# The Implementation and Challenge of Continuous Assessment in Teaching

# and Learning Mathematics in Some selected General Secondary School of

# Oromia: The case of special zone Oromia surrounding Finfine.

**By**

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This is to certify that this thesis prepared by Eshetu Negussie Asefa, entitled**: The Implementation and Challenge of Continuous Assessment in Teaching and Learning Mathematics in some selected general secondary school of Oromia:** and Submitted in partial fulfillment of the requirements for the degree of Masters of Education compiles with the regulation of the University and meets the accepted standards with respect to originality and quality.

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**The Implementation and Challenge of Continuous Assessment in Teaching and Learning Mathematics in some Selected General Secondary School of Oromia: The case of Special Zone of Oromia surrounding Finfine.**

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## Abstract

This study aimed to find out the current status of the implementation of CA, the attitude of teachers and students toward CA and the challenge facing the implementation of CA. The study involved 6 general secondary schools which were purposely selected from 17 general secondary schools. 551 students, 22 mathematics teachers, and 6 directors were involved in the study. The study used mixed methods design to conduct the research. Data were collected through questionnaire, interview, observation and document analysis. Percentage, one way ANOVA and T-test were statistical method used to analyze and present the data. Finding showed that most teachers use CA during teaching learning mathematics. But there are variations between teachers, schools, Woreda and city administrations. Accordingly, it is hardly possible to say CA is implemented effectively in teaching and learning mathematics in the study area. It can simply be concluded that CA is implemented only moderately. The study concludes that teachers have positive attitude toward CA and they accepted CA is important to improve the achievement of learners. Students have also positive attitude toward continuous assessment but, the awareness of students toward CA is very low. Large instructional content, lack of clear guide lines, lack of access internet and reference books, plasma television interruption, teacher miss class, teachers' lack of training and teachers commitment are the challenge facing the implementation of CA. The researcher recommend that in service training of teacher should be encourage by woreda and zonal education office, the school have to reduce shortage of school facilities to enhance CA effectively by participating students family, community and non government organization, and all teachers have to commit equally in the implementation of CA.

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# List of Acronyms

| | |
|---|---|
| AIR | American Institute of Research |
| CA | Continuous Assessment |
| GEQIP | General Education Quality Improvement Program |
| ICBSE | Indian Central Board of Secondary Education |
| IEQ | Improving Education Quality |
| MBECN | Ministry of Basic Education and Culture of Namibia |
| MOE | Ministry of Education |
| MSCHE | Middle State Commission of Higher Education |
| TGE | Transition Government of Ethiopia |

# Chapter one: Introduction

## 1.1. Back ground of the Study

As everybody knows and believes education is any social activity by which an individual gains knowledge, develop skills, ability, and attitude. It is therefore understood as a basic means of economic, social and cultural changes of a society as a whole. This means it enables individuals and society to acquire the necessary knowledge, skill, and attitude that helps to improve their lives. According to Hopkins and McKeown (2002) people around the world recognize that the current economic development trends are not sustained and that public awareness, education and training are the key to moving society toward sustainability. According to Adegbesan (2010), education has been described as the bedrock of every society and tool for nation building. From this idea, it is not difficult to think that development of nation cannot be believed without education.

Assessment plays a significant role in the educational development of person and of course, a nation. Educational assessment provides the necessary feedback we require in order to maximize the outcomes of educational efforts. It is a means of quality control of determining the level of accountability displayed by stake holders in the industry and also of determining the effectiveness of teaching and learning as well as in finding out student achievement. Greaney and Kellagham (2001) defined assessment as any produce or activity that is designed to collect information about the knowledge, attitude, or skill of the learner or a group of learners. Assessment is therefore a process through which the quality of individuals work or performance is judged. Continuous assessment is method in which the students' performance in term, session, or a course is determined using a series of tests and other instruments administered on the students at various time during the term, session, or course. According to Aggrowal (1999) cited in Mwebaza (2010) continuous assessment is not simply continuous testing. It is beyond giving a test. It involves every decision made by the teacher in a class to improve students' achievement.

Other researcher strength this idea:

> CA is not continuous testing. Giving test every month and accumulating pupils for final grading is an insignificant aspect of the assessment package. CA is a demanding task that requires the use of various assessment tools in order to assure the achievement of curricular objectives by each and every student (Desaleng, 1994 cited in Abera Asefa, 2012, p.17)

According to Ugodulunwa (1996) the term continuous assessment refers to a systematic, comprehensive, cumulative, a guidance oriented technique of evaluation rather than single terminal evaluation of an individual. Continuous assessment is therefore characterized by its systematic nature, comprehensive nature, cumulative nature, and guided oriented approach to pupil evaluation.

Continuous assessment is systematic in the sense that it involves an operational plan that specifies in an advance the type of assessment to make the frequency of an assessment and assessment instrument to be used. Its comprehensive nature refers to the use of variety of instruments for assessing behavior in the cognitive, effective, and psychomotor domains. It is cumulative in the sense that it involves repeated measurements of the learners' performance, the results of which are subsequently used in determining the final performance. The guided oriented nature of continuous assessment implies that it provides important information which help teachers in the guiding of the learners (Ugodulunwa, 1996)

According this scholar the implication of these four characteristics of continuous assessment that are systematic, comprehensive, cumulative, and a guided oriented nature of continuous assessment is that it can only achieve its purpose if the teachers at varies school levels are able to have a uniform operational plan. Continuous assessment is the most crucial in teaching and learning practice in order to form meaningful learning. This means successful implementation of continuous assessment program could lead to

improve standard of teaching- leaning in the school. Every teacher at all level of education particularly at secondary school must operate continuous assessment properly to improve education quality. In particular when we go to mathematics education, assessment is a critical issue in teaching and learning and one that require careful consideration by the teachers and stakeholders. Especially a teacher must engage his/ her students in ongoing assessment of the work to determine the effectiveness of their strategies and the creativeness of their results. Since assessment is an integral to teaching and learning and teachers are dependent on information gathered through assessment for the improvement of their practice, assessment need to be ongoing (continuous). Learning is an ongoing (continuous process) and learners learn in different ways and at different paces assessment needs to be responsive to this. We will only get a good picture of the learner's development if we assess the learning process on an ongoing basis which can be done both informally and formally. Therefore, continuous assessment is the important techniques that help to evaluate the students' performance in mathematics. Hence the teachers must utilize this method of assessment by giving them class work, homework, assignments, different tests, and other assessment techniques. one weakness in teaching mathematics is less use of continuous assessment to promote learning mathematics. It is deeply needed to pay attention to use day to day assessment as a tool to raise the achievement of at all level further (Eszter, Somfi, and Cheung, 1988 as cited in Kinfu Tasachew, 2008)

### 1.2. Statements of the Problem

According to MoE (2010), new curriculum education gives great focus to continuous assessment. That means the teaching and learning process requires continuous follow up. The implementation of continuous assessment has direct relationship with quality education. Because, the academic progress of the students can be measured and evaluated by continuous assessment. Concerning the implementation of continuous assessment there are few studies which identify some of the factors that affect the implementation of continuous assessment. For instance, Tamene Olana (2007) stated that class room conditions, attitude of teachers toward CA, lack of professional skill in line with the new approach, lack of instructional materials, school facilities, seem to hinder the

effectiveness of the implementation of CA. But, a study which was done to investigate the challenge of the implementation of continuous assessment with specific reference to teaching and learning mathematics is almost nonexistent. This was one of the reasons that initiated the researchers to undertake the study and the study required to feel the gap seen in this direction. The following conditions are also the reasons which initiated the researcher to undertake this study on this area and subject specifically.

Firstly, from general education quality improvement program (MoE, 2008, p: 6), school facility is one of the important things that require great consideration by all stakeholders in order to solve the problems seen to improve quality education. But there are standard and situation variety among schools of special zone of Oromia surrounding Finfine. These standard varieties are class size, resource availability, teachers load, instructional materials and the commitment of teachers and other stakeholders.

Secondly, since I am a mathematics teacher I observed from my experience that some of our school teachers have the problems related to professional skills. These professional skills include considering continuous assessment as only continuous testing, poor test construction and failure to apply the law of measurement and evaluation, poor handling scores and poor coverage of instructional content.

Thirdly, there are also attitudinal varieties between students on accepting continuous assessment in teaching and learning mathematics. I believe that some of my school students consider continuous assessment as method which make them busy and increase load for the preparation of the content they learn. This means there is fear to be successful among some of the students when they are assessed by continuous assessment on the subject they learn particularly in teaching and learning mathematics.

Again in the actual situation of my school Chancho Aba Geda general secondary school, some of the teachers are in doubt about the effectiveness of the program. Because, some of them apply the traditional pen and pencil test and they don't apply the new approach as intended and the contribution of continuous assessment to the total promotion mark are very low.

Therefore in this study the researcher wants to investigate the current status of the implementation of continuous assessment in teaching and learning mathematics, the attitude of teachers and students to ward CA, and some of the challenges that affect the implementation of CA in the study area and look for relevant and applicable alternative solution that may help in avoiding the problem.

### 1.3 Objective of the Study

The general objective of this study was:
to investigate the current status of the implementation of continuous assessment in teaching and learning mathematics , the attitude of teachers and students toward continuous assessment and the challenge facing its implementation in general secondary schools of Special zone of Oromia surrounding Finfine.

Furthermore the study addressed the following specific objectives:

1. to investigate the current status of the implementation continuous assessment in teaching and learning mathematics
2. to find out the attitude of mathematics teachers and students toward continuous assessment in teaching and learning mathematics.
3. to investigate the challenge facing the implementation of continuous assessment in teaching and learning mathematics.

### 1.3. Research Questions

Based on the above objectives the study attempted to answer the following research questions:

1. What is the status of the implementation of continuous assessment in teaching and learning mathematics in general secondary school of Special zone of Oromia surrounding Finfine?
2. What are the attitudes of mathematics teachers and students toward continuous assessment in teaching and learning mathematics?
3. What are the challenge facing the implementation of continuous assessment in teaching and learning mathematics.

### 1.4. Significance of the Study

The researcher expect that a study may help teachers to know the benefit of implementing continuous assessment for quality education and the way they can implement continuous assessment and help learners to know how continuous assessment improve their knowledge, develop their skills and attitude throughout teaching and learning. The study may also help other researchers who are interested in carrying out further study on this area.

### 1.5. Scope of the study

The study was conducted in general secondary schools of Special zone of Oromia Surrounding Finfine Oromia regional state. The study included government general secondary schools of the study area. The study considered teachers, directors and students. The study also revolved around the current status of the implementation of continuous assessment, the challenge facing the implementation of continuous assessment in teaching and learning mathematics and the attitude of teachers and students toward continuous assessment.

### 1.6. Limitation of the study

Different limitations hindered the progress of this research, for instance; the difficulty of getting adequate and relevant locally prepared materials on the implementation of continuous assessment in general and teaching and learning mathematics in particular. Due to this fact, this study is not supported with review literature in the context of Ethiopia adequately.

### 1.7. Definition of Terms

**Achievement**– the competence learners have on the test prepared by the teachers or others body on the basis of mathematics syllabus and content of text book.

**Attitude** – a way of feeling or acting toward situation.

**Challenge –** situations or conditions or something that hinder the operation of continuous assessment.

**Continuous assessment**- the system in which the quality of students work is assessed by various pieces of work during a course not by mid examination and final examination.

**General Secondary School-** school that range from grade nine to ten (MOE, 2008).

**Implementation**- putting into effect by means of definite plan or procedure.

**Terminal Assessment**- an assessment that is carried out at the end of a course or major unit thereof.

# Chapter two: Review of Related Literature

## 2.1. Concepts of Educational Assessment

Many scholars wrote about the definition of assessment in different ways. Regarding this Greaney and Kelladhan (2001) state that the term assessment "may be used in education to refer to any procedure or activity that is designed to collect information about the knowledge, attitudes, or skills of a learner or a group of learner". They also stated that "assessment is process of obtaining information that is used to make educational decision about students, to give feedback to the students about his or her progress, strengths and weakness or to judge instructional effectiveness and circular adequacy and to inform policy".

Again according to Brown (2004) assessment is any act of interpreting information about students' performance collected through any of multitude of means or practice. It the procedure through which information about pupils is obtained by any method or procedure that is formally or informally.

Other have strengthen this view:

> Assessment is assented in the never ending cycle of formulating goal of development, which emerge as a result of new warnings. Assessment implies that consideration has been given to certain trails, values, standards and that interpretation of the evidence has been made in the light of particular attention. Assessment is a process of making judgment that is to be used for further planning. It is a process for improving the product, the process even the goal themselves (Agrawal, 1994 cited in Hailu Tefere, 2012, p.14)

Assessment that is integral to the process of learning and teaching can impact achievement significantly, but only if it becomes the focus of more effects to develop

academic programs. In other words, this kind of assessment must become an assented part of the design and enactment of contemporary learning environments (Pellegrino, 1999).

### 2.2. What are the Purposes of Assessment?

Assessment is a process of collecting, synthesizing information to assist teachers, parents and other stockholders in making decision about the progress of learners. It involves gathering and organizing information (evidence of learning), in order to review what learners have achieved. According to Wiggins (1998) the aim of assessment is primarily to educate and improve students' performance, not merely to audit it. This implies that assessment is designed to teach the learners than measuring them by revealing what worth their work look like.

According to Abera Asefa (2012) the purposes of assessments is student learning which implies assessment is the way for education to measure progress, strength, and area of growth. Many teachers assess their students using pre-tests, mid-term and posttests to gauge student learning. They may take place throughout unit or the entire school year. Teacher use assessment to determine what is effective in their teaching practice; what is the working and what needs improvement. A variety of assessment tools may be used in order to determine what types of instructions are most beneficial in meeting the need of students. Communication assessment should serve as a means of communication between education, students, administrators and parents. According to Abera Asefa (2012) Parent and students often took at assessment to WHAT is being learned, HOW progress is measured and the type of instruction being received. Assessment can prove a good measure of once program revealing evidence of the effectiveness of that program, throughout the year. Assessment can offer direction to the program and modification can be made to increase students and instructional success. Assessment show progress when improvement is shown, students feel positive about their learning environment, and documented assessment can offer proof of growth, thus enhancing students' motivation to perform to the best of their ability.

According to Lambert and Lines (2000.p.4) the purposes of assessment are: to provide feedback to teachers and pupils about progress in order to support future learning (the formative role), to provide information about the level of pupil's achievements at points during and at the end of school (the summative role), to provides the means for selecting by qualification (the certification role), and to contribute to the information on which judgment are made concerning the effectiveness or quality of individuals and institutions in the system as a whole (evaluation role).

The key purposes for using assessment are: a) for students' learning –away for educator to measure strengths, and areas of growth b) for improvement of teaching- to determine what is effective in their teaching practices, what is working and what need improvement c) communication- serve as a means of communicating between educators, students, administrators, and parents d) evaluation programs -how well is the program working in relation to goals and expectation for the students? e) Program support f) motivation- students feel positive about their learning environment when improvement is shown (Abera Assefa, 2012)

According to Ginsburg (2009) assessment should not be reserved for examination of achievement after the teachers has completed instruction. Ruther, assessment should be used to gain information than can help the teacher plan effective instruction, particularly for the individual.

According Plessis, Prouty, Schubert, Habib and George (2003) there are many reasons why the teacher uses continuous assessment in the class room. These are the teacher uses continuous assessment to find out what students know and can do, to gain confidence in what we say our students know and can do, to provide all students with opportunities to show what they know, to promote learning for understanding, to improve teaching, to help determine what kind of remedial and enrichment activities to provide, to identify which students need assistance, to let the students know how well they are progressing in their own learning, to let parents know how their children are progressing and to lead to overall evaluation and more.

According to Meng and Doran (1993) as cited by Peixotto(1997) assessment purposes fall into three broad categories. These are:

**Diagnostic assessment**- the purpose of diagnostic assessment is to determine, prior to instruction, the students background experience, skills, attitudes, and misconceptions. This will help the teacher to evaluate each student learning needs before instruction begins.

**Formative Assessment**- formative assessment is often administered during a lesson. They help teacher to ascertain how students are progressing in their learning. Formative assessment includes student demonstrations, written projects, and interviews between teacher and student. Formative assessments are not used for grading purpose but, provide both teacher and student with valuable feedback about the students' progress. Teacher can use this information to make informed decision about their teaching, such as adjusting the rate of instruction, assigning remedial activities and planning alternative experience.

