Range	Mean	Std. Deviation
Geography	511	78.00	44.43	12.86
History	553	62.00	55.76	10.42
Civics	699	54.00	69.34	8.03
H HPE	503	77.00	45.07	13.07

From table 12 above, the range was highest for geography test takers (78) followed by HPE test takers (79). The range for history and civics test takers was also relatively high, 62 and 54 respectively. It was also found that the mean score for civics test takers (69.34) was higher and followed by history test takers (55.76). If we take mean as an indication, geography and HPE test takers were considered as low achievers. The standard deviation was lowest for civics test takers (8.03). There was high dispersion of scores among test takers of HPE (13.07) followed by geography (12.86). However, there was high variation in the performance in all the social science test takers.

**Table 13. Senior primary school teachers who took licensure and got > 62.5% in content and pedagogy by Subjects**

Tear	2017			2018			2019		
	M	F	T	M	F	T	M	F	T
A/O	695	589	1284	265	737	265	92	55	147
Amharic	1	0	1	17	21	17	13	0	13
English	94	12	106	17	203	17	27	0	27
Mathes	49	6	55	17	239	17	109	12	121
Physics	0	0	0	0	0	0	4	0	4
Chemistry	0	0	0	0	0	0	1	10	11
Bio	0	0	0	0	0	0	7	1	8
Geo	0	0	0	0	0	0	3	7	10
History	0	0	0	0	0	0	32	2	34
Civic	470	216	686	96	416	96	280	74	354

HPE	669	263	932	280	1098	280	44	12	56
Aesthetic	161	67	228	614	1548	614	0	0	0

Out of 3292 senior primary school teachers who took licensure and got > 62.5% in content and pedagogy by subjects in 2017, 39% (1284) was test takers sat for Afan Oromo. (Table 13). Aesthetic and HPE was the subject with most test takers got pass mark in 2018 and it was achieved by female applicants. In both 2018 and 2019, no test takers registered for those subjects (physics, chemistry, biology, geography, and history), similarly no teachers enrolled in 2019 for Aesthetic. English subjects was the one in which lowest candidate registered from 2017 to 2019 except Mathematics in 2017 fewer than English candidate.

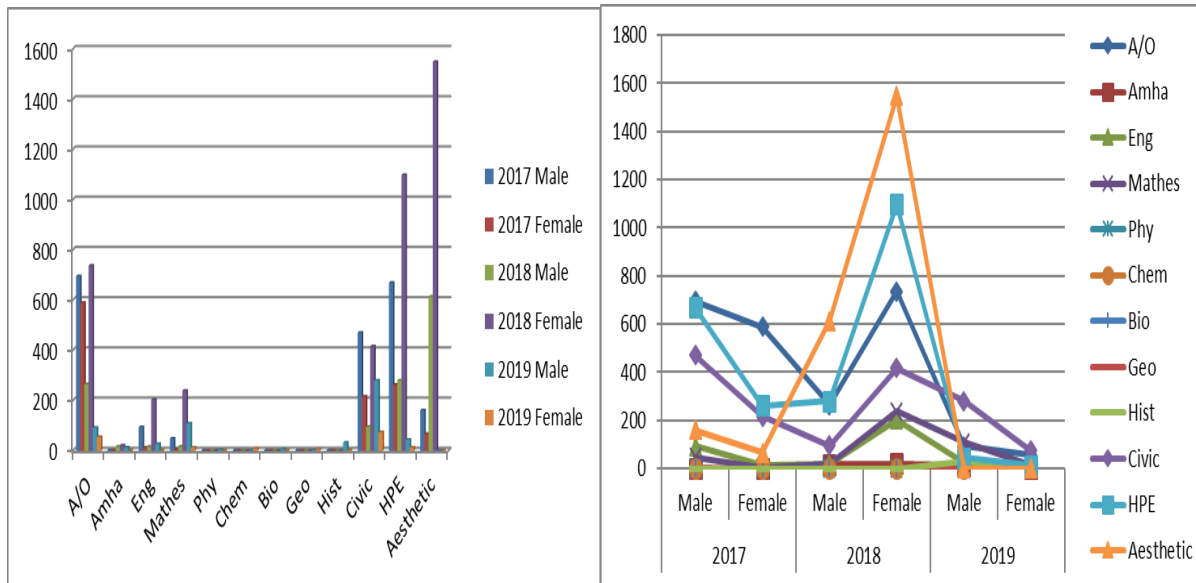


Figure 9 A and B. Bar and line graphs of senior primary school teachers who took licensure and got > 62.5% in content & pedagogy by subject sex and time reference,

**4.2.3. Correlations between Subject Content and Pedagogy Knowledge**

To elaborate the relationship of test takers in the subject content and pedagogic section, correlation coefficient was utilized. As to ease the comparison, both sections of the subject knowledge and pedagogy which accounts for 75% (subject knowledge) and 25 % (pedagogy) scores respectively were first converted to hundred percent then mean scores in each section were compared using correlation coefficients.

**Table 14. Correlation between Subject Content and Pedagogy and Mean scores for Natural Science and Mathematics**

Subjects	Chemistry		Biology		Physics		Mathematics	
	Subject Content	Pedagogy	Subject Content	Pedagogy	Subject Content	Pedagogy	Subject Content	Pedagogy
Mean score	58.8	41.7	49	45.7	43	45.8	48.3	55
Correlation coefficient between subject content and pedagogy	0.38	0.45	0.29	0.46	0.38	0.45	0.29	0.46

Correlation is significant at the 0.01



From table 14 above, for natural science subjects, namely chemistry and biology, the test takers performed on the average better in subject content than pedagogy section 58.8 to 41.7 for chemistry and 49 to 45.7 for biology, while in mathematics and physics the result was vice versa 43 to 45.8 for physics and 48.3 to 55 for mathematics. The correlation coefficient between subject content and pedagogy section of the tests were generally positive. This implies that most test takers that scored better in subject content also scored better in pedagogy section of the tests. However, the correlation coefficients were not so strong to conclude that those test takers that scored better in the subject content section were also scored better in the pedagogy section of the tests.

**Table 15. Correlation between Subject Content and Pedagogy and Mean scores for Social Science and HPE**

Subjects	Geography		History		Civics		HPE	
	Subject content	Pedagogy	Subject content	Pedagogy	Subject content	Pedagogy	Subject content	Pedagogy
Mean Scores	37.5	51.4	51.7	51.3	76.2	46.8	49.9	27.7
Correlation between Subject content and Pedagogy	0.50		0.42		0.44		0.55	

Correlation is significant at the 0.01

The social science subjects' test takers, performed on the average better in subject content in three subjects History 51.7 to 51.3, Civics 76.2 to 46.8 and HPE 49.9 to 27.7, whereas geography test takers performed better in pedagogy section 51.4 to 37.5 respectively. However, the correlation coefficient between subject content and pedagogic content was moderately stronger for these subjects. Keeping other conditions constant, it concluded that, the social science test takers focus equally on pedagogic contents as they do in subject content.

**Table 16. Correlation between Subject Content and Pedagogy and Mean scores for Languages**

Subjects	English (TKT)		Amharic		Afan Oromo	
	Subject Content	Pedagogy	Subject Content	Pedagogy	Subject Content	Pedagogy
Mean scores	49.1	48.4	66.6	48.7	76.3	76.7
Correlation between Subject content and Pedagogy	0.46		0.58		0.38	

Correlation is significant at the 0.01

On the average in English and Amharic language tests, the performance was better in subject content than pedagogy content by 49.1 to 48.4 for English and 66.6 to 48.7 for Amharic subject, while it was nearly equal for Afan Oromo by 76.3 in subject content and in pedagogy 76.7. From correlation coefficients, pedagogy content and subject content scores were positively related, while for English and Amharic were strongly related. Although the mean scores for pedagogy and content were high for Afan Oromo the correlation between them were weak.

**Table 17. Number of senior primary school teachers registered for licensure test by region**

subject	2017			2018			2019		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Oromia	0	0	0	9304	5175	14479	13586	8189	21775
Amhara	0	0	0	2194	1420	3614	2439	1910	4349
SNNPR	4168	1355	5523	6260	2157	8417	0	0	0

AA	0	0	0	936	721	1657	699	697	1396
Tigray	1056	799	1855	1716	1170	2886	3128	2368	5496
Somali	13	1	14	455	70	525	0	0	0
Gambella	0	0	0	424	58	482	325	44	369
Benishangul	0	0	0	399	167	566	427	147	574
Afar	0	0	0	200	106	306	237	94	331
Dire Dawa	110	44	154	134	44	178	232	139	371
Harer	0	0	0	150	79	229	323	160	483
Total	5347	2199	7546	22172	11167	33339	21396	13748	35144

In 2017 total of 7546 senior primary school teachers were register for licensure test at only the following exam centers (SNNPR, Tigray, Somali and Dire Dawa), with the highest and lowest candidate from SNNPR (5523) and Somali (14) respectively, while the remaining region didn't send their candidate for test. (Table 17). In 2018 all region sends their candidates and the number of test taker had increased as compared with 2017. The highest and lowest number candidates were from Oromia (14479) and Dire Dawa (178) respectively. With the exception of SNNPR and Afar region, test takers were registered from all regions with ever highest number of female candidate from Oromia region (8189) which exceeds total number of candidates registered in 2017. Dire Dawa was the only exam center from which candidates were sent for licensure test in all stated exam years.

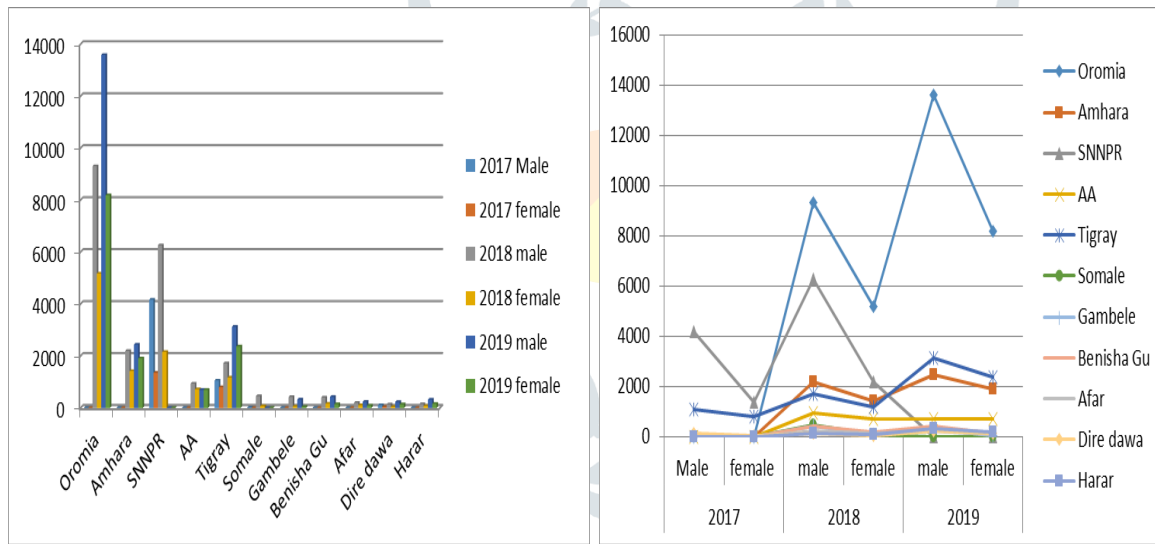


Figure10 A and B. Bar and line graph of number of senior primary school teachers registered for licensure test by region

According to bar and line graphs 10 A and B, in 2017, among 9323 primary schools' teachers in all regions 1344 (14%) scored minimum requirement (62.5%) in written licensing test. In 2018 among 39,190 primary schools' teachers in all regions and city administration, 11, 200 (28%) got the requirement. Concerning 2017 and 2018 teachers' results, the better scorers were recorded by Addis Ababa 54%, Amhara region 30% and Oromia 27%, the others were got below 50%, which were, Afar 11%, Harari 8% and Gambella 4% respectively. Generally, in the three years those who got 62.5% (the minimum requirement) were 25% in all Regions. In general, in the three years' result (2017 - 2019), the passing rate or those who got the minimum requirement were 24% in 2017, 22% in 2018 and 28% for 2019 respectively. The status of the results indicated fluctuation decreasing and very low as intended by Ethiopian MoE is to achieve 100% in 2022.

**Table 18. Number of senior primary school teachers registered for licensure test and got > 62.5% by region**

Subject	2017				2018				2019			
	Male	Female	Total	%	Male	Female	Total	%	Male	Female	Total	%
Oromia	0	0	0	0	3361	1425	4786	33%	4040	1773	5813	27%
Amhara	0	0	0	0	763	296	1059	29%	906	392	1298	30%
SNNPR	526	147	673	13	932	170	1102	13%	0	0	0	0
AA	0	0	0	0	632	347	979	59%	471	286	757	54%
Tigray	127	48	175	9	880	283	1163	42%	1265	576	1841	34%
Somali	0	0	0	0	79	19	98	19	0	0	0	0
Gambella	0	0	0	0	35	0	35	7%	12	1	13	4%
Benishangul	0	0	0	0	55	8	63	11%	66	11	77	13%
Afar	0	0	0	0	29	7	36	12%	33	2	35	11%
Dire Dawa	27	12	39	25	42	26	68	38%	45	23	68	18%
Harer	0	0	0	0	51	22	73	32%	34	7	41	9%
Total	680	207	887		6859	2603	9462		6872	3071	9943	

In 2017, total of 887 were registered at only the SNNPR, Tigray and Dire Dawa regions with 28%, while the remaining regions, Oromia, Amhara, Addis Abeba, Somali, Gambella, Benishangul, Afar and Harari didn't send their candidate for test. (Table 18). Concerning the minimum requirement, all regions got low score, which were 25% in Dire Dawa, 13% in Tigray and 9% in SNNPR. In 2018, all regions sent their test takers with increasing number of participant compared to 2017. The better passing rate (minimum requirement) was registered by Addis Abeba with 59%, Tigray 42% and Dire Dawa 38% respectively, while the lower passing rate recorded in SNNPR 13% Afar 12%, Benishangul 11 and Gambella 7% respectively. In 2019, except SNNPR and Somali regions that did not send their test takers, the number of participant increased from 2017 and 2018. Again Addis Abeba achieved better score with passing rate of 54%, though it decreased compared to 2018, Tigray 34% and Amhara 30% in middle level, the lowest passing rate recorded by Benishangul 13%, Afar 11, Harari 9% and Gambella 4% respectively.

