

**FACTORS INFLUENCING STUDENTS' METACOGNITION  
ABILITY IN RELATION TO ACADEMIC PERFORMACE  
A CASE OF SELECTED SECONDARY SCHOOLS IN  
MOROGORO DISTRICT COUNCIL**

**By**

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**A Dissertation Submitted to the Faculty of Social Sciences in Partial Fulfillment  
of the Requirements for the Degree of Master of Arts in Education (MAED) of  
Mzumbe University**

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## CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled “***Factors Influencing Students ’ Metacognition Ability in Relation to Academic Performance: A Case of Selected Secondary Schools in Morogoro District Council***”, in partial fulfillment of the requirements for award of the degree of Master of Arts in Education of Mzumbe University.

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**DEAN, FACULTY OF SOCIAL SCIENCES**

## **DECLARATION AND COPYRIGHT**

I, Mussa Omari, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

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## **DEDICATION**

This dissertation is dedicated to my caring parents Mr. and Mrs. Tufahamu and to my beloved relatives Ahmad, Zubeda and Khadija. Their prayers and encouragements have made my academic journey prosperous. I am proud of them, and therefore this work is their remuneration. May God Bless them all!.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

|        |                                               |
|--------|-----------------------------------------------|
| UTR    | United Republic of Tanzania                   |
| WEO's  | Ward Education Officers                       |
| SPSS   | Statistical Package for Social Sciences       |
| MOEVT  | Ministry of Education and Vocational Training |
| EEF    | Education Endowment Foundation                |
| BRN    | Big Results Now                               |
| CAMFED | Campaign for Female Education                 |
| NECTA  | National Examination Council of Tanzania      |
| SEDP   | Secondary Education Development Programme     |
| ESDP   | Education Sector Development Programme        |
| MA     | Metacognitive Ability                         |
| CBC    | Competence Based Curriculum                   |
| FGD    | Focus Group Discussion                        |

## **ABSTRACT**

The study explored the factors influencing students' metacognition ability in relation to academic performance. The study was guided by three objectives; to assess awareness of education stakeholders in relation to academic performance; to identify factors contributing to building students' metacognition abilities in relation to academic performance, and; assessing the usefulness of factors building students' metacognition ability in relation to academic performance.

The study employed a qualitative approach and explorative case study design. A sample of 53 respondents was drawn from 3 secondary schools for data collection. Data was collected using interviews, focus group discussion, open ended questionnaires, and documentary review.

The study findings revealed that people were aware with the importance of metacognition ability and its contribution to student's academic performance. Factors influencing students' metacognition ability in relation to academic performance include quality of teachers, in-service teachers training programmes, guidance and counseling, good instructional methods and materials, school environment as well as parent cooperation.

This study recommends that, the government should establish concrete programmes to strengthen the quality of metacognition abilities of students in schools. Budget should be allocated to cater for trainings that shall help teachers enhance the metacognition abilities of their students. Furthermore, plausible policy engagement approaches should involve education stakeholders from the grass roots level of teachers, parents, and community members. In addition there must be strong public-private partners in efforts to improve students' metacognitive abilities.

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## **CHAPTER ONE**

### **OVERVIEW OF THE STUDY**

#### **1.1 Introduction**

This chapter presents the background of the study, statement of the problem, general and specific objectives. It also includes the research questions, significance of the study, and scope of the study. The background highlights important aspects of education on metacognition ability of the students. It covers its historical perspective in relation to academic performance globally, regionally and locally with specific focus on Morogoro District Council.

#### **1.2 Background of the problem**

Metacognition is a concept which was first used by Flavell in 1976. It refers to the capacity to reflect upon, understand and control one's learning. According to Abdellah (2015), many studies concerning metacognition have been conducted by psychologist researchers in the field of educational psychology. Flavell (1979) conceptualized metacognition as the awareness and cognition about cognitive phenomena. He simply defined metacognition as thinking about thinking. Schraw and Moshman (1995) commented that metacognition is a person's capability to understand and regulate processes of cognitive. It is also known as the ability to regulate or monitor ones presentation and chart learning plans based on learning and performance approximation (Dunbsky & Thiede, 1998).

Modern studies about metacognition have got two types, which are knowledge and regulation metacognition (Flavell, 1979 & Schraw and Dennison, 1994). Metacognition knowledge is referred to what we understand about processes of cognition and can be known as declarative routine (Schraw & Moshman, 1995). Metacognition regulation is referred to the real action that person involve in so that to influence learning and memory. It is the act of controlling ones thoughts and learning (Schraw & Moshman, 1995).

Metacognition plays a very significant responsibility in education because it helps learners to be proficient to building up a plan, monitor, and assess how much it is effective. That means metacognition enables learners to involve more in process of learning (Costa & Kallick, 2001). Dunning, Johnson, Ehringer and Kruger (2003) suggest that metacognition is central factor in learning and is forecaster of academic achievement. Biggs (1985) believed that there is a positive relationship between the use of metacognition and academic achievement. Jacobs and Paris (1987) claimed that, metacognition support student academic performance. The report of Watkins and Hatlie (1992) stated that learner of high academic achievement tend to use ways of metacognition ability more than lower achieving students. The investigation of metacognition skills on academic achievement of high schools pupils found that metacognitive ability tends to relate absolutely with academic affection of high school pupils (Maqsud, 1997).