Formative assessment is ongoing assessment that is intended to improve an individual student's performance, student learning outcome at the course or program or overall institutional effectiveness (MSCHE, 2008). Generally, formative is used for checking the learners' readiness, understanding, difficulty, and effectiveness of teaching approach.

**Summative assessment**-summative assessments are most often administered at the conclusion of a lesson, unit, or grading period. Summative assessments are often used for reporting students' achievement levels to districts and states for assigning grades and for determining whether to place students in an advance or remedial class. In general secondary school this type of assessment is collecting information about students learning that is used to make decision about certifying, grading, reporting to parents, and promoting. This is usually done at the end of unit, semester Program.

### 2.3. Definition of Continuous Assessment

According to Olufemi, Kassim, and Olunfunbi (2011) continuous assessment is a systematic collection of marks or grades over a period of time and their aggregation in to

a final grade. There are a lot of terms that can be used to describe continuous assessment. In some country people refers continuous assessment as teacher grading. Sometimes it referred as running records, or curriculum based assessment. In all cases, teachers are given responsibility to find out what students in their class know, understand and are able to do. When this is done is variety of ways over time and used to improve instruction and then it is considered to be CA Joy (2003) as cited in Tamene Olana (2007)

According to Airasian (1991) as cited in Tamene Olana (2007) continuous assessment is an assessment approach which should depict the full range of sources and methods teachers use to gather, interpret and synthesize information about learners; information that is used to help teachers understand their learners, plan and monitor instruction, and establish available classroom culture.

Another definition by Curzon (1990) as is cited in Abera Asefa (2012) "CA is a comprehensive term which refers particularly to enquiring in learners' competence, knowledge, attitude and skill through various student profiles using different assessment method to improve learning. In the same way Desalegn (2004) as cited in Abera Asefa (2012) CA is a mechanism whereby the final grading of learners in the cognitive, affective and psychomotor (Mind-Heart-Hand) domains of learning are given due emphasis." Cognitive domain relates to the capacity thinking or one's mental skills Bloom (1956) as cited in Abera Asefa (2012). The affected domain as krathwohl (1964) cited in Abera Asefa (2012) is all about emotions and feelings, especially in relation to a set values. The psychomotor domain, on the other hand, is concerned with the mastery of physical skills ranging from reflexive movement to exhibiting appropriate body language Marrow (1972) as cited in Abera Asefa (2012) related to the above mentioned.

From the above definition we can easily understand that CA is an assessment approach conducted as ongoing process which uses varieties assessment instruments. In general the approach is holistic; that is the overall grading of learners performance is determined from cognitive, affective and psychomotor domains.

## 2.4. The Benefit of Continuous Assessment

There are many researchers which wrote about the benefit of continuous assessment. For instance Getachew Kassa (2008) stated that continuous assessment is a powerful diagnostic tool that enables pupils to understand the areas in which they are having difficulty and to concentrate their efforts in those areas. It helps both the teachers and the learners to concentrate on the topic which require great concentration and make the learned concept more easy and simple. Continuous assessment has also a great contribution to strength the relation between the learners and the teachers. According to Tamene Olana (2007:pp.3-4) continuous assessment is a proper evaluation procedure which enable pupils to understand the areas in which they are having difficulty and to concentrate their efforts in those areas, allow teachers to monitor the impact of their lesson on pupil understanding, allow teachers to evaluate the effectiveness of their teaching strategies as indicated by the needs of their pupils and help teachers to modify their pedagogical strategies to include the construction of remediation activities for pupils who are not working at the expected grade level and the creation of enrichment activities for pupils who are working at or above the expected grade level.

### 2.4.1. Use of Continuous Assessment for Students

Primarily continuous assessment helps students in variety of ways. We know that students are the primary beneficiary of Continuous assessment. According to Ebhomien,Paul, Oriahi, Christie, Diahi and Smart (2012) continuous assessment involves the use a great varieties of modes of evaluation for the purpose of guiding and improving the learning and performance of students. From this study it is possible to infer that continuous assessment help students to develop her abilities to the fullest.

Buhagir (2007) as cited in Dandis (2013) argued that in order to provide every student with the best learning opportunity traditional way of assessment should be replaced by alternative forms of assessment.

Plessis.et.al (2003) stated that continuous assessment helps learners as a feedback. That is feedback to the learners from the teachers tells the students how to improve, and learners see their own progress. Learners start thinking about the quality of their work.

### 2.4.2. Use of Continuous Assessment for Teachers

Continuous assessment has also a great function for teachers. A teacher's job is to ensure that all learners learn. He /she do this by teaching them in variety of ways. If the learners are learning, the teacher needs continuous assessment to inform him/her about the learning progress.

Stiggns (1998), Osterhof (1999), Popham (1999) as cited in Tamene Olana (2007) pointed out the use of continuous assessment for teachers. These are: To find out what students know and can do, to gain confidence in what we say our students know and can do, to provide all children with opportunities to show what they know, to promote learning for understanding, to improve teaching, to help determine what kind of remediation and enrichment activities to provide and to identify which student need assistance, to let the students know how well they are progressing in their assistance, to let parents know how their children are progressing and to lead to overall evaluation.

According to Plessis.et.al (2003) continuous assessment may tell a teacher which learners are struggling with a topic or skill, what aspects of the topic is difficult for the learners, which learners are grasping the topic and skill well and whether the teaching was effective at helping learners learn.

In general teachers are dependent on information gathered through assessment for improvement of his or her practice. Due to this ongoing or continues assessment is significant mirror for teacher.

## 2.5. Basic Requirement for Continuous Assessment

According to McAlpine (2002) before designing any assessment, you need to insure that what you are planning will fulfill the demands that you wish to make on it. This involves a thorough examination of your reasons for assessing: consideration may include the

information that you want to get out of the task, the uses that you will put that information, how much time and effort you are able to it, what information you wish to convey to students and others.

According to ICDR (2004) cited in Mulukan Ayalew (2006) there exist precondition that need to be met to make an effective and appropriate assessment. Some of these are: Assessment must be a planned activity i.e. it should be planned how it will be made and when it will be made and it should be based on the actual condition, time, place and social factors of the class; pupil's level of knowledge and the nature of instruction. Due to this it is important that the teacher must be equipped with an adequate knowledge and capability about assessment technique. Teachers who have adequate knowledge about assessment can be able to select and apply variety of items and assessment techniques, consider and check the reliability, validity, objectivity and the discriminating power of the assessment techniques. Assessment should be prepared in a clear, readable and precise language and it must be well administered. Again its results must be recorded, documented and reported.

Tamene Olana (2007) also suggested the precondition needed to implement continuous assessment one of the precondition is teachers professional skills. These skills include teachers skill in the planning, construction and utilizing of achievement tests and assessment tools for measuring learning attainment of students, teachers skill in statistical operation or computation applicable in the continuous assessment practice that involve tabular and graphic presentation of data, computation of measures of central tendency, measure of variability and also computation relating to transformation of score into some more meaningful for or standard scores, teachers skill of combining all the score attained by each pupil in class assignment ,homework, test, examination, and any other source used during instruction to obtain an overall score for given period, teachers' skills in the maintenance of detailed record and preparation of students' reports and Teachers require skill in effective planning, designing and utilization of tools or instrument for the assessment of the personality characteristic. They should keep a class watch on the personality development of each student. personality should include (a) character (b)

temperament (c) interest (d)attitude (e)adjustment student performance on measure of personality should contribute to their final assessment.

### 2.6. The Difference between Continuous Assessment and Exam

Continuous assessment and exam are mechanisms which help to evaluate a child learning. This means they are used to assessing learners. But these two terms have different meaning. Continuous assessment is ongoing and is based on observation of what students are doing. Examination is one way of assessing learners but they are a "snap shot of the learner."

Plessis.*et al.* (2003) compares continuous assessment and examination as follow:

**Table 1: comparisons of continuous assessment and examination**

| Continuous assessment | Examination |
|---|---|
| Ongoing in the classroom throughout the year | Usually at the end of a unit, semester, term or a cycle of learning |
| Many different tasks are given to the learners as teaching and learning proceed | One examination or few tests are given per subject |
| Carried out by the teacher | Can be administered by some one of other than the class room teacher |
| The assessment items can be developed by the class room teacher | Often developed by persons other than the class room teacher |
| Marked by the class room teacher | Often marked by the persons other than teachers |
| Teachers use the assessment to improve their teaching strategies | Teachers do not always know learners weakness or strengths the examinations |
| The assessment items are directly connected to the taught curriculum and the syllabus content | The list items may not be directly connected to the taught curriculum and syllabus content |

### 2.7. Formal and Informal Assessments

Formal assessments are procedures for gathering information about the learners that are created with special thoughtfulness and care and should be closely matched to the basic competencies in the syllabus. Formal assessments by their nature can usually be designed to be more valid and reliable than informal assessments and they are usually graded and

recorded. Formal assessments may include a variety of techniques such as short tests, quizzes, oral examinations, performance assessment tasks, written examinations, projects and portfolios (MBECN, 1999).

Informal assessments are procedures for gathering information about learning that you frequently use on the spur of the moment or casually during classroom activities. They are not necessarily planed and usually are not assigned letter grades, but they are meant to provide teachers with information that are critical for them to know at that moment. Informal assessments need not be created with the thoughtfulness and care with which formal assessments are created and occur as a teacher is presenting a lesson. Informal assessments may include a variety of techniques including questioning a learner, observing learner work, reviewing a learner's homework, talking with a learner and listening to the learner during recitation (MBECN, 1999).

### 2.8. Authentic Assessment and Traditional Assessment

According to Wiggins (1998) assessment is Authentic when we enchor testing in the kind of work real people do, rather than merely eliciting easy to score responses to simple questions. Callison (1998) also state that authentic assessment is an evaluation process that involves multiple forms of performance measurement reflecting students learning, achievement, motivation, and attitudes on instructionally relevant activates. Performance assessment, portfolios, and self assessment are some examples of authentic assessment. According to Wiggins (1998.p.22) the following are standards for authentic assessment.

1. *Is realistic*- the task or tasks replicate the way in which a person's knowledge and ability are "lested" in a real world situations.
2. *Require judgment and innovation*- the student has to use knowledge and skills wisely and effectively to solve unstructured problem, such as when a plan must be designed, and the solution involve more than the following a set rotine or procedure or plugging in knowledge.
3. *Asks students to "do" the subject*-in study of reciting, restating, or replicating through demonstration what she or he was taught or what is already known, students has to carryout exploration.

According to Callison (1998) multiple choices, true/false or matching test represents traditional assessment. In contrast to authentic assessment traditional assessment test factual recall (lower order thinking skills) and students typically select answer or recall information to complete the assessment. These tests may be standardized or teacher centered. They may be administered locally or state wise, or international.

### 2.9. Selected Graded Continuous Assessment

According to MBECN (1999) a selected graded continuous assessment is a recorded assessment that contributes to the summative continuous assessment promotion grade in each subject. It is described as selected because teachers may grade and record several continuous assessments, but only the selected graded assessments are part of the summative continuous assessments promotion grade. Most continuous assessments are not graded because they are informal. The selected graded assessments should be planned and selected at the beginning of the school year.

According to ICBSE (2010) 40% percent of the total mark should be from 4 selected graded continuous assessments and the remaining should be from two end term exams. In Namibian secondary schools, no less than 33% and no more than 50% of the final promotion grade should be based on the continuous assessment mark (MBECN, 1999). And in Malawi 30% of the total mark is from continuous assessment (AIR, 2003)**.**

### 2.10. Attitude of Teachers and Students toward CA

The attitude of teacher and students affect how assessment is viewed and implemented. This means the positive and the negative attitudes that teachers and students may have due to reason of their own may have the power of influencing the implementation positively and negatively. In relation to this researchers and educators share the idea that teacher's low interest or negative attitude towards assessment has been one of the variable that contribute to an effective assessment implementation. In view of this Nitko (1996), and Gronlund and Linn (2000) as cited in Tamene Olana (2007) suggested that a new assessment program can succeed only if teachers accept it. If teachers do not accept the philosophy of this program it is clear that it is not possible to implement the program

effectively. We know that, teachers are more interested to assessments carefully if they accept the new assessment strategy. Teshome (2001) in the work of Getachew Kassa (2008) strengthen this idea and suggested that teachers must understand the assessment process, feel secure about it, and accept it as their own for its effective implementation. But insufficient training, lack of adequate materials, Lack of moral support, and lack of orientation and assistance from concerned body make it difficult for teachers to appreciate and apply continuous assessment.

The attitudes of students are also important factors on the implementation of the program. In case of students attitude Shirley (2003) in the work of Getacho Kassa (2008) suggested that pupils who do well in tests like tests and pupils who do not do well on tests do not like tests. That is pupils, who do well on tests, may have a positive attitude towards assessment and pupils who are not doing test may have negative attitude towards continuous assessment.

### 2.11. Continuous Assessment and its Challenges

Different studies suggest different types of challenges that are facing continuous assessment. Notably, the Ethiopian education and training policy (TGE, 1994:26) affirmed that "CA in academic and practical subjects including aptitude tests will be conducted to ascertain the formation of all around profile of students at all levels". As the result of this policy, students learning outcomes in both secondary and postsecondary education are supposed to be assessed using continuous assessment produce in relation to three primary domains: cognitive, affective and psychomotor Desalegn (2004) as cited in Abera Asefa (2012). From this idea we can deduce this compressive term which refers particularly to inquiring into the learners' competence, knowledge, attitude, and skill through various students profile using different assessment methods to improve learning, has become an integral part of learning process over since the policy has been implemented.

According to Abera Asefa (2012) teachers fail to use continuous assessment in the classroom due to the following challenges. These are: a) large class size b) lack of commitment c) tight schedule d) broad course content e) attitude of teachers toward

continuous assessment f) absence of good practice to benchmark g) absence of CA clear guidelines h) pupil absenteeism i) in adequate teaching and learning resources j) bias of teachers based on sex, race, personality… etc.

Ipaye (1982) cited in Ugodulunwa (1996:87) also strength the idea of Abera Asefa (2012) on the challenges of continuous assessment. These challenges are: the load of work of the teachers, variation in standards between schools, and lack of qualified personnel. Continuous assessment makes demand on teachers' time and energy which suggests that teachers' must be attitudinally, physically, mentally, and professionally ready to operate the system effectively. The extent to which teachers are prepared to sacrifice their time and energy in conducting assessment continuously depend on their level of acquaintance with the operational technique of CA, (Ugodulunwa, and 1996.p.87). There are also the problems of lack of qualitative and lack of expertise. Many of our teachers need more training in evaluation. They need practical exposure to basic practical statistical concepts. This will help them to handle with ease, the computations and activities involved in record keeping aspect of continuous assessment. The issue of large classes is one of the problems initiating against effective teaching assessment in Nigerian primary schools (Okapala, 1999, Bemisaye, Okpala, 2002) as cited in (Olufemi.et.al, 2011:36). This problem could be attributed to the insufficient human resource required for the implementation of quality teaching and the associated CA program in schools.

Specifically, in teaching and learning mathematics there are many challenges to implement continuous assessment effectively. According to Lawal (2009) cited in Ebhomien.et.al (2012) there are many problems hindering the practices of continuous assessment in mathematics. These are: inadequate supply of teaching aids, lack of instruments for non-cognitive behavior, inadequate supply of mathematics teachers, lack of technical knowledge on the part of teachers, heavy teaching loads, inadequate time for test and recording, lack of interest and dodging of test.

### 2.12. How to Use Continuous Assessment in the Classroom

During teaching and learning the teacher has to consider how to assess his or her students. This means in order to implement continuous assessment the teachers has to consider the

necessary pre-conditions. As it is mentioned in the back ground of this proposal continuous assessment is not simply continuous testing. According to Hailu Terefe (2012) the main thing to be considered while using continuous assessment is classroom include assessment question practice and documentation, the way of keeping records in the learners' portfolios, using varieties of assessment techniques to assess the learners' performances' properly and direct involvement of the learner in his or her own assessment etc.

On the importance of portfolio Mathew Apple and Etsuko Shimo (2000) in the work of Hailu Terefe (2012) stated that: rather than judging a single moment in time, as does an exam, portfolios emphasize individual progress toward goals, which the learners themselves help establish. In that sense portfolios offer a collaborative assessment, an assessment partly determined by the instructor and partly determined by the learner.

Additionally Phul (1997) as cited in Hailu Terefe (2012) mentioned the important classroom device in continuous assessment as: we used classroom continuous assessment devices such as self-assessment, peer assessment and assessment by the lecturer, portfolio, and reflective statement. From this we can deduce that by using different assessment techniques we can easily accomplish continuous assessment and one can gain the required quality education.