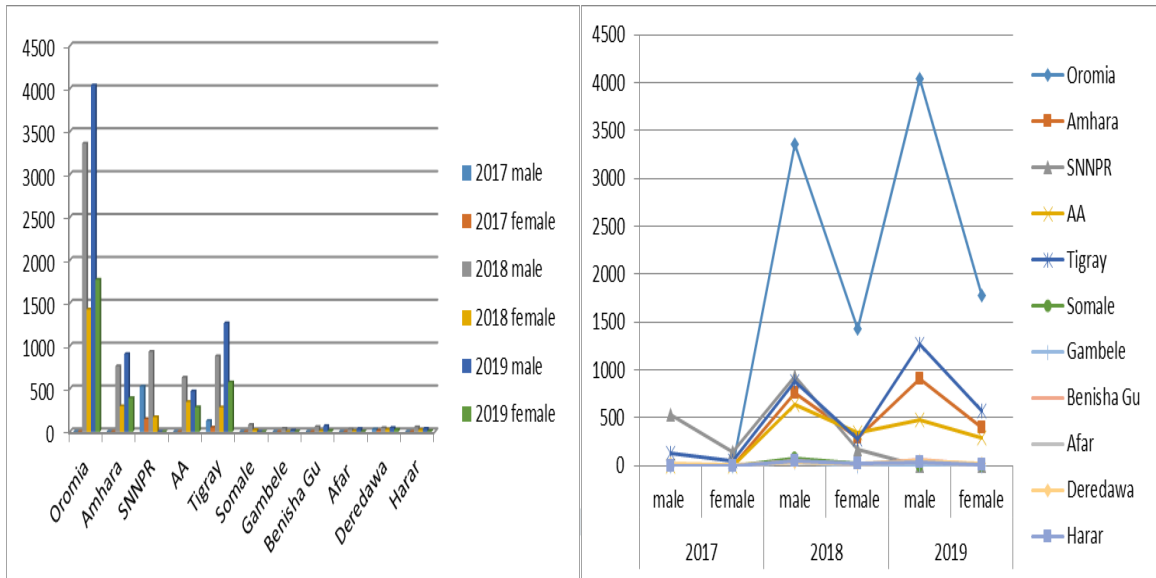


Figure 11 A. and B, Bar and line graph of senior primary school teachers registered for licensure test and got > 62.5% by region

**Table 19. Number of senior Primary School Teachers who got minimum requirement and reach for portfolio**

Subjects	2018			2019			2021		
	All test taker			All test taker			All test taker		
	M	F	T	M	F	T	M	F	T
A/Orom	645	513	1158	938	772	1710	1395	1167	2562
Amharic	432	454	886	504	558	1062	367	505	872
English	1352	270	1622	1633	361	1994	1652	286	1938
Mathes	1754	195	1949	2284	279	2563	2294	194	2488
Physics	1167	85	1246	1534	164	1698	1519	158	1677
Chemis.	1157	142	1299	1627	166	1793	1441	161	1602
Bio	1077	266	1343	1362	388	1750	1421	527	1948
Geo	901	130	1031	1118	174	1292	1069	247	1316
History	753	67	820	861	103	964	798	111	909
Civic	888	243	1131	1254	351	1605	1162	437	1599
HPE	338	96	434	604	190	794	593	228	821
Total	10464	2461	12919	13719	3506	17225	13711	4021	17732

As indicate in table 19 above and bar and line graph 12 A and B below, in 2018, 12919 teachers were reach (sat) for portfolio practical assessment in eleven subjects from all regions and two city administrations with highest numbers of teachers in Mathematics (1949), English (1622), chemistry 91299) and physics (12460 and lowest



number of teachers in subject like HPE (434), History (820) and Amharic (8860 respectively). In 2019, the number of teachers who reach for portfolio practical assessment increases (17, 225), with better number of teachers in mathematics (2563) followed by English (19940 and lower teachers in subject like HPE (1900, and History 9964). In 2021, (no data for year 2020 due to COVID 19) teachers who reach for portfolio practical assessment to some extent increases in number (17, 7320, with high number of test takers in subjects like Afan Oromo (2762) Mathematics (2488) as well as the lower subjects in HPE (821) and Amharic 872.

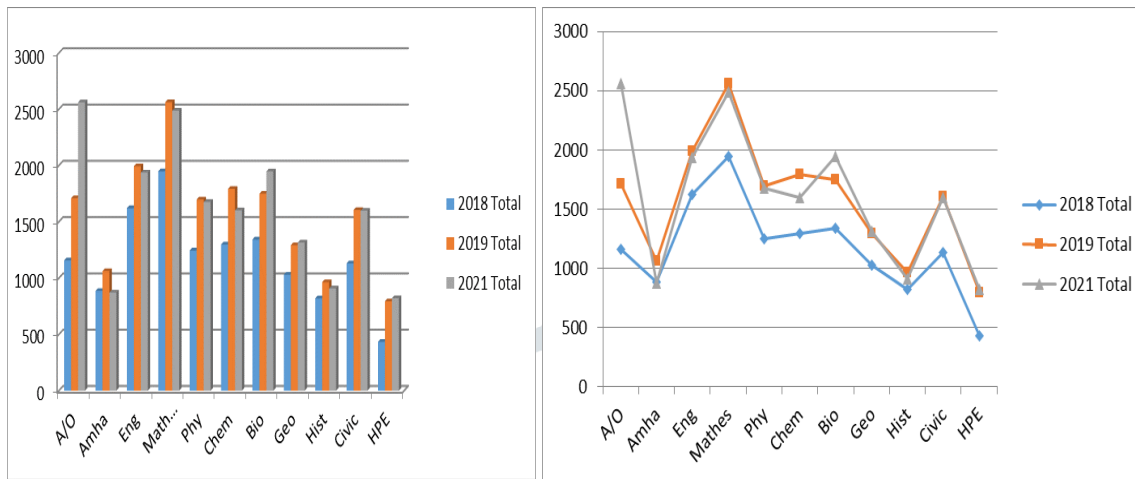


Figure 12 A and B. Bar and line graph of number of senior Primary School Teachers who got minimum requirement and reach for portfolio.

Table 20. Senior Primary School Teachers who got > 62.5 % & set for portfolio

Subjects	2018				2019				2021			
	Got > 62.5 % & set for portfolio				Got > 62.5 % & set for portfolio				Got > 62.5 % & set for portfolio			
	M	F	T	%	M	F	T	%	M	F	T	%
A/Orom	151	53	204	18	691	430	1121	65	513	215	728	28
Amhari	169	145	314	35	192	166	358	34	200	245	445	51
English	745	106	851	52	289	42	331	17	188	25	213	11
Mathes	332	23	355	18	1625	149	1774	69	11	0	11	0.4
Physics	179	1	180	14	360	13	373	22	78	4	82	5
Chemistry	501	31	532	41	844	63	907	51	516	25	541	34
Bio	570	68	638	48	360	47	407	23	992	316	1308	67
Geo	438	33	471	46	329	19	348	27	345	35	380	29
History	166	4	170	21	480	26	506	52	439	30	469	52
Civic	687	119	806	71	975	180	1155	72	530	106	635	40
HPE	17	0	17	4	194	24	218	27	220	31	251	31
Total	3955	583	4538	368	6339	1159	7498	459	4032	1032	5063	348.4

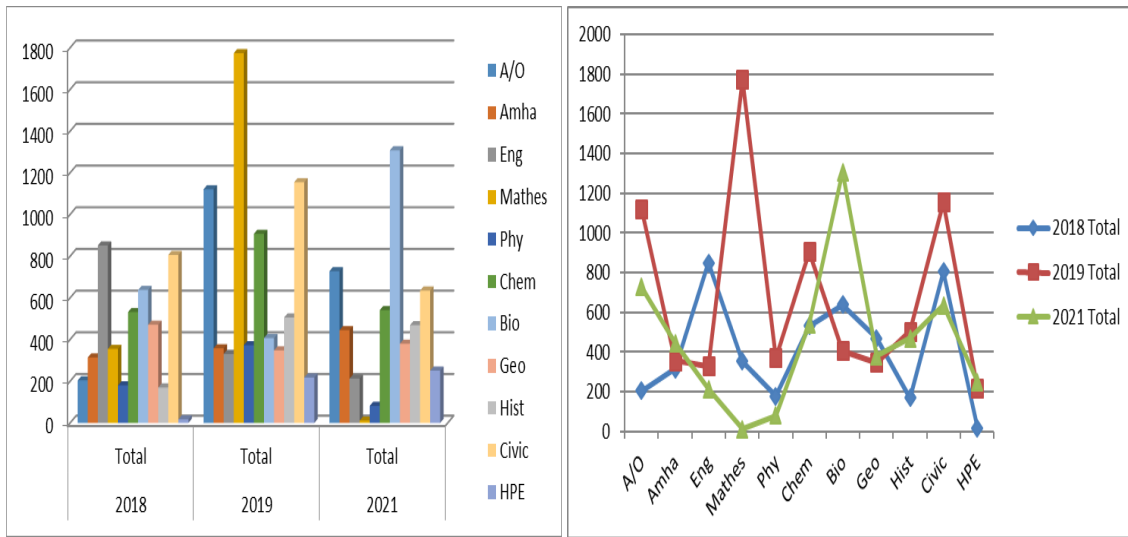


Figure 13 A and B. Bar and line graph of total number of senior primary school teachers who got > 62.5 % and sat for portfolio with time in years

In general, in all years from among male 181, 804 and female 125, 960 with the total of 307, 764 senior primary school teachers involved in the teachers’ professional licensure testing, those who got 62.5% and above (got the minimum requirement) were male 48, 743 and female 26, 029 with the total of 74, 772 (24%). Out of these, those who set for portfolio practical assessment were male 14, 325 and female 2772 with the total of 17, 099. Therefore, 6% from the teachers who involved in the licensure test and 25% from teachers who got minimum requirement were sat for portfolio practical assessment.

**Table 21. Total Senior Primary School Teachers enrolled by subject contents and pedagogy by regions**

Subject	2018 -21		T
	M	F	
<b>Tigray</b>	418	547	965
<b>Afar</b>	1126	1683	2809
<b>Amha</b>	3062	1339	4401
<b>Oromia</b>	9282	2446	11728
<b>Somali</b>	1798	336	2134
<b>Harari</b>	2098	533	2631
<b>Benishangul</b>	2885	1363	4248
<b>Gambella</b>	1433	676	2109
<b>SNNP</b>	524	187	711
<b>A/Abeba</b>	4023	2490	6513
<b>D/Dawa</b>	2155	1053	3208
<b>Total</b>	28804	12653	41457

Out of 41,457 senior primary school teachers who registered for licensure by content and pedagogy, 69.5% was male candidate with the highest number from Oromia region (9282), followed by Amhara region (3062). The lowest number was recorded by female candidate from SNNRP and Somali region respectively. (Table 21 and figure 14A).

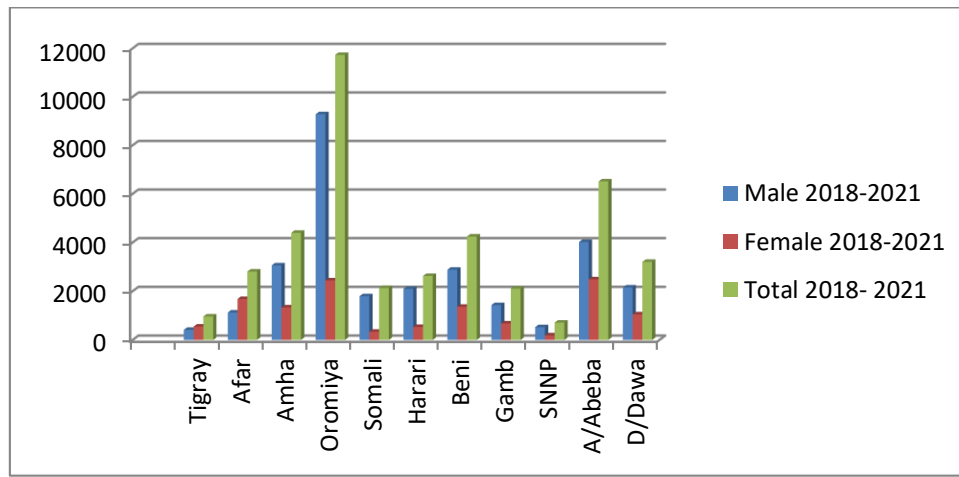


Figure 14 A. Bar graph of total number of senior primary school teachers enrolled for the test with regard to subject contents and pedagogy by regions.

Table 22. Total Senior Primary School Teachers sat for test and has got > 62.5% in content by regions

Year	2018			2019			2021			G/Total
	Got > 62.5% in Content			Got > 62.5 in Content			Got > 62.5 in Content			
	M	F	T	M	F	T	M	F	T	
<b>Regions</b>										
<b>Tigray</b>	9	4	13	45	36	81	73	18	91	185
<b>Afar</b>	40	72	112	48	13	61	83	12	95	268
<b>Amha</b>	52	14	66	288	70	358	103	25	128	552
<b>Oromia</b>	105	6	111	1158	268	1426	251	45	296	1833
<b>Somali</b>	11	0	11	19	6	25	41	5	46	82
<b>Harari</b>	33	2	35	333	70	403	123	21	144	582
<b>Beni.</b>	11	0	11	889	349	1238	39	12	51	1300
<b>Gambella</b>	77	20	97	589	186	775	4	2	8	880
<b>SNNP</b>	2	1	3	25	5	30	52	17	69	102
<b>A/Abeba</b>	238	50	288	735	261	996	298	78	374	1658
<b>D/Dawa</b>	94	23	117	58	24	82	87	34	121	320
<b>Total</b>	672	192	864	4187	1288	5475	1154	269	1423	7762

Among 864 senior primary school teachers who passed licensure and got > 62.5% in content in 2018, 33.3 % (288) were test takers from Addis Ababa while the least was from SNNPR 0.35% (3). The number of senior primary school teachers those score > 62.5% in 2019 was almost three and six times higher than 2018 and 2021 respectively. Similarly, the number of test takers who got > 62.5 % in content was much higher in 2019 than other stated exam years.

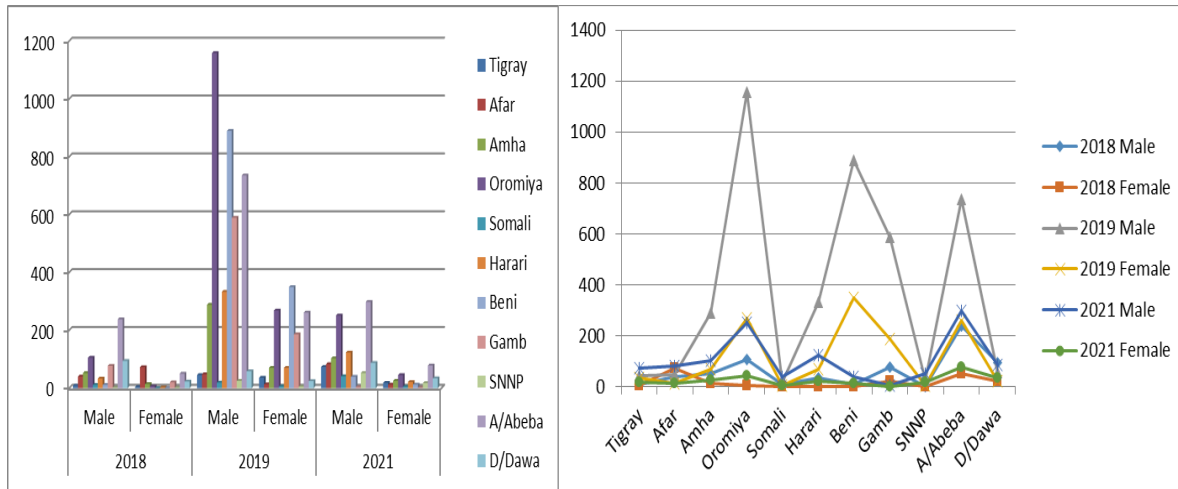


Figure 15 A and B. Bar and line graphs of total number of senior primary school teachers scoring > 62.5% in content by regions.