### 2.13. Advantages and Disadvantages of Continuous Assessment

It should be noted that Continuous Assessment has not only advantages but also it has its own disadvantages

#### 2.13.1. Advantages of Continuous Assessment

According to Ellington and Earl (1997) continuous assessment can provide much more extensive syllabus coverage than terminal assessment by assessing more things, it uses a range of different assessment techniques, it places more emphasis on worthwhile learning, it encourages regular and systematic study and discourages last minute cramming, it also provides early warnings of which students are having problems with the course, CA provides early indicators of the likely performance of students and something that can be

of great help to the students themselves, CA also provides an ongoing picture of how individual students develop and mature as they work their way through a course, it constitutes an extremely useful vehicle for on-going course monitoring and evaluation by providing course tutors with early warning of any problems or weaknesses, thus enabling them to take appropriate measures to improve matters. It also reduces the intense stress that many students experience when preparing for and sitting terminal examinations and above all it provides a more natural assessment environment that is better matched to the situations in which students will find themselves working in later life.

### 2.13.2. Disadvantages of Continuous Assessment

According to Dery (n.d) continuous assessment has its own disadvantages. Thse are: teacher subjectivity, the existence of different standards in different schools, high implication on time in terms of record keeping.

According to Ellington and Earl (1997) continuous assessment may make students feel that every error that they make along the way can count against them and this can give rise to a different type of stress from that which students experience as a result of terminal assessment. Unless continuous assessment is carefully planned and coordinated, there is a very real danger that students may be grossly over-assessed-particularly at certain times of the year, when several lecturers are asking simultaneously for assignments to be handed in. CA may affect the relationship between students and tutors. It may make students feel that it turns out to be nothing more than a series of tests or "mini examinations". CA may require tutors with a high level of experience in assessment to enable them to make creative and effective use of continuous assessment more than terminal assessment. In addition to this, students may suffer from unequal availability of resources, something that is becoming increasingly important now that they are carrying out much of their work on personal computers or at a distance.

## 2.14. Planning and Organizing Continuous Assessment

Ellington and Earl (1997) pointed out that while using continuous Assessment the teachers have to ensure that that the proposed assessment scheme is progressive and

properly integrated, and that the different assessment vehicles are appropriately matched to the objectives, learning outcomes or competences that they are intended to assess. Remember that examinations and other 'terminal assessment' vehicles can be used together with continuous assessment programs, so the teachers have to use both modes of assessment in the most effective and complementary way. Always tell your students exactly what it is you expect them to do, and make sure that your requirements and 'ground rules' are properly adhered to. Ensure that any written instructions or guidelines provided to your students are clear, unambiguous and helpful. Make sure that you create appropriate opportunities for students to discuss the continuous-assessment program with yourself and any other members of staff involved, both before they embark on the program and during the program itself.

Remember that full and constructive feedback is an essential feature of continuous assessment, particularly if it is being used for formative purposes. Make sure that you provide this; if you don't, then an external examiner or verifier will almost certainly spot its absence. Feedback is evidence that confirms or disconfirms the correctness of action. The best feedback is highly specific, directly revealing or highly descriptive of what actually resulted, clear to the performer, and available or offered in terms of specific targets and standards (Wiggins, 1998.p.14)

# Chapter three: Research Method and Design

## 3.1. General Description of the Research Approach

In this unit the researcher discussed about the design of the study, source of data, population and sampling techniques, research instruments, validity and reliability of instruments, procedure of data collection and data analysis.

### 3.2. Design of the Study

The researcher used descriptive survey design to conduct the research in terms of its appropriateness. This design was appropriate to get the detail of data from the respondents and appropriate to assess the status of phenomenon. The researcher used both qualitative and quantitative methods (mixed method). According to Creswell (2012.p.22) the core argument for a mixed methods design is that the combination of both forms of data provided a better understanding of a research problem than either quantitative or qualitative data by itself. In this process Creswell(2012) state that the researcher had to decide on the emphasis he would give to each form of data (priority), which data would be collected first (concurrent and sequential), how the researcher would "mix" the data ( integrating and connecting), and how to use theory to guide the study(e.g., advocacy or social science theory). Accordingly, the researcher used mixed method since the method is appropriate in order to triangulate data obtained from questionnaires, interviews and document analysis and the researcher used this method in order to integrate the study with scientific theory. Again this method was chosen by the researcher since the combinations of the two methods are convenient to get the detail information available for the study.

### 3.3. Source of Data

Both primary and secondary sources of data were used in this study. The sources were obtained from mathematics teachers, school principals, students and class room observation and secondary sources of data were obtained from curriculum and teachers' lesson plan.

### 3.4. Population and Sampling Techniques

The research was held in government general secondary school of Finfine surrounding special zone of Oromia regional state. This zone is found in Oromia region state and bounding Addis Ababa city, which is the capital city of Ethiopia, in all directions. In this zone, there are six woredas namely Sululta, Mulo, Barak, Wolmera, Akaki and sebetahawas. Again there are eight city administrations namely sululta, Sabata, Dukam,

Holeta,Sandafa, Burayu ,Lagatafo and Gelan. In Special zone of Oromia Surrunding Finfine two woredas namely Sululta woreda and Sebetahawas woreda and one city administration namely Sebeta city administration, each has two general secondary schools. In the remaining woredas' and city administrations' of the zone, there is only one general secondary school in each. Totally, there are seventeen general secondary schools in the zone. The researcher was purposely selecting three secondary schools from woredas of the zone and three general secondary schools from city administrations, totally six secondary schools for study.

The rationale behind selecting these secondary schools by using purposive sampling technique was to avoid the chance of choosing more than one general secondary schools from one woreda and one city administration Because, the status of the phenomena can be similar in secondary schools that belongs to the same woredas and city administrations. The researcher also preferred purposive sampling technique in order to assess status of phenomenon throughout the study area by taking these samples woredas from different directions of this zone.

Again the researcher was purposely selecting equal number of general secondary schools both from the woredas and city administrations in order to see status of the implementation continuous assessment since the researcher took the assumption their status can be different. From the stated sample general secondary schools the researcher uses sample determination formula.

This formula is given by following:

A 95% confidence level and P=.5 assumed the formula:

$$n=$$

Where, n= the sample size

N= the size of population

e =the error of 5 percentage point (0.05)

Students from each secondary school were also taken for the study by using random sampling. From the sampled general secondary schools, the researcher took all mathematics teachers (100%) and including school principals of the selected schools and obtained the relevant information available for study. The researcher put the population and the sample of the selected general secondary schools in the following table.

**Table 2: Name of schools and the number of respective directors, teachers and students who respond to the questionnaire and interview.**

| No | Name of school | Director | | Mathematics Teachers | | Students | |
|---|---|---|---|---|---|---|---|
| | | Population | Sample | Population | Sample | Population | Sample |
| 1 | Chancho Aba Geda General secondary school | 1 | 1 | 5 | 5 | 1362 | 136 |
| 2 | Sandafa general secondary school | 1 | 1 | 4 | 4 | 1603 | 160 |
| 3 | Wato(Alemgena) general secondary school | 1 | 1 | 5 | 5 | 966 | 96 |
| 4 | Bake general secondary school | 1 | 1 | 2 | 2 | 398 | 40 |
| 5 | Sululta general secondary school | 1 | 1 | 4 | 4 | 797 | 80 |
| 6 | Mulo general secondary school | 1 | 1 | 2 | 2 | 439 | 44 |
| | Total | 6 | 6 | 22 | 22 | 5564 | 551 |

### 3.5. Research Instruments

The instruments used for data collection were determined by the needs of a given research and research questions. The research needs wide quantitative description and there are things related to the implementation of continuous assessment which needs to be described qualitatively. Therefore, through the use of multiple instruments; relevant data for the study were collected.

### 3.5.1. Questionnaires

Many scholars wrote about the importance of questionnaire to collect information from respondents. According to Key (1997) cited in Hailu Terefe (2012) questionnaire is a means of eliciting the feelings, beliefs, experiences, perceptions or attitudes of some sample of individuals. The researcher would set two types of questionnaire. One set of questionnaire was administered to teachers in order to investigate the current status of the implementation continuous assessment, the attitude of teachers toward continuous assessment and to identify the challenge facing the implementation of continuous assessment. The items of this questioner contain five point scale measurements i.e., strongly agree=5, agree=4, undecided=3, disagree=2, strongly disagree=1 and open-ended questions. Other set of questionnaire was administered to students in order to investigate the attitude of students toward CA. This questionnaire included 12 items of questions contained five point scale measurements i.e., strongly agree=5, agree=4, undecided=3, disagree=2, strongly disagree=1and included 7 items which help to investigate the type of CA that their teachers use most frequently.

### 3.5.2. Interviews

Some of the interviews were made with directors of the selected general secondary schools, head departments of mathematics and students. The interviews were used because of their advantage over questionnaire especially to allow the researchers to probe for particular responses, clarification and confirmation of information from respondents. The prepared open-ended interview question contains 4 questions for mathematics teachers, 5 questions for school directors and 4 questions for students. Students' interview was made by Afan Oromo. During the conversion of English to Afan Oromo and Amharic language the researcher used the help of one of Afan Oromo masters students of Addis Ababa University. Teachers and directors' interview was made by English language and the whole interviews were recorded using note book. Finally the response of interviews were integrated with other instruments and analyzed.

### 3.5.3. Document analysis

Documents regarding continuous assessment including teachers lesson plan were properly assessed by the researcher to evaluate whether mathematics teachers of the schools consider continuous assessment in their weekly, monthly and yearly lesson plans based on the prepared check list and the researcher analyzed whether curriculum( textbook, teachers guide and syllabus) consider continuous assessment from the prepared check list.

### 3.5.4. Observation

The observation checklist which include five scale measurements i.e., very low=1, low=2, medium=3, high=4 and very high=5 were developed by the researcher. The researcher aimed to obtain the following during observation: to assess the status of the implementation of continuous assessment during teaching and learning mathematics inside the class room these include the assessment techniques the teacher used, the involvement of students in teaching and learning, the involvement of continuous assessment in teachers lesson and its implementation and to observe some of the factors that affect the implementation of continuous assessment inside the classroom that have close relation to the implementation of continuous assessment. Such factors include availability of instructional materials, facilities such as tables, chairs and others.

## 3.6. Validity and Reliability of Instruments

In order to ascertain the validity of instruments, before data collection was made the researcher used the comments and suggestions of expert opinion from advisor and peers on face, content and format of questionnaire, interviews, document analysis check lists and observation check list. Again to ascertain the reliability of instruments a pilot study was made in schools belongs to the same zone that did not participate in the actual study. The researcher used Cronbach's alpha coefficient (α) to measure internal consistency of instruments. The study obtained $\alpha_1$= 0.85 for scale prepared to measure the current status of the implementation CA, $\alpha_2$= 0.76 for scale prepared to measure the attitude of teachers toward CA, $\alpha_3$= 0.75 for scale prepared to measure the attitude of students toward CA,

$\alpha_4$= 0.71 for scale prepared to measure the challenge facing the implementation of CA. According to cronbach's alpha the value of α greater than or equal to 7 is satisfactory.

### 3.7. Procedure of Data Collection

The data gathering instruments were prepared in English language for teachers and school principals, but for students it was prepared in Amharic and Afan Oromo to overcome the problem of understanding and for free expression of ideas. The reason behind converting the questionnaire of students to Afan oromo and Amharic is to avoid bias between students who speak Afan Oromo or Amharic because, in special Zone of Oromia surrounding Fifine there are many students who speak only Amaric similary only Afan Oromo. The distribution, continuous follows up, and the collection of questionnaire was made by the researcher himself. The researcher made the objective of the study clear to all of the respondents to avoid confusion, get reliable information, and facilitated ease of administration.

### 3.8. Data Analysis

In this section all information obtained from questionnaire for teachers and students and interview for school directors, mathematics teachers and students and observation check list were analyzed. Frequency count and percentage were statistical method used to analyze and present the structured data items of the questionnaires collected from 22 mathematics teachers and 551 students and Observation made quantitatively. In order to compare the status of the implementation of CA between schools the researcher used one way ANOVA and for those which there status show statistically significant the research used Tukey HSD in order to know between which groups the status are statistically significant. Again in order to make comparison between woredas and city administrations of special zone of Oromia surrounding Finfine on the status of the implementation of CA the research used T-test and analyzes their results. In this analysis all P value less than .05 were considered to be statistically significant. In order to apply this test the researcher used SPPS version 15. Beside this in order to strength the information gathered through questionnaire the data obtained through interview and document analysis which include

teachers' lesson plan, curriculum was analyzed qualitatively and integrated with the data analyzed quantitatively.

## Chapter four: Data presentation, Analyses and Interpretation

In this chapter, findings of the study were presented, analyzed, and interpreted in order to answer the identified research questions. This Analysis was based on 22 questionnaires from mathematics teachers', 551 questionnaires from secondary school students, interview of 6 directors, interview of 6 mathematics teachers and students, document analysis and classroom observations.

## 4.1. Results and Discussion on Current status of CA in Teaching and Learning Mathematics

In the following table data collected from questionnaire for teachers based on five measuring scale was presented as the following and the code were given to the items for clarity of tables and the whole information of the table were appended at the back this research paper.

**Table 3: teachers' response on the current status of CA in teaching learning**

| Item codes | (SA)=5 | | (Ag) =4 | | (Und) =3 | | (DA) =2 | | (SD) =1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No | % | No | % | No | % | No | % | No | % |
| 1 | 9 | 40.91 | 12 | 54.54 | 1 | 4.55 | - | - | - | - |
| 2 | 5 | 22.73 | 13 | 59.09 | 4 | 18.18 | - | | - | |
| 3 | 10 | 45.45 | 12 | 54.55 | - | - | - | | - | |
| 4 | 4 | 18.18 | - | - | 1 | 4.55 | 4 | 18.18 | 13 | 59.09 |
| 5 | 2 | 9.09 | 4 | 18.18 | 4 | 18.18 | 8 | 36.36 | 4 | 18.18 |
| 6 | 6 | 27.27 | 13 | 59.09 | 2 | 9.09 | - | - | 1 | 4.55 |
| 7 | 2 | 9.09 | 3 | 13.64 | 3 | 13.64 | 10 | 45.55 | 4 | 18.18 |
| 8 | 11 | 50 | 8 | 36.36 | 3 | 13.64 | - | - | - | - |
| 9 | 7 | 31.82 | 13 | 59.09 | 2 | 9.09 | - | - | - | - |
| 10 | 2 | 9.09 | 8 | 36.36 | 2 | 9.09 | 3 | 13.64 | 7 | 31.82 |
| 11 | 7 | 31.82 | 11 | 50 | 3 | 13.64 | 1 | 4.55 | - | - |
| 12 | 3 | 13.64 | 13 | 59.09 | 5 | 22.73 | 1 | 4.55 | - | - |
| 13 | 5 | 22.73 | 12 | 54.55 | 3 | 13.64 | 2 | 9.09 | - | - |
| 14 | 10 | 45.45 | 9 | 40.90 | 2 | 9.09 | - | - | 1 | 4.55 |
| 15 | 9 | 40.90 | 12 | 54.55 | 1 | 4.55 | - | - | - | - |
| 16 | 5 | 22.73 | 11 | 50 | 4 | 18.18 | 2 | 9.09 | - | - |
| 17 | 1 | 4.55 | 2 | 9.09 | 4 | 18.18 | 9 | 40.90 | 6 | 27.27 |

Item 1of table 3 is about the inclusion of continuous assessment in teachers' lesson plan. According to this item majority of respondents 54.54% agreed they include continuous assessment as part of their plan when they prepare their plan and 40.91% also strongly agreed they include continuous assessment as part of their plan. Out of 22 respondents only 1(4.55%) respondent responded undecided and he/she are not sure whether he/she included CA as part of the plan or not during the preparation of lesson plan.

Regarding this other study stated the following about the inclusion of continuous assessment in lesson plan.

> Continuous assessment should never be viewed or implemented as an "add on" to the teaching and learning process or because it is considered a requirement spiffed by the ministry. Rather the potential of CA to improve teaching and learning will be realized if it is implemented as an integral part of the teaching learning process. (MBECN, 1999, p.12)

As it was illustrated in this table almost all 94.54% respondents accepted that they included continuous assessment as part of their plan when they prepared their lesson plan.