**Table 23. Total Senior Primary School Teachers sat for test and has got > 62.5% in Peda by regions**

Year	2018			2019			2021			G/Total
	Got > 62.5 in peda			Got > 62.5% In Peda			Got > 62.5% in Peda			
Subject	Male	Female	Total	Male	Female	Total	Male	Female	Total	
<b>Tigray</b>	358	85	443	29	21	50	98	23	121	614
<b>Afar</b>	36	4	40	66	3	69	28	0	28	137
<b>Amha</b>	707	173	880	154	34	188	632	106	738	1806
<b>Oromia</b>	1340	261	1601	28	23	51	672	132	804	2456
<b>Somali</b>	28	5	33	6	0	6	18	6	24	63
<b>Harari</b>	13	2	15	231	109	340	98	79	177	532
<b>Beni.</b>	51	5	57	38	15	53	43	19	62	172
<b>Gambel</b>	35	4	39	12	4	16	3	2	5	60
<b>SNNP</b>	82	41	123	37	69	106	29	6	35	264
<b>A/A</b>	148	42	190	0	0	0	431	105	536	726
<b>D/D</b>	95	17	112	9	4	13	43	23	66	191
<b>Total</b>	2893	639	3533	610	282	892	2095	501	2596	7021

Among 7021 senior primary school teachers who passed licensure and got > 62.5% in Pedagogy in the past three years (2017 – 2019), 50.3% (3533), was recorded in 2018, and the least during 2019 which was about 12.7% (892). Oromia and Amhara were the leading regions with overall highest number of test takers score > 62.5% in Pedagogy 2456 and 1806 respectively. The least number of test takers were from Gambella region with only 60 applicants. (Table 23 above and figure 16 below).



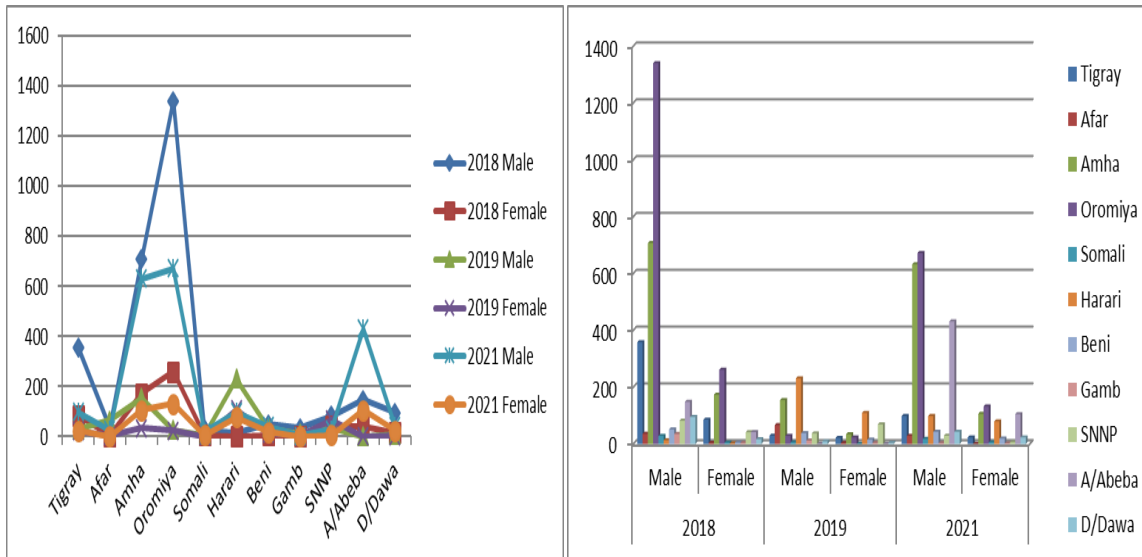


Figure 16 A and B.

Line and bar graph of total number of senior primary school teachers scoring > 62.5% in Peda by regions.

**Table 24. Senior Primary School Teachers Relative Scores by Content and Pedagogy**

Pillar	Scored > 70				Scored 50- 70				Scored < 50				Total			
	M	F	T	%	M	F	T	%	M	F	T	%	M	F	T	%
<b>Content</b>	105	21	126	38.7	267	58	325	36.5	588	231	819	62	960	310	1270	50
<b>Pedagogy</b>	155	48	203	62.3	453	113	566	63.5	352	149	501	38	960	310	1270	50
<b>Total</b>	260	69	326		720	171	891		940	380	1320		1920	630	2540	

Out of 2540 senior primary school teachers, who passed their tests in 2017, 13% (326) had scored greater than 70 % in content and pedagogy and more than half of the candidate 52% (1320) has got less than 50 % in their test. Among 720 senior primary school teachers with the score between 50 to 70, about 63% were registered by pedagogy test takers (Table 24 above and figure 17 below).

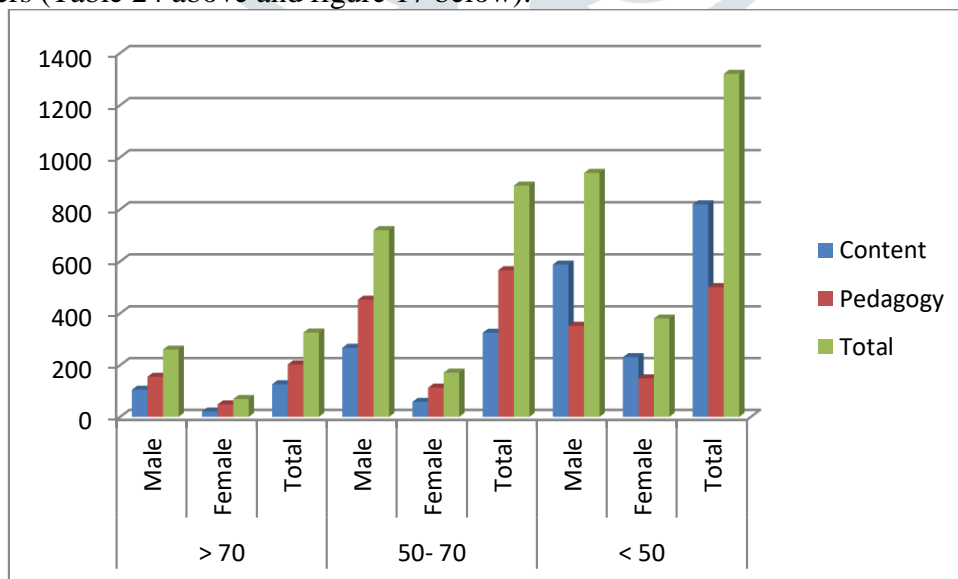
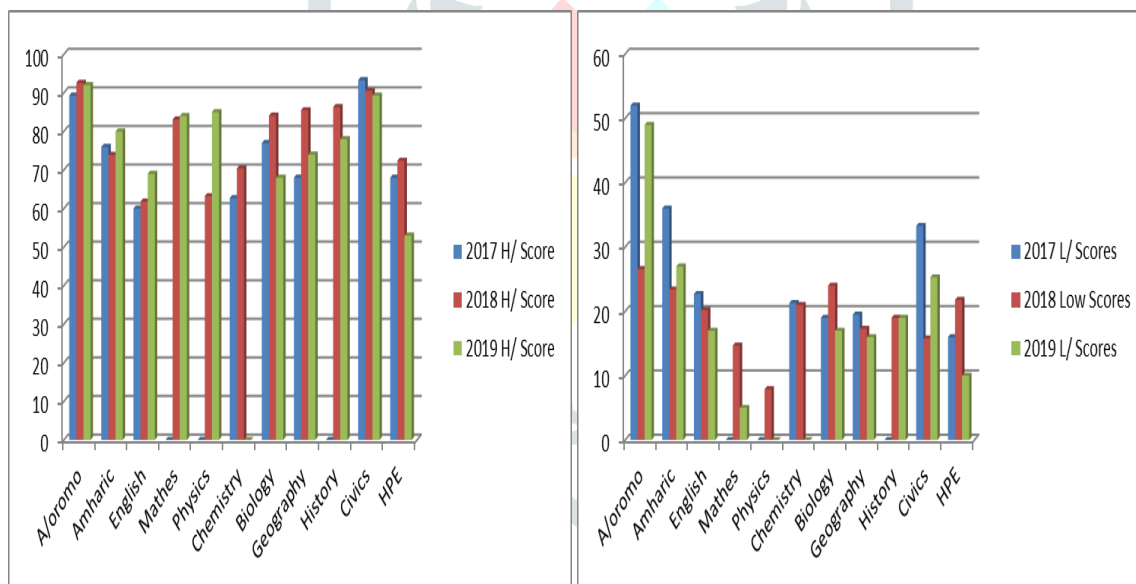


Figure 17. Bar graph of total number of Senior Primary School Teachers Relative Test Scores in Content and Pedagogy

Table 25. Senior Primary School teacher's relative scores by subjects

Years	2017			2018			2019		
	H/ Score	L/ Scores	Average	H/ Score	Low Scores	Average	H/ Score	L/ Score	Average
Subjects									
A/oromo	89.3	52	75.9	92.6	26.6	72.1	92	49	75.87
Amharic	76	36	56.8	73.9	23.4	48.4	80	27	53.72
English	60	22.7	41.7	61.8	20.2	39.4	69	17	39.84
Mathes	0	0	0	83.1	14.7	46.5	84	5	45.76
Physics	0	0	0	63.2	7.9	38.3	85	0	35.4
Chemistry	62.7	21.3	40.5	70.4	21	43.7	0	0	0
Biology	77	19	49	84.1	24	54.5	68	17	53.35
Geography	68	19.5	44	85.5	17.3	40.8	74	16	49.42
History	0	0	0	86.3	19	44	78	19	49.73
Civics	93.3	33.3	74.4	90.5	15.8	59.8	89.3	25.3	67.88
HPE	68	16	44	72.4	21.8	44	53	10	31.9

In 2017, the highest score was registered by civic 93.3, while A/oromo controlled the top score of 2018 and 2019 respectively. The record of least mark was attained by physics and HPE in 2017 and 2019 correspondingly. Afan oromo was also the subject with best average score as compared with the remaining subjects in three years.

Figure 18 A and B. Bar graphs of senior primary school teachers with **high and low** scores by subjects

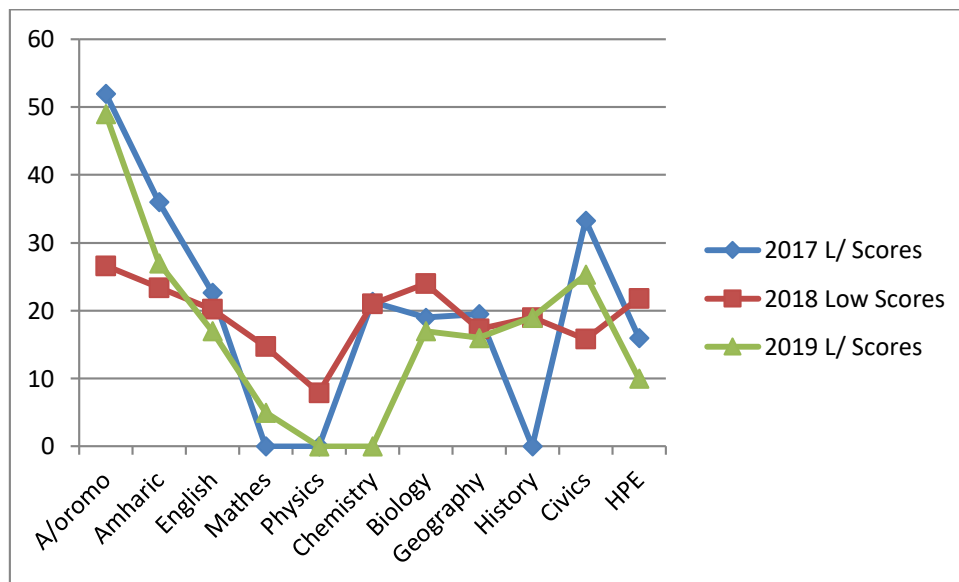


Figure 19. Line graph of Senior Primary School teachers with **lower scores by subjects**

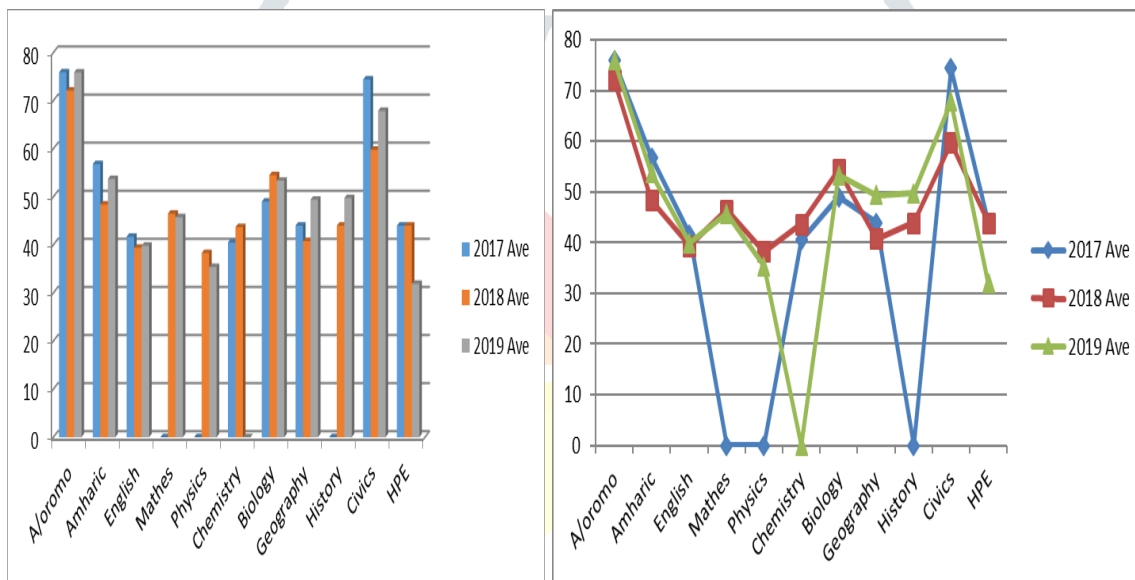


Figure 20 A and B. Bar and line graphs of senior primary school teachers with **average scores by subjects**.

**4.2.4. Performance of senior primary school teachers at different Bands**

In this part, the senior teachers were divided into four levels as ‘Band I’, ‘Band II’, ‘Band III’ and ‘Band IV’ and the proportion achieving at each level was presented below in Table 26. The classification was based on the scaled scores where ‘Band I’ was greater than 80%, ‘Band II’ in the range of 60% to 80%, ‘Band III’ in the range of 50% to 60% and ‘Band IV’ less than 50% or below the mean passing score as stipulated on the Guide line.

**Table 26. Natural Science & Mathematics Senior primary school teachers' mean Score by Bands (N=4397)**

Subject	> 80			60 - 80			50 - 60			< 50			Total Test Takers		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Mathes	100	3	103	430	22	452	241	10	251	417	31	448	1188	66	1254
Chemis.	26	0	26	458	19	477	269	39	308	183	52	235	936	110	1046
Biology	1	0	1	206	18	224	298	46	344	310	83	393	815	147	962
Physics	17	1	18	194	2	196	282	11	293	575	53	628	1068	67	1135
Total	144	4	148	1288	61	1349	1090	106	1196	1485	219	1704	4007	390	4397
%	3.6	1.0	3	32.	15.	30.	27.	27	27	37.1	56.	38.	91.	8.9	

Looking at table 26 above, from all the test takers (4397) who sat for the licensing test in 2017 only 62.2 % of them scored greater than the minimum score required which was 50%. The situation was worse for physics (than biology, chemistry and mathes), where only 510 (44.7% of the test takers) scored greater than or equal to 50%. The highest achievers who scored greater than 80% in this group were only 3.4%. Again in the case of physics the percent was as low as 1.7%. The disaggregated score table for sex shows that there was poor performance in female teachers relative to the males. In this respect, 56.2% of the female scored less than 50 % while this figure was only 37.1% for males.