According to Table 3, item 2 there was no negative response by the respondents. Regarding the use of continuous assessment there were 22.72% respondents who responded strongly agree and they use continuous assessment during teaching and learning. Most of the respondents 59.09% responded agree and they use continuous assessment during teaching and learning mathematics. Similar to this it was seen in table 3 item 4, above average 59.09% respondents responded strongly disagree and 4(18.18%) respondents responded disagree the idea of the item that they were not used only mid exam and final exam in order to assess their students. This implies many of the teachers use continuous assessment during teaching and learning together with terminal assessment like mid exam and final exam

From table 3 item 3, 12(54.54%) respondents agreed and 10(45.45%) respondents strongly agreed that they use different assessment technique such as project work, assignment, class work and group work regularly to assess their students. Totally all the respondents have positive response on this idea and they apply different assessment techniques during teaching and learning. Beside this one of the interviewed student from school A said the following about different assessment technique their mathematics teacher use.

> Our *mathematics teacher gave us tests and assignment many times, especially this year our teacher was giving us at least two tests per week and one assignment per two weeks. During our mathematics class our teacher was giving us class work and gave us a chance of working in group. During this year our teachers used different assessment such as assignment, quizzes, written tests and others instead of using single mid examination.* (*Date 02/04/14)*

From the response the interviewed students it is not difficult to see that teacher of this school make his /her own effort to implement the program. On a similar day other interviewed student of the same school also said

> *Our mathematics teachers use testes, quizzes, group work, class work and assignment many times but our teachers do not gave us project work. Again our teachers award mark only for tests, quizzes and assignment but not for class work.*

From these respondents it is possible to deduce that even if mathematics teachers use different assessment techniques there was somewhat limitation by the teachers on using different assessment technique to measure students' achievement. This means since continuous assessment involves the use of great values of modes of evaluation for the purpose of guiding and improving the learning and performance of students the teachers is required to use different mode effectively for the benefit of the learners. The researchers also related this item with item 3. In this item 8(36.36%) respondents disagreed and 4(18.18%) strongly disagreed the idea they conseder informal assessment for measuring students' performancee. This implies by combining disagree and strongly disagree 54.55% respondents did not accept the idea of the item and they consider both formal and informal assessment for measuring their students' performance. Among the respondents 9(18.18%) of them had neutral idea and they were selected undecided from the given options.

According to table 3 item 6 13(59.09%) respondents agreed and 6(27.27%) respondents strongly agreed that they assess their students' progress in their day to day activity rather than at the end of unit or semester. 2(9.09%) respondents were not decided about the idea and only 1 respondent strongly disagree about the idea. Based on this idea Ellington and Earl (1997) said that "continuous assessment is based on a radically different premise, namely, the best and fairest way to assess students' performance is to assess each stage of

a course as soon after it has been completed as possible or, in some cases while the work is actual being carried out". This implies when the learners' progress is assessed throughout their activity the teachers can easily obtain corrective feedback about the performance of their learners.

From table 3 item 7 10(45.45%) respondents disagreed and 4(18.18%) strongly disagreed that they refused the idea of the item and there was strength on the implementation of continuous assessment in mathematics department in their school. From total respondents 3(13.64%) of them did not decide on the idea i.e. they have neutral response. Above average respondent accepted that according to their schools there was strength by the department toward the implementation of continuous assessment.

According to table 3 item 8 11(50%) respondents strongly agreed and 8(36.36%) respondents agreed that the used the achieved results of the learners as a feedback to evaluate their instruction. 3(13.64%) respondents responded undecided. According data obtained from respondents all of the respondents accepted that they use assessment results of their students as a feedback to evaluate their instruction.

According to table 3 item 9, majority of respondents 13(59.09%) agreed, 7(31.82%) respondents strongly disagreed and 2(9.09%) respondents had neutral idea. The researcher combined the response of the respondents who responded agree and strongly agree that 90.09% of them accepted that they gave immediate and continuous feedback for their students about their students' achievement.

Item 10 of table 3 stated that I use continuous assessment format only for mid exam and final exam. On this item 9.09% respondents strongly agreed and 36.36% respondents agreed to the idea. Again 13.66% respondents disagree and 31.82% respondents strongly disagreed to the idea. By combining strongly disagree with disagree and strongly agree with agree 45.45% accepted the idea and 45.45% refused the idea.

According to table 3 item 11 7(31.82%) respondents responded that they strongly disagreed and 11(50%) agreed that they encourage peer assessment. 3(13.64%) respondents selected undecided and 1(4.45%) disagree and they are not encourage peer assessment between students.

According to table 3 item12 3(13.64%) respondents responded that they strongly agreed and 13(59.64%) agreed the idea that there was an opportunity to examine the strength and weakness of the implementation of continuous assessment. 5(22.73%) respondents responded undecided (neutral) and 1(4.45%) refused the idea of this item.

Table 3 item 13 is about the contribution of continuous assessment to the total promotion mark. According to this item 5(22.73%) respondents responded strongly agree and 12(54.45%) responded agree that they make continuous assessment mark to contribute to the total promotion mark. Out of 22 respondents 3(13.64%) responded undecided and 2(9.09%) responded disagree that they refused an idea of the items. This implies majority of the teachers use continuous assessment and this assessment result have contribution for total promotion.

According to table 3 item 14 10(45.45%) respondents responded strongly agree and 9(40.90%) responded agree the idea of the item which said all tasks used to assess the learners and information gathered about them to give decision about their achievement is well recorded and documented. 2(9.09%) responded undecided and 1(4.45%) responded strongly disagree about this idea. In this item majority of the respondents 86.36% accepted that they were recorded every activity of the learners that help them to give decision about the performance of the learner.

According to table 3 item15 9(40.90%) teachers responded strongly agree and 12(54.55%) agree and 1(4.55%) responded undecided. By summarizing strongly agree and agree 21(95.45%) respondents accepted there were no uniformity between their school mathematics teachers on the implementation of continuous assessment. This means there are teachers who implement continuous assessment effectively as teachers who does not use and implement continuous assessment effectively throughout schools.

According to table 3 item 16 5(22.73%) teachers responded strongly agree and 11(50%) responded agree that according to their schools they discuss by department about the strength and weakness of the implementation of continuous assessment and they take corrective measure if there is weakness on implementing continuous assessment. 4(18.18%) responded undecided and 2(9.09%) responded disagree on the given idea.

Combining strongly agree and agree majority respondents 72.73% discuss by department about the strength and weakness of the implementation of continuous assessment in their schools.

According to table 3 item 17 1(4.55%) teacher respondents responded strongly agree and 2(9.09%) responded agree and 4(18.18) responded undecided. Among 22 respondents 9(40.90%) of them responded disagree and 6(27.27%) responded strongly disagree. Combining disagree and strongly disagree 15(68.18%) of them did not accept this idea, i.e. in case of their school continuous assessment is implemented in teaching and learning mathematics effectively.

Beside this questionnaire the response the interviewed school directors and teachers was given as follows concerning the current status of continuous assessment. One of school D director said the following on the current status CA:

> *In our school the implementation of continuous assessment is more or less on a good condition and many of our school teachers implement it. But when I say in good condition I do not mean that there is no limitation on implementing it. Because, there is degree of variation between our school teachers on dedicating to implement the program and there are factors that hinder us to fully implement continuous assessment. (Date 19/03/2014)*

Combining the response obtained from teachers' questionnaire and an interview made with students, teachers and school directors there are activities of teachers and schools to implement continuous assessment. But, from their response it is possible to deduce that it is hardly possible to say continuous assessment is implemented effectively. According, to the response obtained from interviewed persons all teachers do not dedicate equally throughout schools in order to implement continuous assessment effectively.

One of the interviewed teacher of school D also said that:

> *Not only as mathematics department but also as our school the continuous assessment creates good condition for us to reduce students' absentees and most the school teachers use this system in order to control their class students. From the total promotion mark our school teachers' uses 40% by continuous assessment for evaluating their students' performance (Date 19/03/2014)*

From the respondents it is possible to see that continuous assessment is implemented in this school and the motivation of teachers and the school to implement the program is very high but Relative to the suggestion given on teachers guide about the contribution of continuous assessment to the total promotion mark, the percentage given to CA by the teachers is less. Because, it was suggested on teacher guide that continuous assessment can take 70% of the total promotion mark.

School E director also said the following on the current status of the implementation continuous assessment:

> *In our school there is the beginning on implementing continuous assessment but it is not this much satisfactory because, there are students who has no interest when they are assessed by continuous assessment. Especially, our school students did not like to do assignments and home works. The commitment of our school teacher is also low and there is overlook between our teachers. Due to this I can generalize that currently as our school the program was not get off the ground effectively and it needs more effort and works. (Date 01/04/2014)*

One of the student in school E also strength the response of school directors and said that:

> *Our mathematics teachers did not encourage students to participate during teaching and learning and he teach us without giving chance for us and he run fast to cover the portion only. Again our teachers do not identify the level of students and he measures us by preparing question which we are not learned in the class. (Date 01/04/2014)*

But the response of one the interviewed teacher of school E contradicts with the responses of school director and said the following on the current status of continuous assessment.

> *Currently the status of continuous assessment in our school is on good condition. There are good commitments between teachers as our department. We give tests and different assignments for our students in order increase learners' performance. In our school we consider Saturday as working day and we teach our students in order to reduce shortage of time facing us during our regular periods. For this reason we are on good condition on implementing continuous assessment.*

From the above interviewed persons only mathematics teachers accepted that currently their school implements continuous assessment effectively. But the

teachers and students refused that in their school mathematics teachers did not implement continuous assessment effectively.

One of school A Director also said the following on the current status CA:

> *According to our school in generals and mathematics department in particular the status of the implementation of continuous assessment is on good condition rather than a few limitations. Many of our school teachers have good awareness on how to implement continuous assessment and they identified the difference between continuous assessment and continuous testing. (02/04/2014)*

In this school the teachers, again the students were responded the same suggestion that the implementation of continuous assessment according to their school is good. Again they also raised different factors that bother their school for more effective implementation of the program.

Director of school C said the following on the current status of the implementation of CA at their school:

> *The awareness of our school teachers and students they have on continuous assessment is growing from time to time and our entire school teachers implement it effectively. Even our school teachers and students omit to use mid exam and most of our school teachers particularly mathematics teachers assess their students out 50% by continuous assessment. (Date 05/04/14)*

According to the response obtained from mathematic teachers and students of the selected schools they responded the same answer that most of their school teachers implemented continuous assessment according to their school even though there are problems on promoting the program effectively.

The following table shows summary of the response of students on the question based on the type of continuous assessment their teachers used most frequently.

**Table 4: The assessment methods mathematics teacher used most frequently**

| Item | Use always | | When necessary | | Not use | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Homework | 351 | 63.7 | 152 | 27.59 | 48 | 8.71 |
| Class work (individual, group) | 203 | 36.84 | 294 | 53.36 | 54 | 9.8 |
| Assignment | 157 | 28.49 | 357 | 64.79 | 37 | 6.72 |
| Observation | 141 | 25.59 | 234 | 42.47 | 176 | 31.94 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Oral questions | 258 | 46.82 | 205 | 37.2 | 88 | 15.97 |
| Project work | 90 | 16.33 | 235 | 42.65 | 226 | 41.02 |
| Selected response items (multiple choice, true/false, matching etc.) | 251 | 45.55 | 205 | 37.2 | 95 | 17.24 |

The finding in table 4 indicated that homework, oral questions, and selected response items were the most commonly used continuous assessment strategy by general secondary school mathematics teachers of special zone of Oromia regional state. As it is possible to observe from their response even if practices of homework really help students to acquire skills, oral question and selected response items measure students cognitive skill and they are traditional types of assessments. Again majority teachers do not use project work and assignments which are authentic type's assessment and observation which is basically important to understand students' attitude. This indicates that the most common assessment techniques used by general secondary school mathematics teachers are cognitive oriented or traditional type of assessment.

The researcher also analyzed the response of respondents which were obtained from open-ended questions and put it result as followed:

The first open ended question was about the current status of continuous assessment in teaching and learning mathematics in their schools. Most of the respondents suggested that even though there are many problems that hinder the implementation of the program the teachers make effort in order to implement CA. In most general secondary schools, the teachers responded that the awareness of secondary school teachers on this program shows change from year to year and some of their school teachers make effort to implement continuous assessment. They suggested that still it is difficult to say that CA is implemented effectively equally throughout all teachers and it is difficult to conclude that all teachers have no equal awareness about continuous assessment. From their response the study estimated that it is hardly possible to say that continuous assessment is implemented effectively in teaching and learning mathematics in the study area. Again it is hardly possible to say that continuous assessment is totally not implemented in the study area. Accordingly, it can be simply concluded that continuous assessment is implemented only moderately. Because, the awareness of teachers between different

schools even teachers of the same school are not the same. Again their dedication to implement the program varies from teacher to teachers.

### 4.1.1. Comparison between Schools, Woredas and City Administration on the Status of the Implementation of CA

In this section the researcher presented and discussed the relation between schools, woredas and city administrations of study area on the status of the implementation of continuous assessment.

**Table 5: One way ANOVA comparison between schools**

| Mean of current status of CA | SS | df | MS | F | P |
|---|---|---|---|---|---|
| Between Groups | 5.099 | 5 | 1.020 | 6.838 | .001 |
| Within Groups | 2.386 | 16 | .149 | | |
| Total | 7.485 | 21 | | | |

As it was shown in table 5 we revealed that there are statistical differences between schools on the status of the implementation of continuous assessment in teaching and learning mathematics in the study area since P<.05. Additionally the researcher used Tukey HSD for multiple comparisons between schools that mean in order to identify between which schools the variation of the status of continuous assessment exist.

**Table 6: Tukey HSD for multiple comparisons between schools**

| (I)group | (J)group | Mean Difference (I-J) | Std.error | Sig. | 95% confidence interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower bound | Upper bound |
| Chancho | Mulo | .89412 | .32310 | .115 | -.1470 | 1.9352 |
| | Bake | -.16471 | .32310 | .995 | -1.2058 | .8764 |
| | Sandafa | -.51765 | .25906 | .385 | -1.3524 | .3171 |
| | Wato | -.32941 | .24424 | .755 | -1.1164 | .4576 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Sululta | -.92941(*) | .25906 | .025 | -1.7641 | -.0947 |
| Mulo | Bake | -1.05882 | .38618 | .120 | -2.3032 | .1855 |
| | Sandafa | -1.41176(*) | .33444 | .007 | -2.4894 | -.3341 |
| | Wato | -1.22353(*) | .32310 | .017 | -2.2646 | -.1824 |
| | Sululta | -1.82353(*) | .33444 | .001 | -2.9012 | -.7459 |
| Bake | Sandafa | -.35294 | .33444 | .892 | -1.4306 | .7247 |
| | Wato | -.16471 | .32310 | .995 | -1.2058 | .8764 |
| | Sululta | -.76471 | .33444 | .255 | -1.8423 | .3129 |
| sandafa | Wato | .18824 | .25906 | .976 | -.6465 | 1.0230 |
| | Suluta | -.41176 | .27307 | .664 | -1.2916 | .4681 |
| Wato | Sululta | -.60000 | .25906 | .244 | -1.4347 | .2347 |

As illustrated in table 6: there is statically significances between Chancho and Sululta (P<.05). The mean difference between these two school is (I-J) = -1.82353(*) or 1.82353(*) since the table is symmetrical. There are also statistical significance Mulo with Sandafa, Mulo with Wato, and Mulo with sululta vice versa since P<.05.

**Table 7: Independent T-test Comparison between Woredas & city Administrations**

| Current | Groups | n | M | SD | df | t | P |
|---|---|---|---|---|---|---|---|
| Status | Woreda | 9 | 3.32 | .58 | 20 | -3.522 | .002 |
| of CA | City Ad. | 13 | 4.05 | .40 | | | |

As it was illustrated in the table 7 it is statistically significant that there are difference between city administrations and Woredas on the status of the implementation of continuous assessment (P<.05). Again as it was illustrated above the status of the implementation of continuous assessment in teaching and learning mathematics in city administration is better than woredas.

### 4.1.2. Analysis of Classroom Observation

Class room observation is one of the tools that the researcher used in order to investigate the status of the implementation of continuous assessment in teaching and learning

mathematics. This observation insisted the researcher to investigate the activities inside the classroom environment. These include the teaching approach mathematics teachers used inside the classroom, the assessment method the teachers used during teaching and learning and the participation of learners inside the classroom. Observation check list containing five measuring scale (low, very low, medium, high and very high) were developed by the researcher to measure the status of the implementation of continuous assessment in teaching and learning of mathematics.

**Table 8: Summary of observed teachers**

| Item Codes | 1 (very low) | | 2(low) | | 3 (medium) | | 4 (High ) | | 5(Very High) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| 1 | 10 | 83.33 | - | - | 2 | 16.67 | - | - | - | - |
| 2 | - | - | 2 | 16.67 | 6 | 50 | 4 | 33.33 | - | - |
| 3 | 1 | 8.33 | 4 | 33.33 | 2 | 16.67 | 5 | 41.67 | - | - |
| 4 | 3 | 25 | 4 | 33.33 | 5 | 41.67 | - | - | - | - |
| 5 | - | - | 2 | 16.67 | 6 | 50 | 4 | 33.33 | - | - |
| 6 | - | - | 3 | 25 | 3 | 25 | 6 | 50 | - | - |
| 7 | - | - | 2 | 16.67 | 3 | 25 | 7 | 58.33 | - | - |
| 8 | - | - | 1 | 8.33 | 1 | 8.33 | 6 | 50 | 4 | 33.33 |
| 9 | - | - | 1 | 8.33 | 4 | 33.33 | 5 | 41.67 | 2 | 16.67 |
| 10 | - | - | 1 | 8.33 | 2 | 16.67 | 2 | 16.67 | 7 | 58.33 |
| 11 | - | - | - | - | 6 | 50 | 2 | 16.67 | 4 | 33.3 |

Item 1 of table 8 is about the inclusion of continuous assessment in teachers' lesson plan. As it was illustrated in this item majority of the observed teachers was judged under very low. The reason behind judging under very low was as it was seen in analysis of teachers' lesson plan majority of them 83.33% have no weekly and daily lesson plan with the exception of annual lesson plan and they were not provided for the observer at the required interval. As it was observed by the observer and put in item 2 also that the infrastructures of majority of the observed class room 50% were judged under medium. Because, in majority of the observed class rooms, chairs were not much with the number of students and 33.33% classrooms were judged under high.

Table 8 item 3 is about the presence of continuous assessment format. 41.67% teachers were judged under high and 33.33% of teachers were judged under low. From this item it is possible to see that even though the percentage of teachers who were used the continuous assessment format is greater than the percentage of teachers who were not used continuous assessment the researchers observed that most of the observed assessment format were not appropriate to record every activities of the learners. Because, space given to assessment format was more convenient to record terminal assessment i.e. are mid exam and final exam than different types of assessment.

Concerning about assessment format stated that:

> The challenge for the teachers is to use the most appropriate assessment format for obtaining information that will serve the desired purpose. Traditional format of assessment such as standardized tests and paper-and- pencil exams will continue to be useful tools for measuring specific educational out comes (Peixotto, 1997, p.4)

In item 4 of table 8 it was possible to observe that majority of teachers 41.67% were judged under medium and they record some of the activities of their students and they prepared an instrument that help them to record every activities of their students.

Table 8 item 5 is about different assessment tools the teacher used during teaching and learning. In this item majority of them 50% were judged under medium on using different assessment tools and 33.33% of them were judged under low. Again as it was illustrated in table 8 item 6 majorities of teachers 50% judged under medium on encouraging peer assessment and 25% of teachers were judged under high and 25% were also judged under low. Concerning this item the observer was possible to observe that there were 1:5 grouping system in most of the class rooms which help students to evaluate each other's and to do class activity and group work together. The researcher also observed this item

with item 7 that majority of the observed teachers 58.33% were judged under high that teachers encourage students' participation by giving different activities and 25% of them were seen under medium.

Item 8 of table 8 is about the participation of students on answering oral questions, class activity, and group discussion. Majority of the observed teachers 50% were judged under high and 33.33% were judged under very high. From this judgment it is possible to observe that the interest of the learners in the study area was in good condition. In relation to this it was also possible to observe from item 9 that 41.67% of teachers were judged under high and they give feed back to their students during their participation and 33.33% observed teachers were judged under medium on giving feedback during their students participation.

Table 8 item 10 is about how teachers give homework and give feedback on the given homework. From this item it was possible to observe that majority of teachers 58.33% were judged under very high and 16.67% was judge under high and medium. From this observation it was possible to observe that majority of teachers use home work to assess their students.

As it was also illustrated from item 11 of table 8 50% of the observed teachers were judged under medium on the relation between lesson objectives and assessment tools. Again 33.33% of teachers were judged under very high and 16.67% were judged under high and their assessment tools match lesson objectives.

### 4.1.3. Analysis of Curriculum on the Implementation of CA

The study analyzed secondary school mathematics text book, teachers guide and syllabus and identified whether they promote continuous assessment or not. Depending on the prepared check list the study analyzed the result and presented it by the following table.

**Table 9: analyses of teachers guide, text book and syllabus**

| No | Items included in learners mark list | Yes | No |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 1 | Text book state the outcome of lesson and unit clearly | | ✓ |
| 2 | text book include different assessment methods in every lesson and unit | ✓ | |
| 3 | Teachers guide state the outcome of lesson and unit clearly | ✓ | |
| 4 | Teachers guide state the work of teacher and students clearly | ✓ | |
| 5 | Teachers guide and syllabus suggest different continuous assessment | ✓ | |
| 6 | Teacher guide and syllabus suggest both formal and informal Continuous assessment | ✓ | |
| 7 | Teachers guide and syllabus suggest on how to record students achievement | | ✓ |

As it was illustrated in the table 9, the researchers observed that text book stated the outcome of each unit clearly but, it was not stated the outcome the each lesson differently and this is why the researchers responded 'No'. The outcome of each lesson was clearly stated on teachers guide and syllabus. Again teacher guide and syllabus clearly stated what the teachers have to do, suggest the assessment techniques the teachers must use, the teaching materials the teachers must use and what students have to do. On teachers guide and syllabus continuous assessment and instruction were integrated in three different time frames namely pre-instruction, during instruction and post instruction. The researchers also observed that the assessment techniques which were also suggested on teachers guide and syllabus include formal type of assessment and informal type of assessment. The study was also possible to identify that the curriculum (text book, teachers guide, and syllabus) of general secondary school mathematics was prepared as well convenient to promoting continuous assessment. Especially, teachers guide wrote the detail definition of CA and active learning and put suggestion on how often the teachers assess the students. Teachers guide clearly suggested on how to mark a semester's achievement and how to record students' achievement. As stated on teachers guide CA include 70% out total promotion mark. This really showed that the contribution of continuous assessment to the total promotion mark is greater than the standardized exam i.e. mid exam and final exam.

### 4.1.4. Analysis of Teachers Lesson plan

The analyses of teachers' lesson plan additionally assisted the researcher in order to investigate the status of the implementation of continuous assessment in teaching and learning mathematics. The researcher qualitatively analyzed teachers' lesson plan in order to investigate how much mathematics teachers consider continuous assessment as part of their plan and how much the teachers use different assessment techniques. With the exception of two mathematics teachers all teachers who were asked about their daily or weekly lesson plan, most of them did not give response to the researchers in the required intervals. They provided the response which said "I did not bring my plan to the school", "I forget my plan at my home" and other respondent said "I was not preparing lesson plan for this week". During this study the researchers also observed annual lesson plan of grade 9 and grade 10 mathematics teachers of the study schools. The researchers observed that from the observed annual lesson plan in most of the school plan the objective were stated clearly in the entire observed plan. The work of the teachers and students were also stated clearly. But in almost all plans the assessment techniques the teachers planned to use entire the units were similar. Throughout units the assessment techniques they were stated were: giving homework, asking oral question, giving class work, giving assignment are the most common assessment techniques they were stated in the plan. The study analyzed the teachers' annual lesson plan and teachers' daily lesson plan that the plans were moderately prepared as to promote continuous assessment.

## 4.2. The Attitude of Mathematics Teacher toward the Implementation of Continuous Assessment

The response of the teacher respondents on the questionnaire the attitude of mathematics teachers on the implementation of continuous assessment during teaching and learning mathematics is summarized by the following table. This questionnaire contains five measuring scales. Code is given to each item and its detail is appended at the back.

**Table 10: Attitude of Mathematics teachers toward CA**

| Item codes | (SA) =5 | | (Ag) =4 | | (Und) =3 | | (DA) =2 | | (SD) =1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | NO | % | NO | % | NO | % | NO | % | NO | % |
| 1 | 20 | 90.91 | 2 | 9.09 | - | - | - | - | - | - |
| 2 | 4 | 18.18 | 2 | 9.09 | 2 | 9.09 | 6 | 27.27 | 8 | 36.36 |
| 3 | -` | - | 4 | 18.18 | 2 | 9.09 | 10 | 45.45 | 6 | 27.27 |
| 4 | 7 | 31.82 | 9 | 40.91 | 2 | 9.09 | 4 | 18.18 | - | - |
| 5 | - | - | 2 | 9.09 | 1 | 4.55 | 2 | 9.09 | 17 | 77.27 |
| 6 | 1 | 4.55 | 4 | 18.18 | 8 | 36.36 | 3 | 13.64 | 6 | 27.27 |
| 7 | 1 | 4.55 | 2 | 9.09 | 3 | 13.64 | 8 | 36.36 | 8 | 36.36 |
| 8 | 12 | 54.55 | 8 | 36.36 | 2 | 9.09 | - | | - | |
| 9 | 2 | 9.09 | 1 | 4.55 | 1 | 4.55 | 8 | 36.36 | 10 | 45.45 |
| 10 | 2 | 9.09 | 12 | 54.55 | 3 | 13.64 | 3 | 13.64 | 2 | 9.09 |
| 11 | 8 | 36.36 | 10 | 45.45 | - | - | 2 | 9.09 | 2 | 9.09 |
| 12 | 3 | 13.64 | 10 | 45.45 | 4 | 18.18 | 5 | 22.73 | - | - |
| 13 | 12 | 54.55 | 9 | 40.91 | 2 | 9.09 | - | | - | |
| 14 | 10 | 45.45 | 10 | 45.45 | 2 | 9.09 | - | | - | |

According table 10 items 1 all respondents have positive response and they believed and accepted that continuous assessment is necessary to increase the academic achievement of the learners. Out of total respondents 90.91% responded strongly agree and 9.09% responded agree and there was no respondents who refused the idea. Beside the response of respondents Ebhomien.et.al (2012) said that "the aim of CA is to get the true possible picture of each student's ability at the same time helping each student to develop his or her abilities to the fullest. The study combined this with item 4 and item 9 of the same table. In item 4 most respondents 72.73% accepted and they believed that CA provides early indicators of the likely performance of students and they indicated that they like to use continuous assessment. In this item only 18.18% respondents disagree with idea and they responded that they prefer continuous assessment. In item 9 majorities of respondents refused the idea which stated useless of continuous assessments and the consideration of continuous assessment as wasting time. From total respondents 36.36% disagreed and 45.55% strongly disagreed. Totally 81.82% respondents refused the idea

and they believed that continuous assessment is useful in teaching and learning mathematics.

Again in relation to this item the researcher also combined this item with item 8 of table 10 in order to confirm the response of item 1and 4 i.e. above average 54.55% respondents responded strongly agree and 36.36% responded agree that they like continuous assessment since it make assessment more meaningful and more representative of learners over all abilities.

According to table 10 item 2 18.18% respondents responded strongly agree and 9.09% responded agree and they prefer mid -term and final exam to assess their students and most respondents 36.36% respondents strongly disagree and 27.27% respondents disagree and they are not prefer mid-term and final exam in order to assess their students. From the response obtained from respondents most the teachers like to apply continuous assessment than mid-term and final exam.

Item 3 of table 10 stated that continuous assessment is tire some and take more time and I did not like to use it. On this idea most respondents did not accept this idea i.e. by combining disagree and strongly disagree 72.73% respondents refuse the idea and they like to use continuous assessment. Only 18.18% accepted the idea and they do not like to use it.

From table 10 item 5 it was clearly observed that the majority of respondents 77.27% strongly disagree the idea of the item and positively accept the relevance of continuous assessment for students learning in teaching and learning mathematics. Only 9.09% respondents agree the idea of the item and they refuse the relevance of continuous assessment for students learning.

The finding in table 10 item 6 was also shows that majority of respondents 27.27% had neutral response on the item but by combining disagree and strongly disagree 40.91% respondents believe that students like to be assessed continuously. Again 18.18% responded agree that they believe students don't like being assessed continuously.

From table 10 item 7 it was clearly shown that majority respondents 16(72.72%) refused the idea which stated the difficulty of mathematics and impossibility of continuous assessment on this subject.

According to table 10 item 10 it was clearly observed that majority of respondents 54.55% agreed and 9.09% strongly agreed and they accepted that it is possible to implement continuous assessment in large class size. Again 13.64% disagreed and 9.09% strongly disagreed that their idea felt on, it is not possible to implement CA in large class size.

The finding in table 10 item 11 also revealed that the majority of respondents 45.45% agreed and 36.36% strongly agreed that they believe continuous assessment is beyond giving tests regularly to improve the academic performance of students. Out of total respondents 9.09% disagreed and 9.09% strongly disagreed that they believe continuous assessment is not beyond continuous testing. According to Ugodulunwa (1996) teachers should assess learners' behaviors in the cognitive, affective, and psychomotor domains using appropriate instruments and collect data for assessment purpose continuously. This shows that when teachers regularly give testes for students he can improve only cognitive behaviors and he cannot improve non cognitive behavior. Therefore this finding shows most of the respondents believed that continuous assessment and continuous testing are different.

According to finding obtained from item 12 of table 10 most of the respondents 45.45% agreed and 13.64% strongly agreed and they accepted that continuous assessment is impractical and much of the condition for it are not fulfilled. Again 18.18% respondents responded undecided i.e. they have neutral response and 22.73% respondents did not accept the idea they believed that it is possible to practice continuous assessment or much of the conditions are fulfilled for it.

From table 10 item 13 it is easily observed that majority of respondents 54.55% strongly agreed and 40.91% agreed and they believed that they accepted the students must be assessed continuously in order to assess their progress in their day to day activities. The remaining 9.09% respondents responded undecided i.e. they have neutral response.

In item 14 of table 10 45.455% respondents strongly agreed 45.45% respondents agreed the idea of the item and they accepted Continuous assessment strength the relation between teacher and learners than old assessment progaram and 9.09% responded undecided.

Concerning the attitude of teachers on the implementation of continuous assessment all the interviewed teachers and directors responded that their school mathematics teachers have positive attitude toward continuous assessment.

### 4.3. The Attitude of Students toward CA in Teaching and Learning Mathematics.

The following table gives summary of the response of student respondents on the questionnaire prepared to measure attitude of students toward the implementation continuous assessment. The questionnaire consist twelve items with corresponding five measuring scales and the code is given to items and its detail is appended at the back.

**Table 11: the attitude of students toward CA**

| Item codes | (SA) =5 | | (Ag) =4 | | (Und) =3 | | (DA) =2 | | (SD) =1 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No | % | No | % | No | % | No | % | No | % |
| 1 | 422 | 76.6 | 96 | 17.42 | 21 | 3.81 | 6 | 1.09 | 6 | 1.09 |
| 2 | 191 | 34.66 | 141 | 25.6 | 86 | 15.6 | 72 | 13.07 | 51 | 9.3 |
| 3 | 359 | 65.15 | 98 | 17.79 | 50 | 9.07 | 30 | 5.44 | 14 | 2.54 |
| 4 | 316 | 57.35 | 157 | 28.49 | 39 | 7.08 | 19 | 3.43 | 20 | 3.63 |
| 5 | 296 | 53.72 | 135 | 24.5 | 61 | 11.07 | 38 | 6.9 | 21 | 3.81 |
| 6 | 76 | 13.8 | 61 | 11.07 | 62 | 11.25 | 142 | 27.77 | 210 | 38.11 |
| 7 | 79 | 14.34 | 46 | 8.35 | 50 | 9.07 | 147 | 26.68 | 229 | 41.56 |
| 8 | 60 | 10.89 | 76 | 13.79 | 105 | 19.05 | 156 | 28.31 | 154 | 27.95 |
| 9 | 73 | 13.25 | 53 | 9.62 | 51 | 9.26 | 132 | 23.96 | 244 | 44.28 |
| 10 | 374 | 76.88 | 85 | 15.43 | 40 | 7.26 | 22 | 3.99 | 30 | 5.44 |
| 11 | 342 | 62.07 | 125 | 22.69 | 44 | 7.96 | 23 | 4.17 | 17 | 3.09 |
| 12 | 379 | 68.78 | 107 | 19.42 | 23 | 4.17 | 19 | 3.45 | 21 | 3.81 |

From finding of table 11 item 1 it was easily seen that majority of respondents 76.6% strongly agreed and 17.42% respondents agreed that continuous assessment is necessary increase students' academic achievement. 3.8% respondents responded undecided. Out of total respondents 1.09% disagreed and 1.09% strongly disagreed idea of the item.