**Table 27. Language Senior Teachers Mean Scores by Bands**

Subjects	N	> 80	60 - 80	50 - 60	< 50
English	872	7(.9%)	321(36.8%)	287(32.9%)	257(29.4%)
Amharic	540	35(6.5%)	365(67.6%)	88(16.3%)	52(9.6%)
Afan oromo	136	67(49.3%)	66(48.6%)	2(1.4%)	1(0.7%)
Total	1548	109(7.0%)	752(48.6%)	377(24.4%)	310(20.0%)

Among language teacher test takers, 861 (55.6%) achieve average percentage scores within the 60% to 100% range. Again, the numbers of teachers in the enlarged top range were few in number, i.e. 109 (7.0%) teachers and 310 (20%) language teachers scored below 50 %. They did not necessarily achieve the requirement for achieving the minimum knowledge. With regard to each subject, English test was an area where the least mark had scored. In terms of classified bands compared to other languages, i.e. 257(29.4%) of English teachers were within a range of 0 to 50%. There were so few teachers with average percentage scores in the 80% to 100% range, that was equivalent to 7(.9%). In the case of Afan Oromo, the largest portion of teachers 133(97.9%) fall within the top ranges of 60%-100%. Only 1(0.7%) teacher scored below 50 %. It also found that only 35(6.5%) Amharic teachers achieve an average percentage score within the 80% to 100% range, while 365 (67.6%) Amharic teachers achieve an average percentage score in the range 60% to 80%. Nearly 10 % ( 52) of teachers fail to score greater than 50% on the tests.

**Table 28. Social Science and HPE Senior Teachers Mean Scores by Bands**

Subject	Greater than 80			Between 60 and 80			Below 50			Total no of examinees		
	M	F	T	M	F	T	M	F	T	M	F	T
Geo.	0	0	0	65	2	67	299	39	338	464	46	510
%	0.0%	0%	0.0%	4.0%	4.3%	13.1%	64.4%	34.8%	66.3%	91.0%	9.0%	
History	1	0	1	204	5	209	136	18	154	521	31	552
%	0.2%	0%	0.2%	9.2%	16.1%	37.9%	26.1%	8.1%	27.9%	94.4%	5.6%	
Civics	20	1	21	538	67	605	13	9	22	606	93	699



%	.3%	.1%	1.0%	8.8%	1.0%	6.6%	1.1%	7%	.1%	16.7%	1.3%	
PE	0	0	0	52	2	54	255	96	351	429	114	543
%	0.0%	0%	0.0%	2.1%	1.8%	9.9%	69.5%	34.2%	64.6%	92.3%	21.0%	
Total	21	1	22	859	76	935	703	162	865	2020	284	2304
%	1.0%	.4%	1.0%	2.5%	26.8%	40.6%	34.8%	17.0%	37.5%	87.7%	12.3%	

As shown in table 28, none of the test takers in geography and HPE scored above 80% while only 0.2% of history test taker scored above 80%. In addition, the majority (66.3%) of geography and (64.6%) HPE test takers scored below 50%. However, the vast majority (93.9%) of civics test takers scored 50% and above. In this case test takers showed outstanding result with only 4.1% failing (scored below 50%). The majority (72.2%) of history test takers scored 50% and above which indicates a good result with only 28.8% failing (scored below 50%) in this test. The finding from gender perspective reveals that only 15.2% of Geography, 41.9% of History and 15.8% of HPE female test takers scored greater than or equal to 50%, while the percentage was 35.6%, 72% and 40.5% for males, respectively. On the other hand, male and female civics test takers revealed smaller variation in performances.

### 4.3. Question 2. The status of students’ academic performance in Ethiopian primary schools

#### 4.3.1. Students’ Academic Performance on Six Consecutive NLA Assessment

The results of students’ academic performance on national large assessment like NLA, EGRA and EGMA might be influenced by teachers’ professional competence which in fact will be confirmed by the second phase of quantitative study. In Ethiopia six consecutive ENLA were administered between 2000 and 2021 to measure students' achievements and identify factors related to their achievement. In the assessment, both government and private schools found in the nine regions and the two-city administration had been involved. Concerning ENLA achievement standards, it was divided in to three stages: proficiency stage, which means one standard deviation above the mean (the top 16%), basic stage, within one standard deviation above the mean (above 34%) and below basic stage, below the mean score (above 50%). Performances’ of Students at Various Proficiency Levels (Below Basic, Basic, Proficient and Advanced), is based on the modified Angoff method.

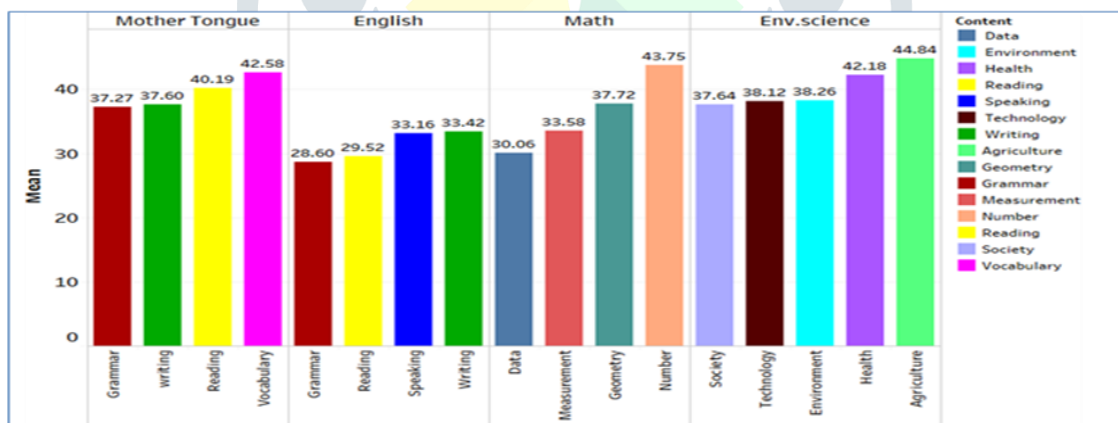


Figure 21. Grades 4 Students’ achievement in mean percent score by Subjects

The composite score of grade 4 students in four subjects was 37.71%. The achievement of students in English was 30.75%, Mathematics 41.07%, Mother Tongue 40.04% and Environmental Science 39.51%. With regards to performances of grade 4 students at different proficiency levels, students' achievement was categorized into below basic, basic, proficient and advanced levels based on a cut score defined following modified Angove standard setting method. Based on this, a high percentage of students observed below basic levels. Students’ score shows that, 58.44% English, was below basic level. Moreover, the percentage of students in grade 4 who performed at basic proficiency level and above in Mathematics, English, Mother Tongue and Environmental Science were found 42.39%, 41.56%, 40.26% and 56.76%, respectively.

An independent t-test was computed to determine grades 4 students’ achievement by school location, there were achievement difference between rural and urban school students. Urban students achieved higher than the rural ones in all subjects including English subject. The mean differences were also statistically significant at P<0.05.

Concerning composite achievement in mean score by region, the one-way ANOVA computed revealed that, Addis Ababa (61.15%) was the highest achiever and Benishangul (26.30%) was the least achiever. The model with F-test also showed that there exists a significant mean difference among regions at  $p < 0.05$ . The finding also showed that all scores were below 50% except for Addis Ababa.

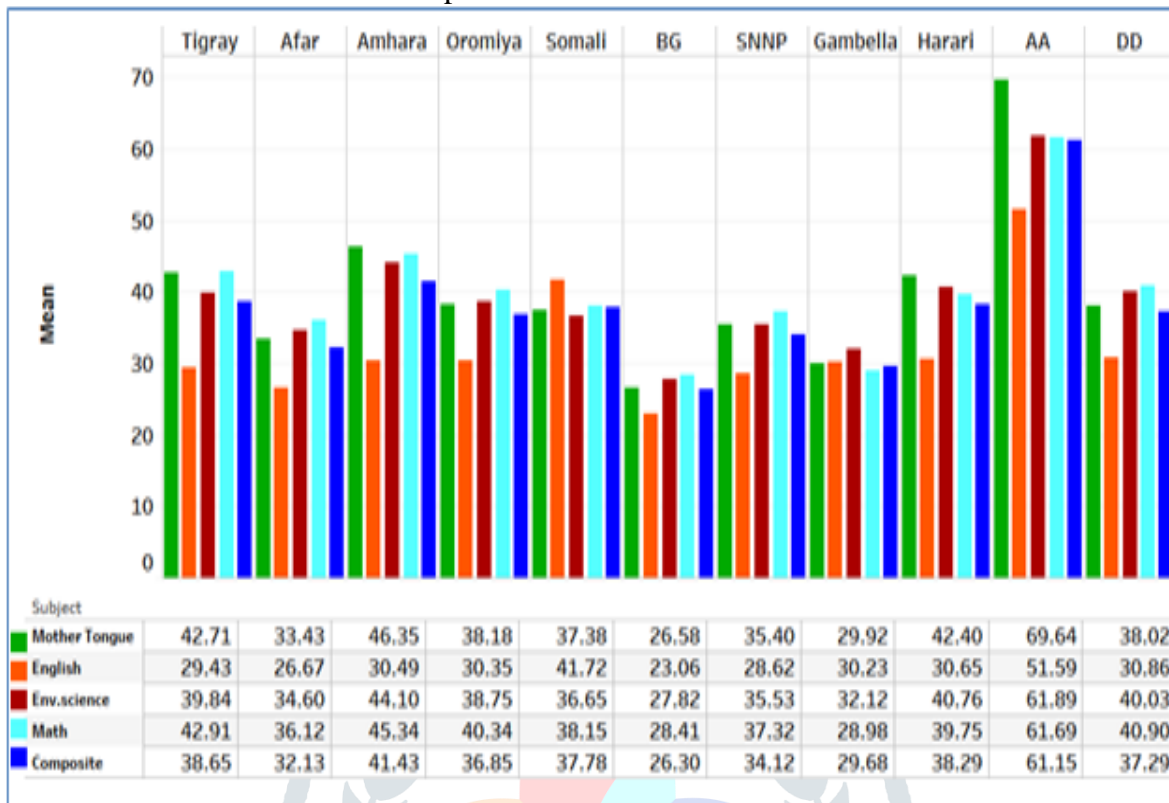


Figure 22. Grade 4 Students' Achievement in Mean Percent Score by Region

Comparisons of percentage of students who scored 50 % and above in composite score with ESDP IV target indicated that, only 21.9 % of the students in grade 4 attained the level. With regard to grade 4 NLA trends in the achievement in mean percent scores of content domain. In English content domains, students scored 33.42% in writing and 33.16% in speaking and scored 29.52% in reading and 28.60% in grammar. In general, the achievements in all English content domains were very low.

The achievement scores at five key marker points of benchmarks: 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup> and 90<sup>th</sup> percentiles reveal that, students at the 90<sup>th</sup> percentile only achieved scores of 60% at the composite average score. This means only 10% of the grade 4 students were able to achieve a score of 60% and above. On the other hand, students at 10<sup>th</sup> percentile by the composite mean scored achieved only 22% and this means that 10% of the students scored below chance level in all subjects. Differences between the 10th and 90th percentiles, 38% in the composite score was an indication of how wide spread the variation between high achiever and low-achiever students.

In general, as shown in figure 23 below, the composite score of grade 4 students in four subjects was 37.71%. The achievement of students in English was 30.75%, Mathematics 41.07%, Mother Tongue 40.04% and Environmental Science was 39.51% respectively. Concerning Mother tongue language except in 2016, the students' achievement had been decreasing. In the remaining subjects (English, Mathematics and Environmental Science), the students' achievement was fluctuating. Accordingly, the six times (2000 to 2021) consecutive NLA students' achievement in all subjects were 49.88% for mather tongue, 43.29% for environmental science, 40.19% for mathematics and 38.65% for English language. As shown in the figure 23 below, the students achieved low score in English subject in the consiquetive six years' assessment.

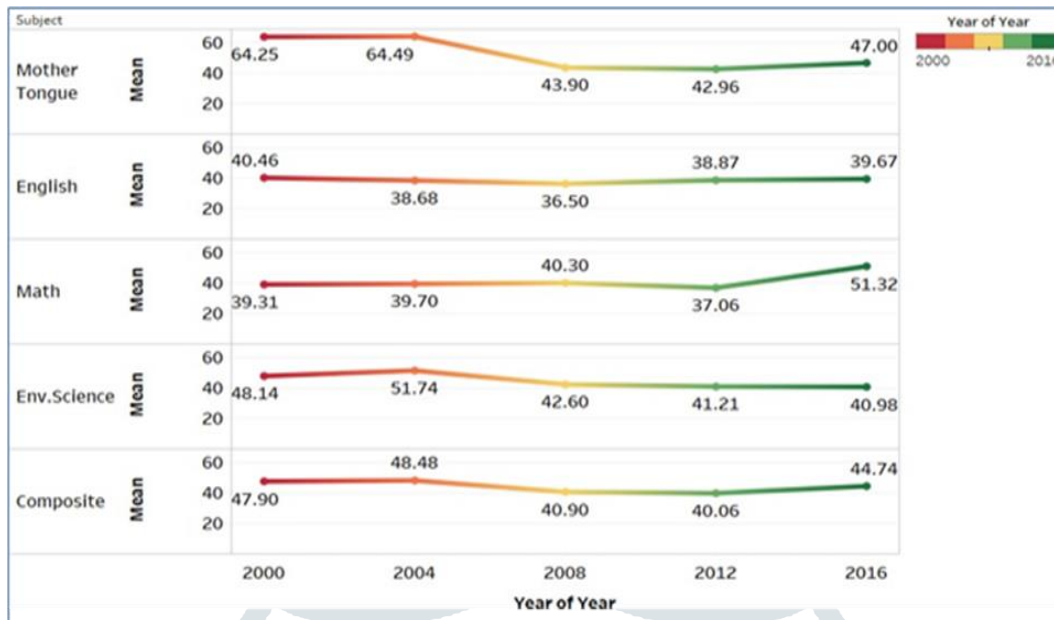


Figure 23. Grade 4 National Learning Assessment Trend in Percent Mean Score

**4.3.2. The status of students’ academic performance in four consecutive EGRA assessment**

In addition to the ENLA students’ assessment, the baseline survey was also assessed the status of early grade students in mother tongue and identify students reading performances. The baseline surveys adopt a consecutive data, in document analysis of EGRA performance subtasks. The participants in four consecutive EGRA assessment (2014- 2021) were 77,440 students, 3872 teachers and 1,560 primary schools’ principals which were from seven regions and nine languages.