According to item 2 of table 11 there were 34.66% respondents and 25.26% respondents who strongly agreed and agreed respectively. Again 15.6% respondents responded undecided and 13.7% respondent and 9.3% respondents disagreed and strongly disagreed respectively. From this finding it was easily observed that majority of respondents prefers mid-term and final exam than being assessed continuously. By comparing this item with item 4 of table 11 most of the respondents 57.35% and 28.49% strongly agreed and agreed respectively that they liked to be assessed by different assessment techniques like observation, group work homework, class work etc. and few students 3.43% and 3.63% disagreed and strongly disagreed respectively.

Finding from item 3 of table 11 also showed that most of the respondents 65.15% strongly agreed and 17.79% agreed that continuous assessment enable students to identify their weakness and strength. Out of total respondents 9.07% responded undecided, 5.44% disagreed and 2.54% respondents responded strongly disagree.

Beside this item one the interviewed student school E said the following about CA

> *I like continuous assessment during teaching learning mathematics since it helps me to identify my strength and weakness and it make me always active on this subject since I believe that mathematics basically important for all subjects.*(*Date 31/03/20014)*

As can be illustrated in table 11 item 5 majority of respondents 53.72% strongly agreed and 24.5% agreed and they believed that practical assessment assess better their performance and ability than pepper and pencil assessment. Out of total respondents 11.07% responded undecided, 6.9% responded disagreed and 3.8% responded strongly disagreed.

From finding of item 6 of table 11 it can be observed that relative to other respondents' majority of them strongly disagreed (38.11%) and agreed (27.77%) that they prefer continuous assessment and they refuse the idea which stated about time wastage of continuous assessment. Similarly majority respondents in item 7 of this table strongly disagreed (41.56%) and agreed (26.65%) that they refused the idea which stated about the difficulty of mathematics and impossibility of continuous assessment on this subject. Again from item 10 of the table majority of respondents 76.88% responded strongly agree and 15.43% respondents agreed that they preferred to be assessed continuously and they believed that continuous assessment enable them mentally ready and avoid last minute cramming.

According to item 8 of table 11 majority of respondents 28.31% agreed 27.95% strongly agreed and they refused the idea of the item which said "continuous assessment increase load and make me busy and I cannot get enough time for other subject". Again smallest number of respondents strongly agreed (10.89%) and agreed (13.79%) that CA increase load and make them busy and they cannot get enough time to prepare for other subjects equally.

Item 9 of table 11 stated that the consequence of assessed by continuous assessment in mathematics learning is failure to the subject. From this finding it was easily observed that majority of respondents did not accept the idea of the item i.e.44.28% strongly disagreed and 23. 96% disagreed that they refused the idea of the item and they preferred to be assessed continuously in teaching and learning mathematics.

Finding in table 11 item 11 illustrated that majority of respondents strongly agreed (62.07 %) and agreed (22.69%) that they were very interested to continuous assessment since it is provide practice to apply knowlege and skills.

As can be illustrated in table 11 item 12 majority of respondents 68.78% strongly agreed and 19.42% agreed that they like continuous assessment. Because, respondents believed that CA provides apportunity and time to correct mistakes and help them to improve their accadamic performance.

Beside this one of the interviewed school C student said the following on CA:

> *I like to be assessed by continuous assessment in mathematics. Because continuous assessment help me to give equal attention to all contents of the subject and this create me opportunity to be good in this subject. (Date 05/04/14)*

Again the response of all of the interviewed students on interview question number 2 which asked do you like to be assessed by continuous assessment? are yes and by the time they are asked their reason all students responded that continuous assessment enable me to identify my strength and weakness, it enable me mentally ready always, it increase my academic performance, and it create the chance to do with my partners.

> Interpreting this results, other stated that "practice of continuous assessment has a significant relation with students' performance in mathematics by improving their scores, motivating students in learning mathematics, reveal specific areas of learning difficulties and provide feedback to the students and teachers"(Ebohomien.et.al, 2012, pp.352-353).

This reveals that the students have positive attitude toward the implementation of continuous assessment and they are like to be assessed by continuous assessment in order to gain the advantage gained from continuous assessment.

### 4.4. The Challenge facing the Implementation of CA.

In the following table data collected from questionnaire for teachers on the factors that affect the implementation of continuous assessment during teaching and learning mathematics is presented. The questionnaire contains 12 items with corresponding five measuring scales.

| No | Items | (SA) =5 | (Ag) =4 | (Und ) =3 | (DA) =2 | (SD) =1 |
|---|---|---|---|---|---|---|

| | | No | % | No | % | No | % | No | % | No | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I have the basic skills of recording and documenting students' CA achievement. | 10 | 45.45 | 7 | 31.82 | 4 | 18.18 | 1 | 4.55 | - | - |
| 2 | I have different training opportunities on the implementation of CA at my school | 3 | 13.64 | 6 | 27.27 | 8 | 36.36 | 2 | 9.09 | 3 | 13.64 |
| 3 | Due to the large number of students in the class it is difficult to assess students continuously. | `8 | 36.36 | 6 | 27.27 | 2 | 9.09 | 4 | 18.18 | 2 | 9.09 |
| 4 | Lack infrastructure like chairs, chalk boards, stationary materials etc. impact on my CA | 10 | 45.45 | 4 | 18.18 | 2 | 9.09 | 5 | 22.73 | 1 | 4.55 |
| 5 | The large size classroom affects my CA techniques by taking more of my time | 8 | 36.36 | 6 | 27.27 | 3 | 13.64 | 3 | 13.64 | 2 | 9.09 |
| 6 | I believe that my work load and additional school activates affect my assessment | 6 | 27.27 | 12 | 54.45 | 2 | 9.09 | 2 | 9.09 | - | - |
| 7 | I gate support from school supervisor on how to implement continuous assessment | 1 | 4.55 | 6 | 27.27 | 6 | 27.27 | 6 | 27.27 | 3 | 13.64 |
| 8 | There are clear manual and guideline on how to implement CA. | - | - | 4 | 18.18 | 6 | 27.27 | 12 | 54.55 | - | - |
| 9 | Little attention is given by school principal on the implementation of CA | 4 | 18.18 | - | - | 3 | 13.64 | 14 | 63.64 | 1 | 4.55 |
| 10 | Large instructional content affect my CA | 6 | 27.27 | 6 | 27.27 | 6 | 27.27 | 4 | 18.18 | - | - |

**Table 12: the challenge facing the implementation of continuous assessment**

All items given from item1 to item 10 are related to factors affecting the implementation of continuous assessment in teaching and learning mathematics. According to item 1of table 12 10(45.45%) respondents responded strongly agree and 7(31.82%) responded agree. By combining respondents who responded agree and strongly agree majority of respondents17 (77.27%) accepted that they have basic skills of recording and documenting students continuous assessment achievement. 4(18.18%) responded undecided and 1(4.55%) disagree that they have no basic skills on recording and documenting students continuous assessment achievement.

Item 2 of table 12 is about training opportunities given to teachers on the implementation of continuous assessment. In this item 13.64% respondents strongly agreed and 27.27% respondents agreed that they get training opportunity on the implementation of continuous assessment. Majority of respondents 36.36% responded that they are not decides on this idea. Again 9.09% respondents disagreed and 13.64% respondents strongly disagreed that they are not get training opportunities. In this item majority of respondents refused that they are not get training opportunity on the implementation of CA. Again from the interviewed general secondary school principals and teachers only 2 school directors and teachers responded that their school prepares training opportunities for their school teachers.

According to the respond obtained from most teachers they raised that most of the training held at regional, woreda and other level is not concerning on assessment and some of the teachers have no basic skill of recording learners achievement result how to prepare students portfolio.

One of the interviewed directors of school C said the following about the factors that hinder or facilitate the implementation of continuous assessment with respective reference to their school in general and mathematics in particular.

> *In our school there is at least one training per year concerning about active learning, how to implement continuous assessment and others for all of school teachers but we have no any additional training prepared for mathematics separated from other teachers. By providing this opportunity our school teachers identified the difference between continuous assessment and continuous testing. (Date 05/04/2014)*

Table 12 item 3 is about the effect of large number of students in the class on the implementation of continuous assessment. On this item 36.36% respondents strongly agreed and 27.27% agreed on the idea. Combining strongly agree and agree 63.64% respondents agree that large number of students in the class negatively influenced their continuous assessment. 27.27% refused the idea and they are not negatively affected and 9.09% respondents responded undecided. Beside this in table 12 item 5 63.64% respondents' responded large number students in their class waste their time and this make their continuous assessment difficult.

Regarding to this item all interviewed directors and teachers responded that there are large number of students in one class according to their school. According to the data obtained from school directors in all general secondary schools there were above 70 students learned in a class.

According to the response obtained from opened questions large number of students in a class is the challenge raised by most of the respondents. From their response it is common to see that 70- 80 number of students present in a class in their school.

One of the interviewed school E student said the following on large number of students in the class:

> *Since there are about 80 students in our class it is difficult to our teachers to check whether we do the homework or not. Because at the time our teachers check our homework one by one he wastes a lot of times and he cannot possible to teach us the day lesson. As I think our teachers fear this problem and many times our teacher gave us homework but he never check the given homework. (Date 31/03/2014)*

Other factors studied by the researcher was concerning on the impact of facilities like chairs chalkboard, stationary materials on the implementation of continuous assessment. It was illustrated in table 12 item 4 largest respondents 45.45% strongly agreed and18.18% agreed- that there are luck of infrastructure like chairs chalkboards, stationary materials in their school that hinder their continuous assessment. In this item 27.27% responded disagree and 9.09% strongly disagree on the idea which implies there is no problems on infrastructure in their schools. Again 9.09% responded undecided. Here, the study showed that there was shortage of facilities in most general secondary school of Finfine surrounding special zone of Oromia Regional state. Most of the interviewed general secondary school directors and teachers gave the same response that there are shortage of paper and duplication machine materials in their schools.

Beside this one of school A teacher said the following about stationary materials:

> *In our school we assess our students by paper only for mid exam and final exam due to shortage of stationary materials such as paper, computer ink and duplication machine ink. When we want to give test the only chance what we have to use is writing the question on the blackboard and testing our students. These have their own disadvantage both for teachers and for students. Because, it is*

*difficult for teachers to write every tests for every classes periodically in order to assess students and the students by them salves did not need the test written on the blackboard.*(*Date 02/04/2014*)

Again the director of school A also said the following on school infrastructure:

*Since the block grant financed from woreda education office is not enough and not match with the number of our school students, we are challenged that scarcity of stationary materials especially paper face us and some of our school teachers take their own measure on giving test. But this problem is not for mid exam and final exam.* (*Date 02/04/2014)*

Again one of the interviewed general secondary school student from school E said the following on school facilities.

*In our school there is no as much problems on chairs and black board but, there are problems on colored chock especially during learning geometry our teachers did not use colored chalk. Accordingly, this problem can make the content learned unclear and difficult. (Date 31/03/2014)*

One of school B director said the following about infrastructures in real situation of their school:

*Since our school is new; shortage of chairs, computers and stationary materials are the problem seen in our school most commonly. Even, we have no chairs and tables on which our teachers sit on. Due to this we are negatively affected by this problems and it is difficult to say continuous assessment is implemented effectively. (Date 02/04/14)*

In relation to facilities according to the response obtained from open-ended questions most respondents raised the shortage of paper and computer access and they are challenged by these shortages in order to prepare written test for students in the required intervals and periods. Shortage of enough reference materials and access internet is also the other problems raised by most teachers. In relation to this they stated that in order to give different assignments and projects reference materials and internet service are the most challenge in their school.

Item 6 of table12 are about the impact of workload and additional school activities of teachers on the implementation of continuous assessment. On this item majority of respondents 54.45% responded agree and 27.27% responded strongly agree that their workload and additional school activities negatively affect their assessment. Out of total

respondents 9.09% responded undecided and 9.09% refuse the idea of the item. In relation to this by comparing table 12 item 6 with table 3 59.09% respondents have weakly work load of 10-15 period and 36.36% have weakly load 21 and above. From these two tables, the study analyzed that above average respondents have work load of which is not this much difficult. This indicated that many of the respondents have load of additional school activities and the commitment of teachers to implement continuous assessment is low that this condition affect them on the implementation of continuous assessment.

Item 7 of table 12 is about support given to teachers by school supervisors on the implementation of continuous assessment. In this item 4.55% responded strongly agree, 27.27% agree and 27.27% responded undecided. Again 27.27% respondents responded disagree and 13.64% responded strongly disagree. By comparing positive and negative response 7(31.82%) respondents accepted the idea and they get support from school supervisor on how to implement CA and larger number of respondents 9(40.91%) responded that they are not get support from school supervisor.

Table 12 item 8 is about the presence of clear guidelines on how to implement continuous assessment. In this item largest number of respondents 54.55% responded disagree the idea that there are no clear manuals and guidelines on how to implement continuous assessment and 27.27% respondents did not decide on the idea. Only 18.18% respondents agreed that there are clear manuals and guidelines on the implementation of CA.

Table 12 item 7 is about the contribution school directors on the implementation of continuous assessment. According to this item above average respondents 63.64% refused the idea and their school directors give great attention to the implementation of continuous assessment. 18.18% respondents agreed the idea and their school directors did not consider continuous assessment. Again 13.63% did not give decision on this item i.e. they have neutral response.

Table 12 item10 is about the effect of instructional content on the implementation of continuous assessment. By combining the response of respondents who responded agree and strongly agree above average 54.55% respondents accepted the idea and large

instructional content affect their continuous assessment and 27.27% respondents have neutral response and 18.18% respondents refused the idea that they are not affected by large instructional content to implement continuous assessment.

The researcher also identified from interviewed students, teachers and directors that large class size, interest of the learners, shortage of stationary materials such as paper and colored chook , duplicating machine materials such as ink, stencil are the most common in all general secondary school to implement continuous assessment effectively and more easily.

Again majority of school teachers and directors responded that support given to their schools by woreda educational office or zonal education office for continuous assessment is very. Concerning this only one director agree the support of woreda education office i.e. School C director responded that the woreda education office gave support for them. On the support given to their school he said that:

> *The support given from woreda education office is very high and they gave us large support especially by providing as necessary materials such as computer and allocating budget and gave as training on continuous assessment.(date 05/04/20014)*

From the response obtained from open ended question most of the respondents stated that students' absenteeism and teacher missing classes are the problem raised by most of the respondents. According to their response as some of the students' attendance is irregular and absent from the school smooth management of students' performance is difficult and teachers fail to assess their students through different activities effectively. In the other case some of mathematics teachers miss their class (period) due to different problems. This leads them to disorder their plan and make them to focus on content coverage than assessing their students effectively. According to the response obtained from most respondents, teachers' lack of computer skill is also the problem that hinders the implementation of continuous assessment in teaching and learning mathematics. Accordingly, they use only paper and pen to keep students mark.

During school observation the researcher really observed that all general secondary schools of the study area are plasma based class. But, from open ended questions the

researcher obtained the response of respondents that the interruption of plasma television is one of the challenge facing the implementation of continuous assessment. Because, during plasma interruption the teachers failed to cover the lesson prepared for that day and need additional time to cover this lesson and this make teachers to run fast to cover the lesson than implementing continuous assessment.

The researcher was also able to summarize the suggestions of respondents on one of the prepared open ended question that help to address some of the solutions for the challenges facing the implementation of continuous assessment during teaching and learning mathematics. The following are some of the suggestions given by most respondents. These are: 1) the government must give great consideration to assessment and must fulfill stationary materials and other needed by the school 2) focus must be given to plasma television by the school by giving great care and all concerning body must give continuous follow up 3)the school must work to fill infrastructure by participating of community, NGO and all stockholders to solve the problems 4) the government must reduce the size of the class 5) the school must work with students family in order to reduce students absenteeism 7)the teachers must commit for the successful of implementation continuous assessment.

According to teachers respondents there are also opportunities for the implementation of continuous assessment during teaching and learning mathematics in the study area. There are 1:5 grouping strategy for both teachers and students in all general secondary schools. This grouping system is the system in which students of the same class are grouped with group of five in order to assist each other and to accomplish every activity together inside the class room and outside. Again it is the system where teachers belong to one department combined with group of five individuals in order to share their experience and help each other on teaching and learning process. This is one of the conditions which create good opportunity for teachers and students to implement continuous assessment effectively. This strategy enable teachers to save the time lost on arranging students in order to give group work, project work, peer assessment since students have awareness about the importance of group work and how they help each other and they can easily grouped and minimize teacher load to facilitate students arrangements.

The way how teachers guide, students' text book and syllabus prepared were also other factors that initiate the implementation of continuous assessment because, they were prepared as convenient to promote continuous assessment.

# Chapter five: Summary, Conclusions and Recommendations

## 5.1. Summary

This research was conducted in government general secondary schools of Finfine surrounding special Zone of Oromia regional state. The main objectives of this study was to investigate the status of the implementation of continuous assessment in teaching and learning mathematics, the attitude of mathematics teachers and students toward continuous assessment and to investigate the challenge facing the implementation of continuous assessment. To attain these objectives six general secondary schools of this

zone were selected for study. This study was aimed to address the following research questions:

1. What is the status of the implementation of continuous assessment in teaching and learning mathematics in general secondary school of Finfine surrounding special zone of Oromia?
2. What are the attitude of mathematics teachers and students toward continuous assessment?
3. What are the challenge the implementation of continuous assessment in teaching and learning mathematics in general secondary school of special Zone of Oromia regional state?

From total seventeen general secondary schools six general secondary schools were selected by purposive sampling technique. Out of selected general secondary schools three of them were selected from city administrations and three of them selected from woredas of the zone. The reason behind selecting by purposive sampling technique is to avoid more than one selection of general secondary schools from similar woreda and city administration. All mathematics teachers that belong to the selected general secondary schools were selected for study and from total 5564 belong to the zone of general secondary schools 551 students were selected for study. In order to answer the stated research questions descriptive survey design was applied. Frequency count and percentage was statistical method used to analyze and present the structured items of the questionnaire and observation quantitatively. Beside this the researcher used one way ANOVA and T-test for comparing the status of the implementation of continuous assessment between schools of the study area. Data obtained from interview, and document analysis was analyzed qualitatively.

1. **Finding related to the current status of continuous assessment in teaching and learning mathematics**

The majority of respondents responded that they include continuous assessment as part of their plan. But concerning the plan the researcher observed that most of mathematics teachers did not prepare their daily and weekly plan. They also use continuous

assessment rather than using terminal assessment (mid exam or final exam). They use different assessment techniques such as assignment, class work, group work, project work etc. regularly to assess their students. Beside the response obtained from questionnaire finding obtained from interview of teachers and students shows that there was no uniformity between teachers on implementing the continuous assessment techniques effectively even between teachers of the same school. Finding also shows that majority of teachers used the achieved results as feedback to evaluate their instruction. Finding obtained from interview of school teachers also showed that the awareness of most of the teachers on continuous assessment is good but there are variation between teachers and schools on the implementation of the program. But finding shows even majority of respondents implement continuous assessment there are limitation on the implementation of the program due to different factors. The study was also showing that homework, oral questions selected response item are the most continuous assessment most of the teachers used. This shows that the continuous assessment most of the teachers used was mostly cognitive oriented. The new prepared general secondary school mathematics text books, teachers guide and syllabus was also prepared as convenient as to promote continuous assessment.

2. **Finding related to the attitude of students and teachers toward continuous assessment.**

The finding showed that all mathematics teachers accepted that continuous assessment is necessary to increase the academic achievement of students. Most of them also accepted that they prefer continuous assessment than mid exam and final exam. From the finding most of the respondents accepted and believed that continuous assessments provides early indicators of the likely performance of students, make assessment more meaningful and more representative of learners over all abilities and strength the relation between teachers and students. Most of the teachers also accepted that it is possible to implement continuous assessment in large class size and they believed that continuous assessment is beyond testing regularly to improve the academic achievement of learners. Majority of the respondents was also refused the impossibility of continuous assessment on mathematics subject. According to the response obtained from interview of teachers and

school directors all teachers have positive attitude toward continuous assessment and they accept the program.

Concerning the attitude of students toward continuous assessment majority of them accepted that continuous assessment is necessary to increase their academic achievement and they accepted continuous assessment enable them to identify their strength and weakness. In one side finding shows majority of students responded they prefer to be assessed by final exam and mid exam than continuous assessment and in other side majority of them also responded that they preferred to be assessed by different assessment techniques like observation, group work, homework class work etc. but, these two idea contradict each other and study found that the knowledge of students on continuous assessment is low. Majority of respondents also accepted they like continuous assessment since it enable them mentally ready and avoid last minute cramming and continuous assessment provide them to provide practice to apply knowledge and skill and continuous assessment provides them opportunity and time to correct their mistake. Majority of respondents also refused the difficulty of mathematics and the impossibility of implementing continuous assessment in teaching and learning this subject. All the interviewed students also responded that they have positive attitude toward continuous assessment and they like to be assessed continuously.

**3. Finding related challenge facing the implementation of continuous assessment**

It was seen from the study that majority of the respondents accepted they have basic skill of recording and documenting students continuous assessment achievement. Most of the respondents was also accepted large number of students in a class, lack of school facilities such as colored chalk, stationary materials, duplication machine materials such as stencil and ink and additional school activates and work load, large instructional content , teachers lack of training were negatively affect their continuous assessment. Again all teachers and school directors accepted there was no clear manuals and guideline on how to implement continuous assessment. It was possible to observe from the finding that majority of respondents accepted the school directors give support to students on the implementation of the program but relatively the support of school supervisor is not satisfactory. According to the finding obtained from open-ended

questionnaire teachers' lack of computer skill, shortage of computer and lack of access internet, plasma television interruption, and teachers miss class, lack of equal commitment between teachers were also seen as the challenge facing the implementation of continuous assessment

The study was also identified the following opportunities for the implementation of continuous assessment:

There were 1:5 grouping strategy both for students and teachers which have great contribution to the implementation of continuous assessment. This grouping system was helping teachers to share their experience to one another on test construction, teaching learning methodology, and how to evaluate their students. Generally this grouping system develops the spirit of working together. It was also helping students to do group work, assignment and project work together. This made students more interested than informal group randomly made by teachers.

The study also analyzed that the prepared students text book, teachers guide and syllabus was convenient to promote continuous assessment. Even, teachers guide gave brief definition of continuous assessment and suggest different continuous assessment methods what the teachers have to use during the given lesson.

## 5.2. Conclusions

The researcher concludes in this study that continuous assessment is implemented in the study area. But, really it is difficult to say that it was implemented effectively because; there are some limitations on its implementation. Some of these limitations are: failure to use all modes of continuous assessment effectively. On using all mode of assessment the researchers concluded that most of the teachers did not use project work and observations effectively for assessing their students. This conditions lead teacher failure to use the three domains effectively for measuring his learners. Traditional assessment strategies are the most continuous assessment implemented in the study area. Again the status of the

implementation of continuous assessment is also not uniform throughout schools. There are also differences between woreda and city administrations. The study concluded that relatively, the status of the implantation of continuous assessment is better in city administration than woredas. Even though majority of respondents responded that they included continuous assessment as part of their plan the study showed that there was a problem on most of the teachers on preparing their daily and weekly lesson plan. From this problem the researcher concludes that since the teachers do not succeed to his work without plan this problem can affect teachers' continuous assessment implementation effectively. In general the study concluded that it is hardly possible to say continuous assessment is implemented effectively. Again it is hardly possible to say continuous assessment is not implemented. Accordingly, the researcher estimated that continuous assessment is moderately implemented in special Zone of Oromia surrounding Finfine. The study also concludes that the of new general secondary school mathematics text book, teachers guide and syllabus were also prepared conveniently to promote continuous assessment.

Concerning the challenge facing the implementation of continues assessment the study conclude that, lack of enough school facilities like paper, duplication machine materials such as ink and stencil, computer, additional school activities and large instructional content were the challenge facing the implementation continuous assessment. Lack of internet access, enough reference materials, plasma television interruption and teachers' lack of training were also the challenge facing the implementation of continuous assessment. The study also concludes that the existence of 1:5 grouping strategy of teachers and students, how the new general secondary school text book, teachers guide and syllabus prepared were the opportunities that initiate the implement of continuous assessment in teaching and learning mathematics.

Concerning the attitude of teachers and students toward continuous assessment the study concluded that teachers have positive attitude toward continuous assessment and they believed that continuous assessment is necessary to increase the academic achievements of their students, provides early indicators of the likely performance of students, make assessment more meaningful and more representative of learners overall abilities and

strength the relation between teachers and students. Again teachers believed that continuous assessment is beyond testing regularly to improve the academic achievement of students. Students have also positive attitude toward continuous assessment. But the awareness of students on continuous assessment is low.

### 5.3. Recommendations

Based on the summary of the finding of the study the following possible recommendations are forwarded.

1. Since the major factors that affect the implementation continuous assessment are lack of enough school facilities the school directors together with woreda education office have to participate community and nongovernmental organizations in order to reduce the problem seen on this direction and create convenient environment for teaching and learning.
2. Woredas or city administrations and Zonal education office should support the school by preparing in service training, workshop and seminars at regular intervals for teachers to overcome teachers basic skills of recording students' continuous assessment result and teachers have to avoid carelessly handling of continuous assessment result.
3. Since reference materials and internet access is the core for quality of education in general and to implement continuous assessment in particular the school must fulfill this shortage together with woreda educational office.
4. School directors and supervisors have to give support and follow up to teachers that the teachers have to prepare their daily and weekly lesson plan.
5. Since continuous assessment is not part of teaching and learning all teachers must equally commit and the necessary support must be given to them by the schools and woreda education offices.
6. Implementation of continuous assessment in teaching and learning process of mathematics is the core that further and deep study must necessary by scholars. So that studies that improve the implementation of continuous assessment was recommended by the researcher.

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# Appendix A

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDY

DEPARTMENT OF MATHEMATICS EDUCATION

**Questionnaire prepared for mathematics teachers**

This questionnaire will help to obtain information about the current status of continuous assessment implementation, the attitude of teachers toward continuous assessment and the challenge facing its implementation in teaching and learning mathematics in general secondary schools. So, your active participation in giving real information is very

important for the success of this study. Hence you are kindly requested to fill this questionnaire properly. Writing your name in any part of this questionnaire is not necessary.

Thank you!

**Part I**

**Direction**: The following questions are expected to address the current status of the implementation of continuous assessment, the attitude of teachers toward continuous assessment and factors that are influencing the implementation of continuous assessment in teaching and learning mathematics in your school. Please, use "x" to show your level of agreement under one of the five scales of measurement for each question.

Strongly agree (SA) = 5 Agree (Ag) =4 undecided (Und) =3 Dis agree (DA) =2

Strongly disagree (SD) = 1

## I. Question related to the current status of the implementation of continuous assessment in teaching and learning mathematics.

| No | Item | (SA) =5 | (Ag) =4 | (Und) =3 | (DA) =2 | (SD) =1 |
|---|---|---|---|---|---|---|
| 1 | When I prepare my lesson plan I include continuous assessment as part of my plan | | | | | |
| 2 | I use continuous assessment during teaching and learning mathematics | | | | | |
| 3 | I use different assessment technique like project work, assignment, class work, homework, group work etc. regularly to assess my students. | ` | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | I useonly mid exam and final exam in order to assess my students. | | | | | |
| 5 | I am not conseder informal assessment for measuring students performancee | | | | | |
| 6 | I assess my students' progress in their day to day activities rather than at the end of the unit or semester. | | | | | |
| 7 | I think in mathematics department the weakness of continuous assessment implementation was more reflected than its strength | | | | | |
| 8 | After assessing my students I used the achieved result as a feedback to evaluate my instruction. | | | | | |
| 9 | I give immediate and continuous feedback for my students about their achievement. | | | | | |
| 10 | I use continuous assessment format only for mid exam and final exam. | | | | | |
| 11 | I encourage peer assessment between students | | | | | |
| 12 | There is an opportunity to examine the strength and weakness of implementation of continuous assessment | | | | | |
| 13 | I make the continuous assessment mark to contribute for the total promotion mark | | | | | |
| 14 | All tasks used to assess the learners and information gathered about them to give decision about their achievement is well recorded and documented | | | | | |
| 15 | The implementation of continuous assessment is different from teacher to teacher and there is no uniform practice between classes in teaching and learning mathematics | | | | | |
| 16 | Mathematics teachers discuss by department about strength and weakness of the implementation of continuous assessment and take corrective measure. | | | | | |
| 17 | In case of our school continous assessment is not | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | imlemented in teaching and learning mathematics effectively. | | | | | |

II. **Question related to the challenge facing the implementation of continuous assessment.**

| No | Item | (SA) =5 | (Ag) =4 | (Und) =3 | (DA) =2 | (SD) =1 |
|---|---|---|---|---|---|---|
| 1 | I have the basic skills of recording and documenting students' continuous assessment achievement. | | | | | |
| 2 | I have different training opportunities on the implementation of continuous assessment at my school | | | | | |
| 3 | Due to the large number of students in the classit is difficult to assess students continuously. | ` | | | | |
| 4 | Lack infrastructure like chairs, chalk boards, stationary materials etc. impact on my continuous assessment | | | | | |
| 5 | The large size classroom affects my continuous assessment techniques by taking more of my time | | | | | |
| 6 | I believe that my work load and additional school activates affect my assessment | | | | | |
| 7 | I gate support from school supervisor on how to implement continuous assessment | | | | | |
| 8 | There are clear manuals and guidelines on how to implement continuous assessment. | | | | | |
| 9 | Little attention is given by school principal on the implementation of continuous assessment | | | | | |
| 10 | Large instructional content affect my continuous assessment | | | | | |

**III. Questions related to the attitude of teachers toward continuous assessment.**

| No | Item | (SA) =5 | (Ag) =4 | (Und) =3 | (DA) =2 | (SD) =1 |
|---|---|---|---|---|---|---|
| 1 | I think continuous assessment is necessary to increase the academic achievement of my students | | | | | |
| 2 | I prefer mid-term and final exam to assess my students than assessing continuously | | | | | |
| 3 | Because, continuous assessment is tiresome and take more of my time, I don't like using it | ` | | | | |
| 4 | I prefer to use continuous assessment since, it proveds early indicators of the likely performance of students. | | | | | |
| 5 | I don't see the relevance of continuous assessment for students' learningin teaching and learning. | | | | | |
| 6 | I believe that students don't like being assessed continuously | | | | | |
| 7 | Since mathematics is difficult and require much preparation,it is difficult to implement continuous assessment | | | | | |
| 8 | I like to use continuous assessment because, it will make assessment more meaningful and more representative of the learners' overall abilities | | | | | |
| 9 | Continuous assessment has no any influence on the academic achievement of students rather than wastage of resource and time. | | | | | |
| 10 | It is possible to implement continuous assessment in large class size | | | | | |
| 11 | I believe continuous assessment is beyond testing regularly to improve the academic achievement students | | | | | |
| 12 | Continuous assessment is impractical because, much of | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | the conditions for it are not fulfilled | | | | | |
| 13 | I believe that students must be assessed continuousely in order to assess their progress in their day to day activities | | | | | |
| 14 | Continuous assessment strength the relation between teacher and learners than old assessment progaram | | | | | |

**PartIV:Open ended questions**

1. Suggest on the current status of continuous assessement in teaching and learning mathematics

   _____
   _____

2. List the major factors that hindar or intiate the implementation of continuous assessment in your school

   _____
   _____

3. What do suggest to minimize the prolem that hinder the implementation of continuous assessment in teaching and learnig mathematics

   _____

   _____

# Appendix B

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDY

DEPARTMENT OF MATHEMATICS EDUCATION

**<u>Questionnaire prepared for General secondary school students</u>**

The purpose of this questionnaire is to obtain information about the current status of the implementation of continuous assessment, the challenge implementation of continuous assessment and the attitude of students toward continuous assessment. Your genuine response contributes much to the success of the research to be undertaken. Hence, you are

kindly requested to fill the questionnaire. Writing your name in any part of this questionnaire is not necessary.

Thank you very much!