**4.3.2.1. Mean scores of students in timed fluency subtasks by language and grade level**

**Table 29. Mean scores of students in timed fluency subtasks by language and grade level**

Language	Letter Name Recognition		Familiar Words Reading		Invented Words Reading		Oral Reading Fluency	
	Gr. 2	Gr. 3	Gr. 2	Gr. 3	Gr. 2	Gr. 3	Gr. 2	Gr. 3
	Af Somali	44.5	46.6	14.3	18.0	14.3	17.9	22.5
Afan Oromo	31.8	53.3	5.7	13.6	4.5	10.2	5.9	15.5
Afar Af	14.1	18	2.1	3.9	1.8	3.6	2.2	4.2
Amharic	22.4	32.8	15	24.7	12.5	18.6	17.2	29.4
Berta	19	18.8	4.5	7.4	4.2	8	9.9	6.4
Hadiyyissa	23.5	37.8	4.6	9.7	4.1	8.7	4.6	9.7
Nuer	9.1	16.3	3.4	6.3	2.6	5.5	8	11.1
Sidaamu Afoo	29.3	44.4	6.1	12.3	4.7	9.4	7	14.4
Wolayttatto	19.1	28.5	5	9.1	4	7.2	5.8	10.3
<b>Total</b>	<b>23.6</b>	<b>32.9</b>	<b>6.7</b>	<b>11.7</b>	<b>5.9</b>	<b>9.9</b>	<b>9.2</b>	<b>14.5</b>

An overall reading performance on EGRA timed subtasks across grade levels was found better in letter name recognition, where grade two and three students could read on average 23.6 and 32.9 letters per minute respectively. The average mean scores for grades 2 and 3 were 5.9 and 9.9 words per minute respectively. In both grade levels, students from Amharic performed better in familiar words reading, as well as invented words reading in grade 3. Similarly, grade 2 students from Af Somali performed better in letter name recognition and invented word reading, as well as oral reading fluency in both grades. The students of Nuer language performed lower in letter name recognition, while students who learned in Afar Af performed lower in the remaining timed subtasks.

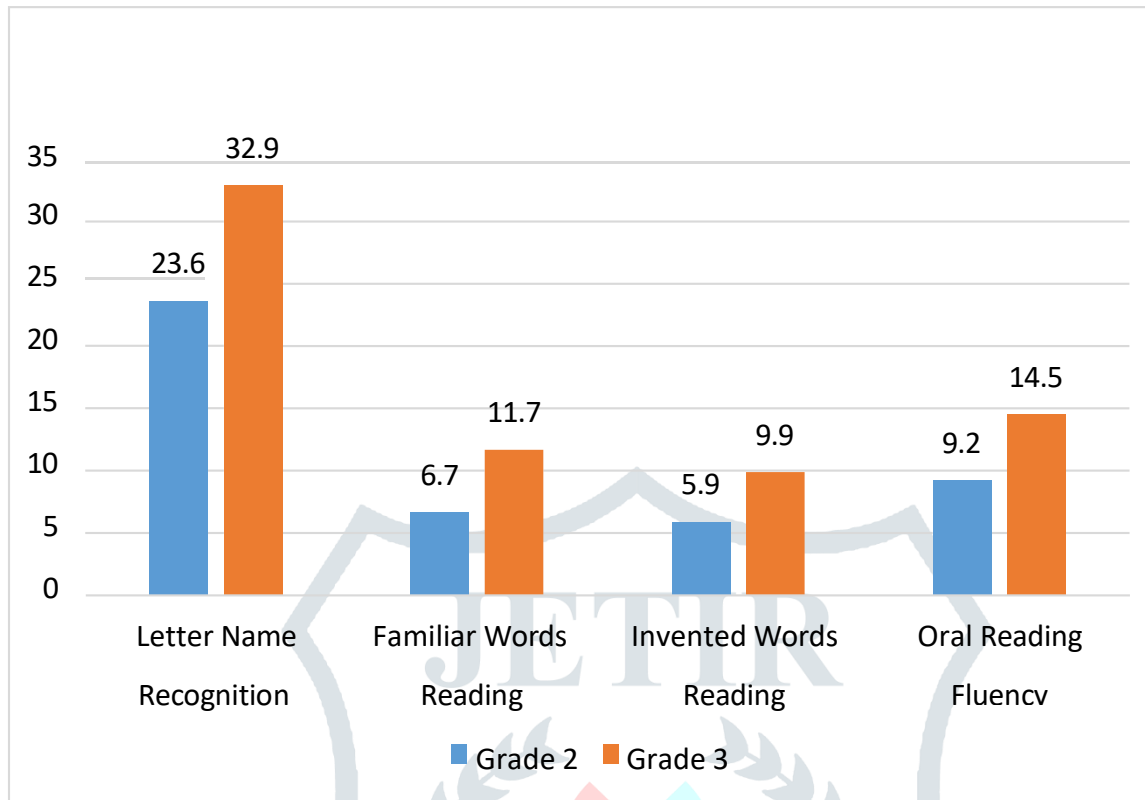


Figure 24. Mean scores of students in timed subtasks by grade

Table 30. Percentage of zero readers on timed subtasks by language and grade levels

Language	Letter Name Recognition		Familiar Words Reading		Invented Words Reading		Oral Words Reading	
	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
Af Somali	16	17	36	30	40	32	35	20
Afan Oromo	15	4	54	26	66	42	63	36
Afar Af	63	55	88	82	91	84	92	85
Amharic	27	16	35	19	33	18	34	18
Berta	53	46	91	85	94	89	92	91
Hadiyyissa	26	15	69	48	74	54	78	56
Nuer	49	25	78	55	81	61	71	49
Sidaamu Afoo	16	6	64	39	70	48	70	47
Wolayttatto	34	21	71	54	77	62	76	58
<b>Total Av.</b>	<b>33</b>	<b>23</b>	<b>65</b>	<b>49</b>	<b>70</b>	<b>54</b>	<b>68</b>	<b>51</b>

Concerning student performances by reading proficiency levels, the results show that at the national level, the percentage of pupils who attained the required highest benchmark or level 1 was about 5% and 6% for grades 2 and 3, respectively. Similarly, the percentage of students who reached the level 2 benchmark, which refers to "reading with increasing fluency and comprehension," was nearly 8% and 17% for grades 2 and 3 respectively. Overall, only about 13% of students in grade 2 and 23% in grade 3 achieved the two highest levels, referring to "full or nearly full" and "increasing" reading proficiency known as functional reading level. On the other hand, about 68% and 51% of the grades 2 and 3 students were respectively categorized under zero readers in oral reading fluency subtask.



In grade-level comparisons, the mean differences between the two grade levels in all EGRA subtasks were statistically significant which in favor of grade 3 in each language. The findings were disaggregated across gender, overall male students performed relatively better than females in each subtask of EGRA. However, in some subtasks, female students from Af Somali and Berta performed better than males. Similarly, the disparity between urban and rural, urban students performed better than rural students in all subtasks at national level. Nevertheless, rural students from Af Somali, Nuer, and Sidaamu Afo languages performed better than urban students in most subtasks.

#### 4.3.2.2. Mean scores of students in untimed fluency subtasks by language and grade level

**Table 31. Mean scores of students in untimed fluency subtasks by language and grade level**

Language	Phonemic Awareness		Reading Comprehension		Listening Comprehension	
	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
	Af Somali	77.0	73.8	19.2	29.9	66.2
Afan Oromo	39.1	63.0	6.7	19.3	64.7	75.5
Afar Af	15.8	23.6	1.1	3.5	50.9	56.5
Amharic	72.6	80.1	16.4	31.1	69.3	73.8
Berta	31.2	40.0	2.1	2.6	55.8	62.2
Hadiyyissa	73.7	78.6	4.8	8.9	74.2	81.5
Nuer	30.3	54.6	5.5	14.6	76.8	80.5
Sidaamu Afoo	82.0	85.6	6.2	13.8	75.8	82.5
Wolayttatto	60.0	69.4	6.3	11.2	47.1	50.0
<b>Total</b>	<b>53.5</b>	<b>63.2</b>	<b>7.6</b>	<b>15.0</b>	<b>64.5</b>	<b>70.8</b>

Concerning the Students score in untimed subtasks, the students' scored better in phonemic awareness and listening comprehension than in reading comprehension in untimed subtasks. The overall percent-correct average score for reading comprehension was only 11%, whereas it was about 53% and 68% for phonemic awareness and listening comprehension respectively. Accordingly, students were more likely to recognize the sounds of the letters in a word and comprehend what they listen rather than what they read in the passage.

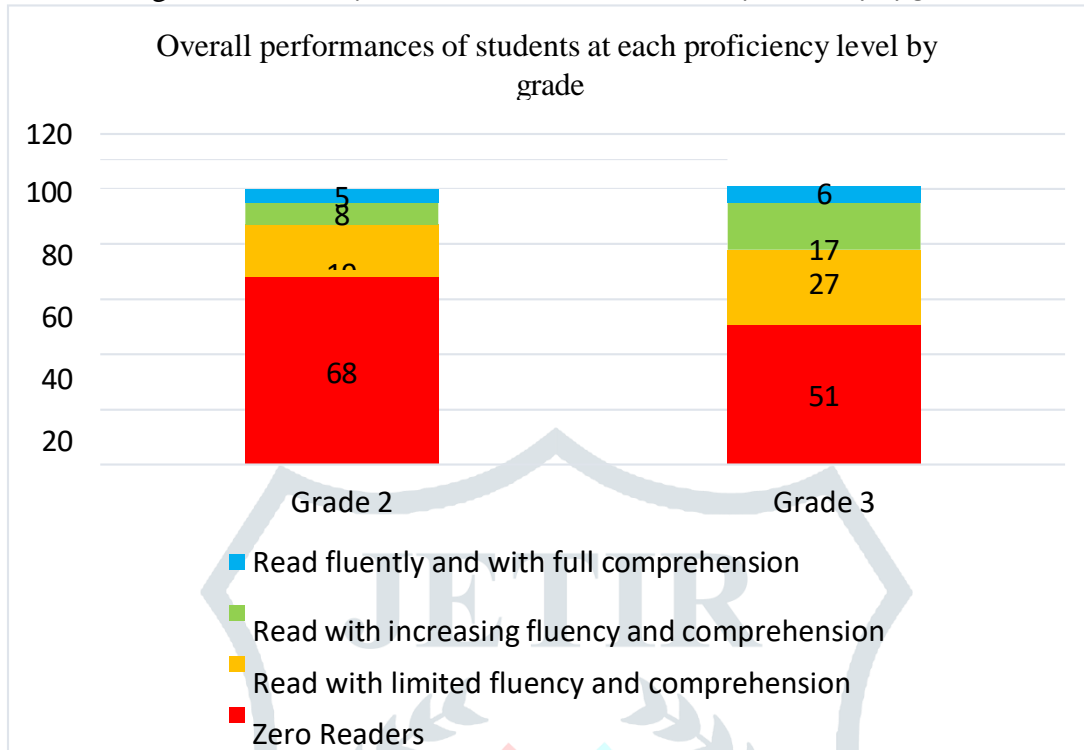
In reading comprehension, there is a higher percentage of zero readers as compared to listening comprehension in all language groups for both grade levels. Afar Af had the highest percentage of zero readers in all untimed subtasks for grade 2 and for phonemic awareness and listening comprehension subtasks for grade 3. The table also indicates that Berta had the highest percentage of zero readers for reading comprehension. On the contrary, in phonemic awareness and listening comprehension, the lowest percentages of zero readers are grade 2 students from Sidaamu Afoo. Likewise, in reading comprehension, the lowest percentages of zero readers are from Amharic language. In grade 3, the lowest percentages of zero readers are from Hadiyyissa in phonemic awareness and listening comprehension, while those are from Amharic in reading comprehension.

**Table 32. Percentage of zero readers on untimed subtasks by language and grade levels**

Language	Phonemic Awareness		Reading Comprehension		Listening Comprehension	
	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
	Af Somali	7	9	69	53	12
Afan Oromo	41	19	85	60	9	3
Afar Af	65	56	96	90	32	24
Amharic	14	9	60	37	3	2
Berta	44	35	96	95	13	12
Hadiyyissa	4	1	85	72	3	1
Nuer	42	21	85	69	4	4
Sidaamu Afoo	3	2	81	64	2	1
Wolayttatto	17	10	88	77	8	8
<b>Total Av.</b>	<b>26</b>	<b>18</b>	<b>83</b>	<b>69</b>	<b>10</b>	<b>7</b>

**Figure 27. Overall performance of students at each proficiency by grade**

Figure 27. Overall performance of students at each proficiency by grade



With regards to percentage of grade 2 students at each benchmark levels by language groups at the national level, 68% of the students were put under the category of zero readers in oral reading fluency subtask. In this case, Afar and Berta languages had the highest percentage of zero readers (about 92%), while Amharic (34%) and Somali languages (35%) had the lowest percentage. The percentage of zero readers in other languages ranged from 63% in Afan Oromo to 78% in Hadiyyissa languages.

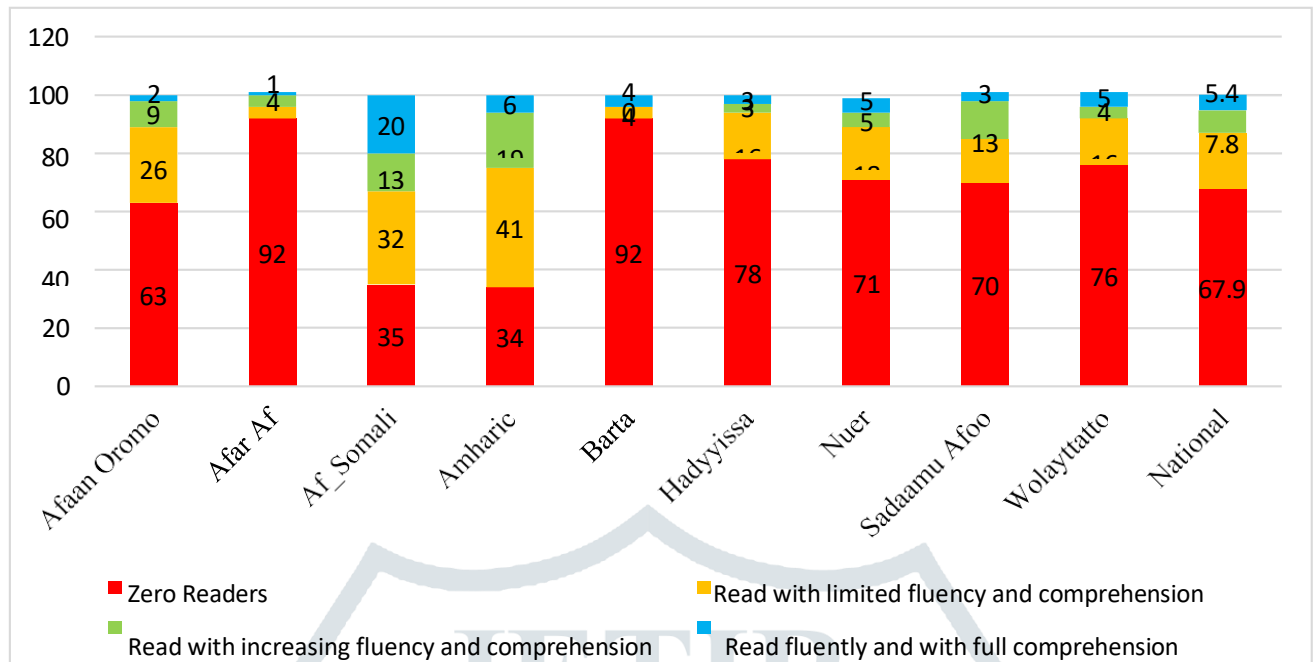


Figure 28. Percentage of grade 2 students at benchmark levels by language

On the other hand, insignificant percentage of student in each language group achieved the highest benchmark (Level 1), which reflects "reading fluently with full comprehension." In this regard, relatively the highest percentage (20%) was from Af - Somali language and the least percentage (1%) was from Afar – Af language in “read fluently and with full comprehension” benchmark. At national level, the percentage of students who reached level 1 benchmark was only 5 %.

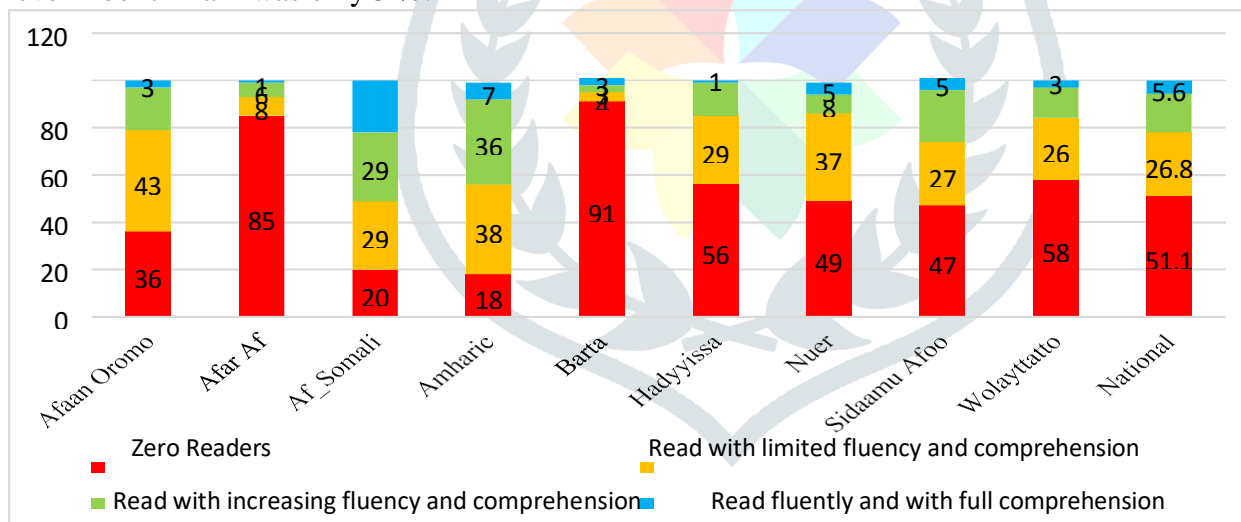


Figure 29. Grade 3 overall percentage of students at benchmark levels by language

Table 33. Grade 2 and 3 overall percentage of students at benchmark levels by language

Language	Zero Readers		Read with limited fluency and comprehension		Read with increasing fluency and comprehension		Read fluently and with full comprehension	
	G2	G3	G2	G3	G2	G3	G2	G3
Afan Oromo	63	36	26	43	9	18	2	3
Afar Af	92	85	4	8	4	6	1	1
Af Somali	35	20	32	29	13	29	20	22
Amharic	34	18	41	38	19	36	6	7

Berta	92	91	4	4	0	3	4	3
Hadiyyissa	78	56	16	29	3	14	3	1
Nuer	71	49	18	37	5	8	5	5
Sidaamu Afoo	70	47	15	27	13	22	3	5
Wolayttatto	76	58	16	26	4	13	5	3
<b>National</b>	<b>68</b>	<b>51</b>	<b>19</b>	<b>27</b>	<b>8</b>	<b>17</b>	<b>5</b>	<b>6</b>

With regard to level 2, which refers to “reading with increasing fluency and comprehension”, the percentages of students attaining this level vary across languages from zero in Berta to 19% in Af- Somali languages. Based on the analysis, an average of only 8% of grade 2 students in Ethiopia, were attaining reading proficiency at the “increasing” level. Overall, at the national level, the percentage of students at the functional reading level or level 1 and level 2 was only about 13%.

With regards to comparison across years in attaining benchmark levels, the performances of students in EGRA across four administration years were compared: 2014 (baseline), 2016 (midline), and 2018 (end-line) conducted by the READ monitoring and evaluation project, and EGRA 2021 conducted by the NEAEA.

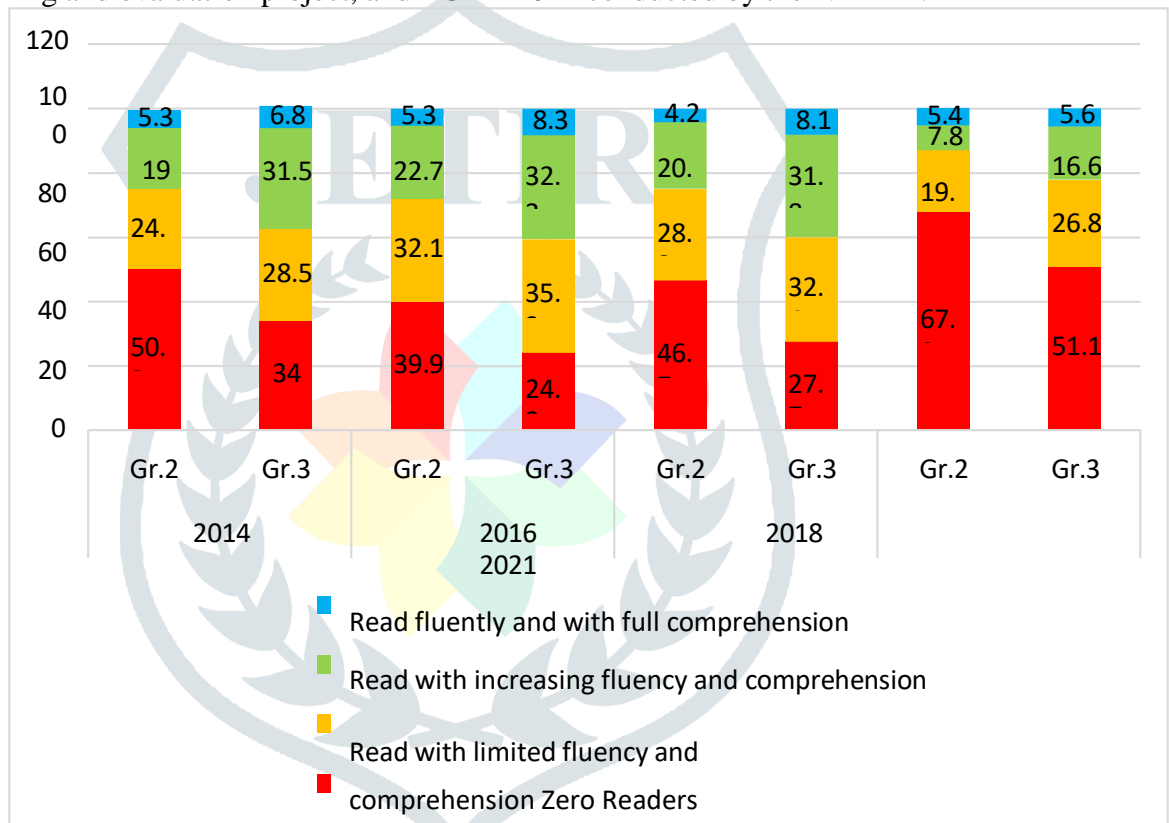


Figure 30. Overall percentage of students at benchmark levels by year and grade

When comparing grades within each EGRA administration years, the percentages of students reaching the functional reading levels was higher for grade 3 than grade 2, even though the cut score of grade 3 was also higher due to the expectation of differences between the two grade levels. The comparison of EGRA 2021's students' oral reading performances to that of earlier EGRA administrations revealed that, there was a significant decrease in the percentages of students achieving full or increasing reading proficiency. For example, in 2021, the percentage of students at the functional reading level were 13% and 23 % for grades 2 and 3 respectively, that were found lower than earlier EGRA studies. On the contrary, the percentages of zero readers in 2021 was higher than previous EGRA results.

Over the last four EGRA administrations, there has been a small variance in students' reading performances. In 2014, about 31% of students met the two upper reading benchmark levels; whereas in 2016, it increased to 34.2%; and in 2018, it decreased to 32.5%. As a result, fluency and comprehension levels remained relatively stable over these time periods, as the deviations were negligible and have little practical effect. On the other hand, when compared to previous EGRA, the percentage of students at the functional reading level in EGRA 2021 declined to 17.7%, about half the percentage recorded in 2016 and the percentage of zero readers raised to about 60%. In

this regard, in the three EGRA administration, overall 30.8% of students met the two upper reading benchmark levels (functional reading level), however, in 2021, the percentage of students dropped to 23%. On the contrary, the percentage of zero readers increased by about 10% from 39% in 2014, 2016 and 2018 to 49.4% in 2021.

When comparing the oral reading fluency performances of each grade 2 and 3 students', they performed lower in EGRA 2021 than three consecutive EGRA assessment. In this case, percentages of grade 2 students attained at functional proficiency levels was 16.9%, which was declined by 7.4% as compared to three consecutive EGRA (24.3%). Similarly, in grade 3, the percentage of students attained at functional proficiency level in EGRA 2021 was 29.2% that was dropped by 8.1% when compared to previous EGRA (37.3%)

The trend of overall performance in each language by year across subtasks shows, in EGRA of 2016 and 2021, the performances of students were highest in Amharic language, but lowest for Sidaamu language than EGRA of 2014 and 2018. On the contrary, students' performance was the lowest for Afan Oromo language in 2021 than 2014, 2016 and 2018. It was the lowest for Somali language in 2016 than in 2014, 2018 and 2021. The highest performance for Afan Oromo and Somali languages were displayed in 2014. In Hadiyyissa and Wolayttatto languages students' better performances were recorded in 2014 and 2016, respectively, and their least performances were observed in 2021. In general, although there were differences among the languages, the overall trend revealed that students' performances were declining over time.

## 5. DISCUSSION

The finding of PGDT candidate primary school teachers those who took Afan Oromo language licensure test indicated that, both decreases in number of participation and achievement (those who got 75% and above. The result of PGDT Candidate primary school teachers those who took Amharic language licensure test takers increases from 2017 to 2018, but their decreases in 2019. Their achievement increases from 2017 to 2018, but there were no teachers that scored 75% and above in 2018. The finding of PGDT Candidate primary school teachers those who took English language licensure test indicated that, like wise Afan oromo language test takers, their results and participation decreases from year to year. In general, as discussed above among the subjects, teachers scored better results in HPE (76.8%), Civic (58.2%) and natural science (26.4%), respectively. There was no candidate who took and got 75% and above in physics and biology test in 2017 and social sciences test takers in 2019. As shown above, the result was decreasing from year to year specifically for English language.

With regards to PGDT candidate primary school teachers those who took Afan Oromo language licensure test in sex in the consecutive three years, about 43.8% of female candidates had achieved a score of greater than 70%. However, there was a gradual decrease in the number of candidates who got 75% and above in the three years' mark scores. Male candidates were more likely than female candidates to pass their licensing test in the most of the subjects although on the HPE exam, female candidates scored higher than male candidates did in 2018 than 2017. The aim was improving the teachers' pedagogy and teaching skills (in addition to subject area and content knowledge) and to improve the teaching learning process for the improvement of students learning performance. However, the overall status indicated that there would be efforts and task to facilitate the PGDT program at HEIs. In line to this, a studies in Philippines on licensure examination performance and academic achievement of teacher education graduates (2020) between the graduates' GWA (general weight average) and licensure examination for teachers' performance shows, a significant relationship exists as a whole and for both BSEd (bachelor of secondary education) and BEEd (Bachelor of primary education) programs. For the BSEd program, strong correlations were revealed on graduates' GWA and LET performance along General Education ( $r = 0.534$ ,  $p$ . Furthermore, a significantly positive relationship between PBE results and licensure examination performance was determined for both BSEd and BEEd programs and when taken as a whole. For the BSEd program, weak correlations were shown between the graduates' performance in PBE (program board of education) and LET along General Education ( $r = 0.093$ ,  $p < .05$ ). These findings connote that review programs conducted along specialization were more effective compared to those conducted along General Education and Professional Education (Amanonce, et al 2020).

The findings of senior primary school teachers who took licensure by subjects in the consecutive three years (2017 -2019) shows that, among 35,114 primary schools' teachers in all regions and two city administrations, 9,941 (28%) scored above 62.5% in written licensure test. Generally, the three years passing rate or the teachers who got the requirement was very low against the minimum requirements set by MoE (62.5%). In line to this,



recent trends in mean scores and characteristics of test-takers on Praxis II Licensure test (2010), analysis in America confirms that, there was a small, but significant decline in scores between 2000 and 2005 for the seven states (Drew, et al 2020). Additionally, there were statistically significant race, gender, and experience differences. The pattern across years is stable across simple and more comprehensive models. As can be seen in the simple model, the proportion of variance accounted for by testing year is very small. Statistical significance is achieved due to the very large sample of candidates.

The results of the mean score by subjects shows that, the Afan – Oromo subject was far better than Amharic and English subjects. With regard to ranges calculated from the scores a range as high as for English and a bit lesser ranges for Amharic and Afan Oromo and respectively. As discussed above, the mean scores for the combined groups shows that, the performance for physics test takers were below this minimum. requirement So that, the standard deviations were high and the differences between the highest scorers and the lowest scorers for all the four subjects. Thus, for all the four group of test taker, it can be concluded that the performance in general was not up to the expected level. Moreover, there was significant difference among the test takers' performance. With regards to social science subjects. The findings indicated that, the range was highest for geography and HPE test takers. The range for history and civics test takers was also relatively high respectively. Taking mean as an indication, geography and HPE test takers were considered as low achievers. The standard deviation was lowest for civics test takers (8.03). Thus, it concluded that, there was high dispersion of scores among test takers of HPE (13.07) followed by geography (12.86). However, there was high variation in the performance in all the social science test takers.

As study conducted in Philippine on Licensure examination performance of the teacher reveals, the BEED (Bachelor of elementary education) teachers displayed an alarming result since they performed poorly both in General Education and Professional Education. In general, they have a “poor” LET performance as shown in the overall rating mean of 71.75. As a whole, the teacher education graduates have “poor” LET performance. The findings connote that, collectively, the graduates of the TEI involved in this study did not even meet the minimum passing rate of 75%. The “poor” performance of the graduates in the LET may signify a decline in the quality of instruction provided to students

The findings for correlations between subject content and pedagogy knowledge, for natural science subjects, namely chemistry and biology indicated that, the test takers performed on the average better in subject content than pedagogy, while in mathematics and physics the result was vice versa. The social science subjects' test takers, performed on the average better in subject content in three subjects, whereas geography test takers performed better in pedagogy section respectively. On the average in English and Amharic language tests, the performance was better in subject content than pedagogy content, while it was nearly equal for Afan Oromo.

The correlation coefficient between subject content and pedagogy for natural science subjects were generally positive that most test takers scored better in subject content also scored better in pedagogy section of the tests. However, the correlation coefficients were not so strong to conclude that, those who scored better in the subject content section were also scored better in the pedagogy section of the tests. The correlation coefficient between subject content and pedagogic content for social science was moderately strong. Keeping other conditions constant, it concluded that, the social science test takers focus equally on pedagogic contents as they do in subject content. The correlation coefficients of the pedagogy content and subject content scores for language subjects were positively related, while for English and Amharic were strongly related. Although the mean scores for pedagogy and content were high for Afan Oromo the correlation between them were weak.