**Part II**

**Direction**: Here are five point scales to measure the attitude of students toward continuous assessment in teaching and learning mathematics. Please, put "x" to show your level of agreement. These scales are:

Strongly agree (SA) =5 Agree (Ag) =4 Undecided (Und) =3 Disagree (DA) =2 strongly Disagree (SD) =1

| No | Item | (SA) =5 | (Ag) =4 | (Und) =3 | (DA) =2 | (SD) =1 |
|---|---|---|---|---|---|---|
| 1 | I think continuous assessment is necessary to increase my academic achievement. | | | | | |
| 2 | I prefer to be assessed by midterm and final exam than being assessed continuously | | | | | |
| 3 | Continuous assessment enables students to identify their weakness and strength. | | | | | |
| 4 | I preferred to be assessed with different assessment technique (like observation, group work, homework, and class work) | | | | | |
| 5 | I believe practical assessment assess better my performance and ability than paper and pencil assessment | | | | | |
| 6 | I do not prefer continuous assessment because, it wastes my time. | | | | | |
| 7 | I do not like to be assessed continuously since; mathematics is difficult and need more preparation. | | | | | |
| 8 | Continuous assessment increase load and make me busy | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | and I can't get enough time to prepare for all subjects equally | | | | | |
| 9 | The consequence of assessed by continuous assessment in mathematics learning is failure to the subject | | | | | |
| 10 | I like to be assessessed continuously because, it makes me always mentallyready and avoid last minute cramming. | | | | | |
| 11 | I am very interseted to continuous assessment because, it provide practice to apply knowlege and skills | | | | | |
| 12 | I like continuous assessment becouse, Continuous assessment provides apportunity and time to correct mistakes and help me to improve my accadamic performance | | | | | |

Part III: indicate "x" for the assessment methods (type) your mathematics teacher use.

| No. | Assessment methods | Use always | When necessary | Do not use |
|---|---|---|---|---|
| 1 | Homework | | | |
| 2 | Class work (individual, group) | | | |
| 3 | Assignment | | | |
| 4 | Observation | | | |
| 5 | Oral questions | | | |
| 6 | Project work | | | |
| 7 | Selected response items (multiple choice, true/false, matching etc.) | | | |

# Appendix C

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDY

DEPARTMENT OF MATHEMATICS EDUCATION

**Class room observation format**

**Part I**: Class room rating scale indicators

Very low =1  low =2  Medium =3  High =4  Very high =5

| No | Item observed | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Inclusion of continuous assessment in lesson plan | | | | | |
| 2 | Availability enough of recourse inside classroom such as chalk board, text books, chairs, | | | | | |
| 3 | Presence of continuous assessment format | | | | | |
| 4 | Recording of test scores | | | | | |
| 5 | Used different assessment tools | | | | | |
| 6 | Encourage peer assessment | | | | | |
| 7 | Encourage students participation by giving different activities | | | | | |
| 8 | Students participation on answering oral questions, class activity, group discussion etc. | | | | | |
| 9 | Teacher encourage students and give feedback during their participation | | | | | |
| 10 | Teachers give homework and give feedback on the given homework | | | | | |
| 11 | Assessment tools match lesson objectives | | | | | |

# Appendix D

Check list prepared for Document Analysis

**1. Check list about teachers' lesson plan**

| No | Items included in learners mark list | Yes | No | Remark |
|---|---|---|---|---|
| 1 | Objective of the lesson is stated clearly | | | |
| 2 | Students' and teacher activity are stated clearly and appropriately | | | |
| 3 | Different assessment techniques are listed in the plan | | | |

| | | | | |
|---|---|---|---|---|
| 4 | The prepared lesson plan is appropriate to promote continuous assessment | | | |
| 5 | The lesson plan is clear enough | | | |
| 6 | Appropriate time is given to the listed activities | | | |

**2. Check list about general secondary school text book, teachers guide, syllabus**

| No | Items included in learners mark list | Yes | No |
|---|---|---|---|
| 1 | Text book state the outcome of each lesson and unit clearly | | |
| 2 | text book include different assessment methods in every lesson and unit | | |
| 3 | Teachers guide state the outcome of each lesson and unit clearly | | |
| 4 | Teachers guide state the work of teacher and students clearly | | |
| 5 | Teachers guide and syllabus suggest different continuous assessment | | |
| 6 | Teacher guide and syllabus suggest both formal and informal Continuous assessment | | |
| 10 | Teachers guide and syllabus suggest on how to record students achievement | | |

# Appendix E

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDY

DEPARTMENT OF MATHEMATICS EDUCATION

The purpose of this interview is to obtain information about the current status of the implementation of continuous assessment, the challenge facing implementation of continuous assessment and the attitude of students toward continuous assessment.

Therefore, I kindly request you listen to each item thoroughly and provide the correct response.

Thank you very much!

A. **Interview for teachers**

1. What do you think the current status of the implementation of continuous assessment in teaching and learning mathematics in your school?
2. What can you suggest about the attitude of other mathematics teachers in your school on the implementation of continuous assessment?
3. What arethe major factors that hinder or facilitate the implementation of continuous assessment while you are teaching mathematics.
4. What should be done to improve the current implementation of continuous assessment in teaching and learning mathematics?

## Appendix F

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDY

DEPARTMENT OF MATHEMATICS EDUCATION

The purpose of this interview is to obtain information about the current status of the implementation of continuous assessment, the challenge facing the implementation of

continuous assessment and the attitude of students toward continuous assessment. Therefore, I kindly request you listen to each item thoroughly and provide the correct response.

**B. Interview for directors**

1. What do you think the current status of the implementation of continuous assessment in teaching and learning mathematics in your school?
2. What supporot does the school, woreda education office, zone or any other body give for teachers in general and for mathematics teachers in particular in order to encourage continuous assessment implementation?
3. What can you suggest about the attitude of students and mathematics teachers toward continuous assessment inteaching and learning mathematics?
4. What are the major challenge facing the implementation of continuous assessment in your school in general and in teaching and learning mathematics in particular?.
5. What should be done to improve the problem hindering the implementation of continuous assessment in your school particularly in teaching and learning mathematics?

# Appendix G

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDY

DEPARTMENT OF MATHEMATICS EDUCATION

The purpose of this interview is to obtain information about the current status of the implementation of continuous assessment, factors that are affecting the implementation

of continuous assessment and the attitude of students toward continuous assessment. Therefore, I kindly request you listen to each item thoroughly and provide the correct response.

**C. Interview question for students**

1. Do you think continuous assessment in teaching and learning mathematics is implemented properly in your school? How?
2. Do you like to to be assessed by continuous assessment in teaching and learnig mathematics? Why?
3. What do you suggest the challenge facing the implementation of continuous assessment in teaching and learning matematics?
4. What should be done for succsfull implementation of continous assessment in teaching and learning mathematics?

# Appendix H

አዲስ አበባ ዩኒቨርሲቲ

የትምህርትና ባህሪ ጥናት ኮሌጅ

የሒሳብ ትምህርት ክፍል

ለአጠቃላይ ሁለተኛ ደረጃ ት/ቤት ተማሪዎች የተዘጋጀ መጠይቅ

የዚህ መጠይቅ ዓላማ የተከታታይ ምዘና አተገባበር በሒሳብ ትምህርት መማር ማስተማር ሒደት በአሁኑ ወቅት ያለበትን ደረጃ፤ ተከታታይ ምዘናን ለመተግበር የሚያጋጥመዉን ተግዳሮቶችና ስለተከታታይ ምዘና የተማሪዎች አመለካከት ምን እንዳሆነ መረጃ ለመሰብሰብ ነው፡ ፡ በማንኛውም የዚህ መጠይቅ ገጽ ላይ ስም መጻፍ አስፈላጊ አይደለም፡

ስለሚደረግልኝ ተብብር በቅድምያ አመሰግናለሁ፡ ፡

ክፍል 1፡ -

ከዚህ በታች ተማሪዎች በተከታታይ ምዘና አተገባበር ላይ ያላቸዎን አመለካከት ለመመዘን የሚያስችል የመለኪያ ነጥቦች ቀርበወል፡ ፡ በተስማሚው ነጥብ ላይ የXምልክት ይደረግ፡ ፡

በጣም አስማማለሁ = 5 እስማማለሁ = 4 መልሱን አልችልም =3

አልስማማም =2 በጣም አልስማማም=1

| ተ.ቁ | የምዘና ዓይነት | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| 1 | ተከታታይ ምዘና የመማር ክህሎቴን ለመሻሻል ይረዳል ብዬ አምናለሁ፡ ፡ | | | | | |
| 2 | በተከታታይ ምዘና ከምገመግሙኝ በሴሜስቴሩ አጋማሽና በሴሜስቴሩ መጨረሻ በሚሰጠው ቢገመግሙኝ እመርጣለሁ፡ ፡ | | | | | |
| 3 | ተከታታይ ምዘና ተማርዎች ጥንካሬያቸዉንና ድክመታቸዉን እንዲለዩ ያስችለቸዋል፡ ፡ | | | | | |
| 4 | በተለያዩ የምዘና ዘዴዎች (ምልክታ፤ የቡድን ሥራ፤ የቤትስራ፤ እና የክፍል ስራ) ቢገመግሙኝ እመርጣለሁ፡ ፡ | | | | | |
| 5 | ተግባራዊ ምዘና ከፅሁፍ ምዘነ የበለጠ የስራ አፈጻጸሜን ይገመግማል ወይም ይመዝናል ብዬ አምናለሁ፡ ፡ | | | | | |
| 6 | ተከታታይ ምዘና ሰዓቴን ስለምያባክነዉ አልመርጠዉም | | | | | |
| 7 | የሒሳብ ትምህርት ከባድና ብዙ ዝግጅት ስለሚፈልግ በተከታታይ ምዘና መገምገም አልወድም፡ ፡ | | | | | |
| 8 | ተከታታይ ምዘና የሥራ ጫናን ስለሚፈጥርና ስራ ስነሚያበዛብኝ ለሌላ የትምህርት አይነት በቂ ግዜ አለገኝም፡ ፡ | | | | | |
| 9 | በሒሳብ ትምህርት ውስጥ በተከታታይ ምዘና መገምገም ውድቀት ነው፡ ፡ | | | | | |
| 10 | አኔ በተከታታይ ምዘና መመዘን አመርጣለሁ ምክንያቱም ሁሌ አእምሮዬን ንቁ | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | ስለሚያደርገኝና በመጨረሻ ከሚገጥመኝ መጨናነቅ ስለሚያድነኝ ነው፡ ፡ | | | | | |
| 11 | በሙከራና በተግባር የተደገፈ እውቀትና ክህሎት ለማግኘት ስለሚያስችለኝ ተከታታይ ምዘና በጣም ደስ ይለኛል፡ ፡ | | | | | |
| 12 | የትምህርት ብቃቴን ስለሚያሻሽልልና በወቅቱ ስህተቴን እንደርም አድል ስለምሰጠኝ ተከታታይ ምዘናን እመርጣለሁ፡ ፡ | | | | | |

ክፍል 2፡ - የሒሳብ መምህር የምጠቀመው የምዘና ዘዴ/ ዓይነት X ምልክት በመፃፍ አመልክት፡ ፡

| ተ.ቁ | የምዘና ዓይነት | ሁልግዜ ይጠቀማል | ስያስፈልግ ይጠቀማል | አይጠቀምም |
|---|---|---|---|---|
| 1 | የቤት ሥራ | | | |
| 2 | የክፍል ሥራ (በግል፤ በጋራ)(በቡድን) | | | |
| 3 | አሳይመንት (ቤትወሰድ) | | | |
| 4 | ምልከታ | | | |
| 5 | የቃል ጥያቄ | | | |
| 6 | ፕሮጀክት ስራ | | | |
| 7 | በመምረጥ የምመለሱ የጥያቄ ዓይናት (ምርጫ፤ እውነትውሸት፤ አዘምድ ወዘተ) | | | |

# Appendix I

YUNVARSITII FINFINNEE KOLLEEJJII BARNOOTA FI QO'ANNOO AMALAA

MUMMEE BARNOOTA HERREGAA

Gafannoo barattota sadarkaa lammaffaatif bahe

Sababbiin gafannoo kanaas akka mana baruumsaa waliigala sadarkaa lammaffaatti yeroo ammaa kana halli hojiirra oolmaa madallii walitti fufaa maal irra akka jiru, rakkoole rawwii madallii walitti fufaa muddataan fi haala baruuf barsiisuu barnoota herrega irraatti ilaalcha barattoonni madaallii walitti fufaa hojirra olchuu irraatti qaban odeeffannoo argachuuf jecha kan qophaa'ee dha. Milkaa'iina qorannoo kanaatiif gaaffilee bahaniif deebiin keessaan nuuf barbaachisaa dha. Kanaaf gaaffilee armaan gaditti qophaa'aan akka nuuf guuttaan ulfinaan isin gaafanna. Qaama gaaffannoo kanaa eddo kamittuu maqaa keessaan barreessuun hin babaachisu.

Galatoomaa !

**Kutaa I Qajeelfama:** Safartuulee shanaan armaan gaditti eeramaan haala baruuf barsiisuu barnoota herrega keessaatti ilaalcha barattootni madalli walitti fufaa hojirra oolchuu irraatti qabaan safaruf nu gargaara kanaaf safartuulee kennamaan keessaa kanatuu ta'uu qaba jettee kan mirkaneffattee jalatti mallattoo "X" ka'uun deebisi. Safartuuleen kunis:

Baayyeen itti walii gala (B.I.W)=5 Ittan waliigala (I.W.G)=4 Murteessuuf nadhiba (M.N)=3 Itti walii hin galu(I.W.H)=2 Baayisee itti walii hin galu (B.I.W.H)=1

| Lak | Gaafannoolee(yaada) | B.I.W =5 | I.W.G =4 | M.N =3 | I.W.H=2 | B.I.W.H =1 |
|---|---|---|---|---|---|---|
| 1 | Madaallii walitti fufaan milkaa'ina qabxii barnoota kiyyaaf barbaachisa | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | dhajedheen yaada. | | | | | |
| 2 | Madaallii walitti fufaan madaalamuu irra qormaata gamisa seemisteeraa fi dhuma seemisteeraatiin madallamuun filadha | | | | | |
| 3 | Madaallii walitti fufaan barattoonni ciminaa fi dadhabina isaanii addaan fo'achuuf isaan dandeechisa. | ` | | | | |
| 4 | Maloota madaallii garagaraatin (kan akka daawwannaa, hojii garee, projeektii, hojii manaa fi daree) madaalamuun filadha. | | | | | |
| 5 | Madaalliin gochaa madaallii barreeffamaa caalaa raawwii hojii kiyyaa fi dandeetti naaf madaala jedheen yaada. | | | | | |
| 6 | Madaallii walitti fufaan yeroo kiyyaa waan najalaa qisaasesuuf hin filadhu. | | | | | |
| 7 | Barnoonni herregaa cimaa fi qophii baayee waan barbaaduuf madaallii walitti fufaan madaalamuu hin jaladhu. | | | | | |
| 8 | Madaallii walitti fufaan ulfaatina hojii dabaluu fi hojii waan natti baayisuuf gosa barnoota kaanif yeroon itti qophaa'u gahaa hin argadhu. | | | | | |
| 9 | Barnoota Herregaa keessaatti madallii walitti fufaan madaallamuun kufaati dha | | | | | |
| 10 | Jala gaahanii dhiphachuu waan nanarraa hambisuu fi yeeroo mara sammuun qophaa'aa waan nataasisuuf madallii walitti fufaan madaallamuu naan jaalladha | | | | | |
| 11 | Sababa beekumsaa fi dandeetti hojiidhaan muullisuufuu madallii walitti fufinsaatti baayeen itti gammada | | | | | |
| 12 | Madaallii walitti fufaan dogoggora kiyyarraa akkan baradhu fi gaa'uumsa barnoota koo akkaan fooyyeeffadhuuf carraa waan naa uumuuf baayeen jalladha. | | | | | |

Kutaa II

**Qajeelfama**: Tooftaalee madallii barsiisaan keeitti fayyamadamu mallattoo “X” n agarsiisi.

| lakk | Tooftaalee madallii | Yeeroo mara fayyada | Yeeroo barbaachise | Hin fayyadamu |
|---|---|---|---|---|
| 1 | Hoji manee | | | |
| 2 | Hojii daree (gareen, dhuunfaan) | | | |
| 3 | Assaayimantii | | | |
| 4 | Do’aannaa | | | |
| 5 | Gaaffii afaanii | | | |
| 6 | Hojii projeektii | | | |
| 7 | Gaaffilee filachuun deebi’aan (filannoo, dhugaa ykn soba, froomsee kkf) | | | |