Concerning the findings of senior primary school teachers who registered for licensure test, in 2017 only SNNPR, Tigray, Somali and Dire Dawa regions candidate sat for exam with the highest candidate from SNNPR and lowest candidate from Somali regional state respectively. However, in 2018 all regions and city administration sent the test takers though their numbers differ significantly with highest number from Oromia regional state and lower number from Dire Dawa city administration. In 2019, with the exception of SNNPR and Afar regions, test takers were registered from all regions with ever highest number of female candidate from Oromia region which exceeds total number of candidates registered in 2017. Dire Dawa was the only exam center from which candidates were sent for licensure test in all stated exam years. The findings of senior primary school teachers who got > 62.5% by region shows that, in 2017 in all regions only 28%, in 2018 22% and 28% in 2019 scored minimum requirement (62.5%) in written licensing test with the better scorers by Addis Ababa 54%, in three consecutive years. The status of the results indicated fluctuation and even very low against the minimum requirement set by MoE.

In line to this, the study conducted on Praxis II test on those who pass and fail in America reveals that, looking at just those who pass, there is either no trend or an increase for the majority of tests. However, when all candidates are included, the majority of tests show a decline. This is due to the fact that, for many tests, the proportion of individuals who fail has increased over time. Because there is no prerequisite for taking a *Praxis* test and also because increasing standards in many states are increasing failure rates, the critical policy question should focus on the characteristics of those who pass the tests (Drew, et al 2020).

The findings of senior primary school teachers who got > 62.5 % in the consecutive three years (2017, 2018, 2019) reveals that, among 181, 804 males and 125, 960 females with the total of 307, 764 senior primary school teachers, those who got 62.5% (got the minimum requirement) were male 48, 743 and female 26, 029 with the total of 74, 772 (24%). Out of these, those who set for portfolio practical assessment were male 14, 325 and female 2772 with the total of 17, 099. Therefore, 6% from the teachers who involved in the licensure test and 25% from teachers who got minimum requirement were set for portfolio practical assessment and licensed. The Ethiopian government planned to certify all teachers and school leaders by 2022, by the overall status of teachers' professional competence licensure testing and teachers' professional competence is 27%, which is against the intended plan. In line to this, the study conducted in Philippine on the LET performance since 2009 revealed that, the mean passing rate of teachers since 2009 is only 31% (Mateo, 2017). PBED also found out that at least half of teachers perform below the mean national passing rate. Similarly, Baylan (2018), who studied the trend of LET performance from 2008 to 2017 of leading TEIs across different regions in the Philippines revealed that, a considerable number of TEIs were struggling to attain a 60% national passing standard (Baylan, 2018). Nool and Ladia (2017), also disclosed poor LET performance of 110 TEIs in Central Luzon from 2009 to 2016. With the apparent gap in the quality of education among TEIs, research studies on the factors affecting graduates' LET performance abound (Ladia, et al 2017).

The findings of total senior primary school teachers sat for test and has got > 62.5% in content and pedagogy by regions indicated that, the highest number was from Oromia region and the lowest number was from SNNRP and Somali region respectively. Concerning the passing rate, the better score was registered by Addis Ababa (33.3%) while the least was from SNNRP (0.35%). The number of senior primary school teachers those score > 62.5% in 2019, in content was much higher in 2019 than other stated exam years. Among senior primary school teachers who passed licensure test and got > 62.5% in pedagogy in the past three years, 50.3% was recorded in 2018, and the least was recorded in 2019 which was about 12.7%. Oromia and Amhara were the leading regions with overall highest number of candidate scoring > 62.5% in Pedagogy. The least number of candidates was from Gambella region. In this case Oromia regional state had better performance in content and pedagogy than other regions and city administration.

The findings of senior primary school teachers relative scores by content and pedagogy shows that, more than half of the candidate has got less than 50 % and only 13% had scored greater than 70 % as well as 63% found between 50 to 70 in their test. Again the results of Senior Primary School teacher's relative scores by subjects indicated that, there was variation in scores between years which was the highest score registered by civics in 2017, Afan Oromo in 2018 and 2019. The record of least mark was attained by physics and HPE in 2017 and 2019 correspondingly. Afan oromo was also the subject with best average score as compared with the remaining subjects in three years.

The findings of senior primary school teachers mean score by bands reveals that, very few number (3.4%) score greater than 80%, and 62% of them scored greater than the minimum score required which was 50%. The least subject was physics with only 1.7%. The disaggregated score for sex shows that there was poor performance in female teachers relative to the males. In this respect, 56.2% of the female scored less than 50 % while this figure was only 37.1% for males. This shows that the gap between males and females still existing and which needs special attention. Concerning the language test takers, 55.6% achieved between 60% to 100% range and 20% scored below 50 %. They did not necessarily achieve the requirement for achieving the minimum knowledge. With regard to each subject, in English subject the least mark had scored. In terms of classified bands compared to other languages, in English 29.4% were within a range of 0 to 50%. In the case of Afan Oromo, 97.9% fall within the top ranges of 60% -100%. While 67.6% Amharic subject test takers achieve an average percentage score in the range 60% to 80. With regard to social science subjects the results reveal that, majority of test takers recorded outstanding result with only 4.1% failing (scored below 50%). The finding from gender perspective was in favor of males than females in males in all subjects.

In Ethiopia six consecutive ENLA were administered between 2000 and 2021 to measure students' achievements and identify factors related to their achievement. In the assessment, both government and private schools found in the nine regions and the two-city administration had been involved. In all ENLA assessment that conducted between 2000 to 2021, the samples that involved for grade 4 were 107, 982 students, 2,856 schools, 9264 teachers and 2,718 principals. The dependent variables were students' achievement and students' attitude, where as independent variables were home background, students' personal characteristics, school structure and curriculum, instructional input, teachers' variables, school management and parent as well as community views. Concerning ENLA achievement standards, it was divided in to three stages: proficiency stage, which means one standard deviation above the mean (the top 16%), basic stage, within one standard deviation above the mean (above 34%) and below basic stage, below the mean score (above 50%), in all subjects

Concerning percent of grade 4 students who scored 50% and above in four subjects (English, mather tongue, environmental science and mathematics), students fall under 50 in all subjects with an average of 39.1%. With regards of performances of grade 4 students at different proficiency levels, a high percentage of students observed below basic levels. In this case, the score of English language was the lowest of all the other subjects. This shows that, students are facing more difficulty in learning English. Thus, it needs special attention, since English is the medium of instruction in most of second cycle primary schools and in all secondary schools in Ethiopia after completion first cycle primary education.

The findings of grades 4 students' achievement by school location reveals that, urban students achieved higher than the rural ones in all subjects at both grade levels. There was also statistically mean differences at  $P < 0.05$ . This finding showed that more effort is required to improve the achievement of rural school students and address the issue of equity.

The results of composite achievement in mean score by region in one-way ANOVA computed revealed that, Addis Ababa was the highest achiever and Benishangul was the least achiever. The finding also showed that all scores were below the minimum requirement set by MoE (50%) except for Addis Ababa. On the other hand, next to Benishangul, Gambella was the low achiever in four subjects, while Afar was performed low in English. Similarly, the regions were grouped in to nine homogeneous subsets based on the composite mean scores. The result showed that Addis Ababa, Amhara, Tigray and Harari were categorized as the high achievers, while Benishangul, Gambella and Afar were categorized as the low achievers.

The findings of the comparisons of percentage of students who scored 50 % and above in composite score with ESDP IV target indicated that, very few students (21.9 %) in grade 4 got requirement. Specifically, the achievements in all English content domains were low. Therefore, from this result one can understand that grade 4 students need more support, particularly in reading and grammar content areas.

The result of the achievement scores at five key marker points of benchmarks: 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup> and 90<sup>th</sup> percentiles indicated that, performance at the 10<sup>th</sup> percentile may be taken as indicative of the standard among low achievers, while performance at the 90<sup>th</sup> percentile can be taken as indicative of high achievers. Based on this, students at the 90<sup>th</sup> percentile only achieved scores of 60% at the composite average score. This means only 10% of the grade 4 students had achieve a score of 60% and above. On the other hand, students at 10<sup>th</sup> percentile by the composite mean scored achieved only 22% and this means that 10% of the students scored below chance level in all subjects. Differences between the 10<sup>th</sup> and 90<sup>th</sup> percentiles, 38% in the composite score was an indication of how wide spread the variation between high achiever and low-achiever students.

The EGRA tool and subtask selection were based on international experiences on the types of skills required for essential reading acquisition. There are four timed subtasks (letter name recognition, familiar words reading, invented words reading, and oral reading fluency/passage reading) and three untimed subtasks (phonemic awareness, reading comprehension, and listening comprehension) in Ethiopia's EGRA tool (EAES,2021). The percentages of students who reached each proficiency level analyzed for each language and grade level based on document analysis. The analysis was based on the benchmarks that classified as Level 1: Full proficiency, Level 2: Increasing proficiency, Level 3: Limited proficiency and Level 4: Non – readers.

The findings on reading performance on EGRA timed subtasks across grade levels was found better in letter name recognition, where grade two and three students could read on average 23.6 and 32.9 letters per minute, respectively. The least total mean scores for reading words per minute was found in reading invented words. In this case, the average mean scores for grades 2 and 3 were 5.9 words per minute and 9.9 words per minute,



respectively. In both grade levels, students from Amharic performed better in familiar words reading, as well as invented words reading in grade 3. Similarly, grade 2 students from Af Somali performed better in letter name recognition and invented word reading, as well as oral reading fluency in both grades. In Afan Oromo, grade 3 students performed better in letter name recognition. However, those who learned in Nuer language performed lower in letter name recognition, while students who learned in Afar Af performed lower in the remaining timed subtasks.

The findings concerning the students score in untimed subtasks, the students' scored better in phonemic awareness and listening comprehension than in reading comprehension in untimed subtasks. Accordingly, students were more likely to recognize the sounds of the letters in a word and comprehend what they listen rather than what they read in the passage.

The results in grade-level comparisons reveals that, the mean differences between the two grade levels in all EGRA subtasks were statistically significant which in favor of grade 3 in each language. The findings were also disaggregated across gender, overall male students performed relatively better than females in each subtask of EGRA. However, in some subtasks, female students from Af Somali and Berta performed better than males. Similarly, the disparity between urban and rural, urban students performed better than rural students in all subtasks at national level. Nevertheless, rural students from Af Somali, Nuer, and Sidaamu Afo languages performed better than urban students in most subtasks.

The findings of student performances by reading proficiency level revealed that, at the national level, the percentage of students who attained the level 1 was about 5% and 6% for grades 2 and 3 respectively. Similarly, the percentage of students who reached reading with increasing fluency and comprehension was nearly 8% and 17% for grades 2 and 3, respectively. Overall, only few students' (13%) in grade 2 and 23% in grade 3 achieved full or nearly full" and "increasing" reading proficiency known as functional reading level.

The findings in reading and listening comprehension shows that, in reading comprehension, there is a higher percentage of zero readers as compared to listening comprehension in all language groups for both grade levels. Accordingly, Afar Af and Berta had the highest percentage of zero readers in all untimed subtasks in grade 2 and also it had the highest percentage of zero readers in grade 3 for phonemic awareness and listening comprehension subtasks. On the contrary, in phonemic awareness and listening comprehension, the lowest percentages of zero readers are grade 2 students from Sidaamu Afoo. Likewise, in reading comprehension, the lowest percentages of zero readers are from Amharic language. In grade 3, the lowest percentages of zero readers are from Hadiyyissa in phonemic awareness and listening comprehension, while those are from Amharic in reading comprehension.

The findings of four consecutive EGRA administrations indicated that, there has been a small variance in students' reading performances. As a result, fluency and comprehension levels remained relatively stable over these time periods, as the deviations were negligible and have little practical effect. In this regard, in the three EGRA administration, overall 30.8% of students met the two upper reading benchmark levels (functional reading level), however, in 2021, the percentage of students dropped to 23%. On the contrary, the percentage of zero readers increased by about 10% from 39% in 2014, 2016 and 2018 to 49.4% in 2021. In general, although there were differences among the languages, the overall trend revealed that students' performances were declining over time which needs great attention.

## 6. SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 6.1. Summary

A teachers' professional competence license is a teaching qualification that an individual need to legally work as a teacher in particular area. The teachers' professional competence licensure testing is one factor that influences the quality of teachers and teaching. Teachers professional competence can be defined as the skills, knowledge, attitudes, and motivational variables that form the basis for mastery of specific situations. Students' academic performance is to be understood as the result of a combination of psychological, social, and economic factors, which further lead to the proper multifaceted growth of students. According to Ethiopian Education Road Map (2018), though the licensing test for on the job teachers have been carried out since 2015, but it has not been effective. The current status of the teachers' professional licensing test may be an indication of the difficulties and problems the program facing. The impact of teachers' competence on students' academic performance also reflected on different national assessment indicators like NLA, EGRA and EGMA.

Some of the factors that affect teachers' professional competence are teachers' performance, low income, misconduct of students, work pressure, job placement in distant areas, negative attitude of colleagues, lack of encouragement from management, household responsibilities, health (physical, mental, emotional) stress and lack of facilities in school. The teachers' competence, family factors like economic condition, health of parents, relationship of parents, relationship with siblings etc. have been of great importance in the performance of students and their academic achievement. students' joining in co-curricular activities and sports, etc. and their use of time outside school has great positive or negative effect on academic performance.

Concerning PGDT candidate primary school teachers those who took licensure test in various subjects and got 70% and above, more applicants took the test in 2018 and that the subjects with the top three highest scores were HPE 5108 (76.8%), Civic 3483 (58.2%), and natural science 2406 (26.4%), respectively. In addition, 1407 (20%) teachers passed the math licensing exam, as opposed to 57 (2.5%), and 15 (9%) in 2017 and 2019 respectively. With regard to ranges calculated from the scores for the 3 subjects, the higher range was recorded for English (62.5) and a bit lesser ranges for Amharic and Afan Oromo 52 and 44 respectively. For all the four subjects (biology, chemistry, physics and mathes) of test taker, it was concluded that the performance in general was not up to the expected level. Moreover, there was significant difference among the test takers' performance. There was high dispersion of scores among social sciences test takers. However, there was high variation in the performance in all the social science test takers.

Concerning, senior primary school teachers who took licensure and got > 62.5% in content and pedagogy by subjects, there were variation among the subjects in 2017 and no candidates enrolled in 2019 for Aesthetic. English subjects was the one in which lowest candidate registered from 2017 to 2019 except Mathematics in 2017 fewer than English candidate.

Concerning the number of senior primary school teachers registered for licensure test by region in the three years (2017 - 2019, those who got 62.5% were 25% in all regions. The number of senior primary school teachers who got minimum requirement and reach for portfolio practical assessment increases from year to 12, 919 in 2018, 17, 225 in 2019 and 17, 7320 in 2021 respectively. Among 864 senior primary school teachers who passed licensure and got > 62.5% in content in 2018, 33.3 % (288) was candidates from Addis Ababa while the least was from SNNPR 0.35% (3). The number of senior primary school teachers those score > 62.5% in 2019 was almost higher than 2018 and 2021 respectively. Similarly, the number of candidate who got > 62.5 % in content was much higher in 2019 than other stated exam years.

Regarding senior primary school teacher's relative scores by subjects, in 2017, the highest score was registered by civic 93.3, while A/oromo controlled the top score of 2018 and 2019 respectively. The record of least mark was attained by physics and HPE in 2017 and 2019 correspondingly. Afan oromo was also the subject with best average score as compared with the remaining subjects in three years.

Concerning natural science and mathematics senior examinees mean score by bands, from all the test takers (4397) who sat for the licensing test only 62.2 % of them scored greater than the minimum score required which was 50%. The situation was worse in the case of physics (than biology, chemistry and mathes) where only 510 (44.7%) of the test takers scored greater than or equal to 50%. Of the total language teacher test takers, 861 (55.6%) achieve average percentage scores within the 60% to 100% range. Concerning social science and HPE senior teachers mean scores by bands, all test takers showed outstanding result with only 4.1% failing (scored below 50%).

With regards of performances of grade 4 students at different proficiency levels, a high percentage of students observed below basic levels. The grade 4 students' achievement by school location indicated that, urban students achieved higher than the rural ones. Concerning composite achievement in mean percent score by region, Addis Ababa (61.15%) was the highest achiever and Benishangul (26.30%) was the least achiever.

Comparisons of percentage of students who scored 50 % and above in composite score with ESDP IV target indicated that, only 21.9 % of the students in grade 4 attained the level. The achievement scores (%) at five key marker points of benchmarks reveal that, students at the 90th percentile only achieved scores of 60% at the composite average score.

An overall reading performance in four consecutive EGRA assessment (2014- 2021) subtasks across grade levels was found better in letter name recognition, where grade two and three students could read on average The least total mean scores for reading words per minute was found in reading invented words. Students scored better in phonemic awareness and listening comprehension than in reading comprehension in untimed subtasks. In grade-level comparisons, the mean differences between the two grade levels in all EGRA subtasks were statistically and



practically significant which in favor of grade 3 in each language than grade two. Concerning student performances by reading proficiency levels at the national level, overall, only about 13% of students in grade 2 and 23% in grade 3 achieved the two highest levels, referring to "full or nearly full" and "increasing" reading proficiency known as functional reading level. With regards to percentage of students at each benchmark levels by language groups at the national level, the percentage of zero readers in languages ranged from 63% in Afan Oromo to 78% in Hadiyyissa languages. At the national level, the percentage of students at the functional reading level or level 1 and level 2 was only about 13%.

Concerning grade 3 students in each language group at each benchmark level, only 13% of grade 3 students in Ethiopia are attaining reading proficiency at the "increasing" level. When comparing grades within each EGRA administration years, the percentages of students reaching the functional reading levels was higher for grade 3 than grade 2, even though the cut score of grade 3 was also higher due to the expectation of differences between the two grade levels. Concerning oral reading fluency performances of each grade 2 and 3 students', they performed lower in EGRA 2021 than three consecutive EGRA assessment.

## 6.2. Conclusions

A teachers' professional competence license is a teaching credential that professional personnel need to legally work as a teacher in particular area. The teachers' professional competence licensure testing is one factor that influences the quality of teachers and teaching. Teachers professional competence can be defined as the skills, knowledge, attitudes, and motivational variables that form the basis for mastery of specific situations. Students' academic performance is to be understood as the result of a combination of psychological, social, and economic factors, which further lead to the proper multifaceted growth of students. This baseline survey of dissertation was aimed to assess the status of teachers' professional competence licensure testing, teacher's professional competence and students' academic performance in Ethiopian primary schools.

The 2018 teachers' result was better 2017, with the average of 56.5%; and in 2018, the average was 59.6% respectively. In Afan Oromo, Civics: and Biology subjects good result were recorded. However, in physics, mathematics, HPE and English the score was low. By region low score happened in Somali (19%) and Gambella (21%) in 2017. Among the regions and city administration, better score recorded in Addis Abeba, 61%; Dire Dawa 61%; Harare 56%; and Amhara 55%. Other regions' score was less than 50%. In 2018, again teachers result was low in Somali (12%) and Gambella (13%) regions. Better achievers were Addis Ababa 63%, Amhara 60% and Dire Dawa 51%. The rest regions score was less than 50%. Results of teachers from emerging regions were relatively low.

The baseline surveys based on the four BANDS/LEVELS for all subjects' reveal that, only 4% of the test takers achieved greater than 80% and 31% of the them obtained a score of less than 50%. In content and pedagogy most of the teachers achieved less than 50% in many of the content and pedagogy sections and it was found that great variations were observed across the subjects and between each standard elements. Generally, the teachers score was highly poor in pedagogical knowledge than content knowledge standards. The baseline surveys revealed that, majority of the teachers scored greater than 50% on content knowledge and very low test takers scored greater than 50% on pedagogical knowledge. From this it was understood that larger number of the test takers' score was highly poor in pedagogical knowledge than content knowledge. Exceptionally no gap was observed for the very majority of Afan Oromo test takers.

Despite the fact that it is not always possible to claim the conclusion of relation of this type, the correlation coefficient between subject matter section and pedagogy section of the tests were generally positive. This indicates that most test takers that scored better in subject content also scored better in pedagogy section of the tests, with some few exceptions in Afan Oromo and Physics subjects. For all subjects, the mean scores for senior teacher were significantly greater than the mean scores of PGDT test takers and it also understood that less variation in scores was observed with in senior teachers than PGDT test takers.

With regard to students' academic performance, the purpose of the document analysis for baseline surveys was to indicate the status of students' academic performance in Ethiopian primary schools in relation to the status of teachers' professional competence licensure testing and to help identify factors that affect students' achievements and forward possible recommendations. The baseline surveys, showed that the composite mean percent score of grades 4 was 43.18% respectively. In composite, the percentage of students who scored 50% and above in each subject were found to be 21.19 % for grade 4. As stated in the education policy, students are expected to score

50% and above to promote from one grade level to the next grade level. However, the results achieved was far below the policy target. The result obtained revealed that grade 4 students had facing relatively more difficulties in English (Grammar and Reading), content domains. Accordingly, few students achieved advanced level for each subject within the range of 1.32% for English. The achievements of males in each subject and in composite mean scores was higher than that of females. And the mean differences for all subjects and composite scores were statistically significant at  $p < 0.001$ . In Grade 4, urban school students were able to achieve higher than the rural school students in all subjects and the composite score.

According to the results of the EGRA 2021, majority of students were unable to read enough letters or words per minute, which was consistent with the past three EGRA findings (2014, 2016, 2018). In both grades 2 and 3, the total mean scores of students in reading comprehension were the lowest across all languages. On the contrary, students in both grades performed better in all language when it comes to listening comprehension. The students also did better in phonemic awareness than the other remaining subtasks, with the exception of students from Afar Af, Berta, and Nuer languages. When the findings were disaggregated across gender, boys performed relatively better than girls across most languages in each subtask of EGRA. The urban students performed better than rural students in most subtasks across languages. With regard to reading proficiency, a large number of students (68%) at national level were not able to read and categorized as zero readers in oral reading fluency subtask. The percentages of students who reached the required highest benchmark or level 1 at the national level were found about 5% and 6% for grades 2 and 3, respectively. Similarly, the percentages of students attaining level 2 benchmark were 8% and 17% for grades 2 and 3, respectively. Overall, the percentage of students who attained the two highest levels referring to “full or almost full” and “increasing” reading proficiency were only 13% for grade 2 and 23% for grade 3. In general, the result of EGRA 2021 was the least for each language as compared to all previously conducted EGRA results. According to this information, despite the fact that many interventions have been in place since the first EGRA findings were released, the majority of students are still struggling to read at a grade-appropriate level.

### 6.3. Recommendations

The primary purpose of this baseline surveys was to allocate the status of teachers’ professional competence licensure testing and teachers’ professional competence and students’ academic performance as well as to propose some recommendations for the improvement of more specific teachers’ professional competence licensing, teachers’ professional competence and development strategies.

Based on the baseline surveys, the following specific recommendations are given: It is helpful to develop a professional development program for on the job teachers and curriculum modalities for candidate teachers in TEIs that aligned with competency standards. So it is possible that short trainings could be designed and delivered in work place or in summer in-service programs at nearby TEIs in an intensive manner. Disparities among content knowledge and pedagogy knowledge which is revealed by score differences among the test takers can be the consequence of the differences in training modalities or curriculum pursued by each TEIs or CTEs. Hence it is essential to scrutinize and make some rearrangement in courses offering and modalities utilized in various training institutes. The overall observed low achievements and existence of wide variations among male and female teachers appeal teachers’ preparation, competence and support to functional professional competency development. The distinctions made between ‘subject matter knowledge’ and ‘pedagogical content knowledge’ and the profiles of achievement in each of the subjects and regions offer new insights into possibilities for curriculum renewal and candidates training in TEIs and the need for further investigation in the area.

Based upon the base line surveys for students’ academic performance status by ENLA, the following recommendations can contribute to improve students' learning and as a result the quality of education. The consecutive six times national learning assessment results showed that students' achievements at the national level was far below the minimum expectation targeted in the Ethiopian education policy (50%). In the case of grade 4, among the four subjects (mather tongue, mathematics, english and environmental science), the result of English language was the lowest comparing to the other subjects. This shows that students had been facing difficulty in learning English, especially in Reading and Grammar content domains. Therefore, there should be training modalities for English language professional development. In general, government and other stakeholders should provide and sustained interventions and harmonized efforts are required to improve students learning. The baseline surveys outlined that there was still a difference in students’ performance across gender, location, and regions. MoE and REBs should pay attention to how these gap in achievement were observed between male and

female, urban and rural, and among regions. And, should design and implement an appropriate strategy that can close the gaps observed in different subgroups. The MoE, REBs, teacher training colleges, and other partners should work closely to provide quality training for teachers. In grade 4, students who attended preschools scored better than those who did not attend. Preschools make students well prepared for formal schooling and ease learning in the next levels. Therefore, MoE and REBs should work strongly in increasing and improving the access of preschool. To address the gaps observed in students' low learning outcomes, practitioners and researchers are encouraged to conduct further researches and identify the root causes of the problems and address the issues broadly and provide ways of intervention as to the problem existed.

Based on baseline surveys, the overall results of EGRA indicate that, the performance of early grade students in reading was very low and declining from year to year. So, to improve the performance of students' reading skills, all the concerned governmental bodies, non-governmental organizations and relevant stakeholders are required to make coordinated efforts so that can be get out of the difficulties of this stalemate. Accordingly, the following specific recommendations are proposed. Minimizing the disparity in reading performance across subgroups: there was a mean difference in reading performances across various subgroups such as gender, location, languages and program types. Therefore, in order to minimizing the gaps, special attentions should be given for those disadvantaged and low performing subgroups. Regarding the performance of students by location, urban students' performed better than rural. Similarly, students from the emerging regions (Afar Af, Berta and Nuer) had performed lower than the other language groups. Hence, policy-makers should focus their attention on the low performances of these groups and design special support mechanism for these disadvantaged groups. In general, the concerned bodies should track differences in regularly and take preventive measures which can minimize the existing gaps among these various subgroups. Professionally qualified and experienced teachers and school personnel should be recruited, trained and assigned, as they are the key actors to provide quality education. There is a need to devise mechanisms for professional development of teachers. Teachers should be encouraged to use various teaching strategies. The school facilities and instructional materials should be availed at all schools. The impact and effectiveness of EGRA interventions should be regularly assessed and evaluated in order to track the key areas for future planning and design.

#### **6.4. Limitations**

A limitation to executing my study to the exact parameters that I had intended was due to insufficient, lack of continuous organized data from MoE, REBs and schools as well as budget and time. Fear and unwillingness of experts and leaders to provide appropriate and accurate data. Both senior and newly deployed primary school teachers' test result were not available at MoE. In 2020 no test administered due to COVID 19 pandemic. Thus no data for this year, that resulted the fluctuation of data for the baseline surveys. Again from 2019/20 to 2021/22, the internal conflict in the northern part of Ethiopian and drought in some eastern and southern part are another problem that led some region excluded from the test and resulted in reduction of teachers' participation in national teachers' professional licensure test which intern paved the way for the fluctuation of teachers' test core data. Data analysis was only three to five years' document analysis and synthesis that done to identify the status of teachers' professional competence licensure testing from MoE data base. Another limitation was that, concluding the result for the whole nation conducted in three regional states is exaggerating. Because, its arguments are not supported by any experiment that can address internationally. Concerning review of related literature, only few articles, other research and studies in the article are indicated due to scarcity of related sources. Again, since the articles need to address the full-fledge facts with in little data it lacks credibility, again it lacks transferability because its data sets and description are limited. Nonetheless, these all limitations were given solution by continuous discussion with participants, by sticking on available data and increasing participant from involved regions.

#### **6.5. Suggestion for Future research**

This baseline surveys of the dissertation acknowledges a number of limitations in the empirical research, and it also raises several new questions, making it important to propose directions for future research. Two major directions for future research are suggested. The first concerns whether the problem is from teachers' professional competence licensure test or from teachers' professional competence. So that there is a need for profound investigation in the area. Because, the base line surveys indicated there are serious problem in the teachers' professional competence licensure testing and teachers' professional competence and students' academic



performance that might be affected by the teachers' professional competence. Therefore, the researchers planned to conduct quantitative research on the contribution of teachers' professional competence to teachers' professional competence and students' academic performance in Ethiopian primary schools English teachers based on the baseline findings. It would be interesting to know if there is a relationship between teachers' professional competence licensure test, teachers' professional competence and students' academic performance. Conducting research that involves qualitative approaches which include interviews and or FGD would add to the data that was obtained from teachers' experts and leaders. Second, further exploration of the various factors like teachers' background characteristic, preparation, collage GPA and school performance based assessment that are involved in academic performance needs to be done to address these factors that influence academic performance. Although differences in gender, location, region, subjects and content are shown, the exact reasons for those differences were unknown. Additional data collection to test these hypotheses would be beneficial and informative.

## ACKNOWLEDGEMENT

Many people have contributed in different ways throughout the process of carrying out this baseline surveys dissertation research, and I am indebted to all of them. My first thanks go to Professor Birhanu Nugussie, Jimma University and the major advisor of this dissertation, who has extended the utmost professional support, unreserved comments, and encouragement. I am grateful to my co-advisor Dr. Zenebe Negewo, Jimma University, for his follow up and constructive comments since the inception stages of this dissertation. I am also very grateful to Dr. Fisaha Mikire and Dr. Adugna Bersisa for their special support and comments as internal and external examiners.

I am very much indebted to the Ministry of Education Inspection Directorate, Oromia Regional State Education Bureau, Somali Regional State Education Bureau and Dire Dawa Education Bureau leaders and experts. I extend my deepest thanks to Mr. Gebeyehu Sileshi, experts from MoE, and Tesfaye Halfom and Zinash Zewdu, from Dire Dawa Education Bureau for their understanding and tolerance in providing the necessary documents. I would like to say thank you to my colleague Tekalign Geleta, for all of his cooperation and support in various ways.

The contribution of Regional, Zonal and Wereda Education Bureau leaders and Experts are highly praiseworthy for collecting the required data. Many thanks also go to the sample schools, school principals, teachers, and students who enthusiastically participated in this baseline surveys dissertation research. Finally, I would like to extend my sincere gratitude to my family, my wife Fetum Mustefa, I thank you from the bottom of my heart for your unwavering love and encouragement. I would also like to acknowledge Mr. Abdurezak Mohammed, my brother for his patience, understanding and support. I extend my deepest gratitude to my mother Halima Mummed who always prays about me and sacrifices a lot.

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