Rahman et al. (2010) investigated the result of metacognition consciousness on performance of learners in chemistry. The study found that it was extensively related to the student's academic performance. Many studies revealed that metacognition of ineffective and effective learners differ. The effective ones are more strategic and able to solve problem compared to ineffective ones (Vadhan & Stander, 1994). Researchers have agreed that metacognition ability have great influence to the academic success (Martin & Shore, 2007; Coutinho, 2007; Turan & Demrrel, 2010). This is justified by the report provided by Uwzurike (2010), Kocak and Bayaci, (2011) and Al Jarrah and Obeidat, (2011) which states that learners with high metacognition ability express high quality of academic performance different to learners with lower metacognition ability. This confirms the point that metacognition is considered as the predictor of academic achievement. The research conducted by Cazan (2012) states that most researchers have focused on academic performance but academic adjustments and metacognition are not given a due attention. Research has shown that, successful academic adjustments reflect students learning behaviour and academic performance.

Although metacognition is known to be the key and among vital factors that manipulate students' academic performance, some indicators show that it has not received its due attention in analysing causes of poor examination results of students over the world. The reports from different countries in the world show that there are a lot of factors that influence student's academic performance and that metacognition has not been mentioned or considered (Mkalagale, 2013; Shabani, 2013; and Mlozi, 2000). In such situation students are treated as victims of other factors contributing to their poor performance as if they are devoid of any responsibility to carry out correctly in order to enhance their academic performance. This is against a theoretical argument by Everson and Tobias (1998) that metacognition abilities help in estimating ones knowledge related to academic attainment in teenager years while young learners learn a great deal of fresh information and overtime, successfully learn to update their knowledge as new ideas, facts and procedures are required.

The research conducted in India by Narang and Saini (2013) states that metacognition holds great role in assisting learners to do better and be in position to be successful with good academic results in terms of grades and intelligence tests. Jaleel and Premachandran (2016) commented that metacognition is the awareness of one's thinking and the strategies one is using and enable student to be more mindful of what they are doing, and why and how the skills they are learning might be used differently in different situation.

Coutinho (2007) investigated the relationship between goals, metacognition and academic success in the United States of America. The study revealed that, supporting training programmes, instructing on how to adopt successful metacognitive skills and learning how to master information are alternatives for seeking good performance. The study emphasizes teaching techniques that present ideas to student in a system that use metacognition strategies.

In South Africa, a study concerning metacognition and academic performance was conducted by Rooyen (2014). Metacognition strategies and academic performance among children with learning problem revealed that children with poor performance

will perform well when taught skills of depending himself or herself. The skills will make him or her perform well academically.

The study which was conducted in Kenya by Oyunga, Aloka and Raburu (2016) unveiled the connection between metacognitive learning strategies and academic performance among Orphanage secondary school students that metacognition plays a critical role in victorious learning. It is therefore essential to study metacognition movement and progress to determine how orphans can be taught to better apply their cognitive resources. These metacognitive learning skills affect performance of the orphans in schools. The study findings showed a constructive correlation between metacognition and student's academic performance.

In Tanzania the issue of academic performance of students in secondary schools has been examined by researchers (Mlozi, 2000; Mkalagale, 2013). The study was influenced by the idea that education is initiative process of preparing man through training in a particular area so that to play a certain active purpose in the society. It provides an attractive and worthwhile thought, skills, attitudes, awareness and understanding for the development of human thinking and activities (URT, 1995). Studies have explored the causes for student academic achievement. Self -efficacy and task value are constructs that have emerged as being strong predictors of academic motivation and performance (Bong, 2001). Kuh et al. (2007) states that student success should include some variables like students background of the education environment and quality of effort or development of student behaviour.

There are different variables enhancing student's academic achievement and performance in Tanzanian secondary schools. Student's social economic background is extensively researched and debated as a factor among educational professionals that contribute towards the academic performance of students (Duke, 2000). Other studies ventured on factors like quality of teachers, materials, and infrastructure as influencing much student's academic performance (Nghambi, 2014; Mhonyiwa, 2014). Based on knowledge generated in such studies, the Ministry of Education Vocational Training have been laying down different strategies geared at improving academic performance in both primary and secondary schools. In addition, teachers

have been encouraged to use different evidence based strategies to improve student academic performance. For instance, Mtitu (2014), Kafyulilo, Innocent and Ikupa (2012) and URT-MOEVT (2010) insist that teachers have to apply student centered method that needs teachers to actively involve students in teaching and learning process. Further, programmes like Secondary Education Development Programme (SEDP) and Big Result Now (BRN) were introduced to improve quality of education as well as students' academic performance. Thus this study was set to investigate factors contributing student metacognition ability with relation to academic performance.

### **1.3 Statement of the problem**

URT (2005) states that the general aim of Secondary Education Development Programme (SEDP) in Tanzania is to ensure quality education and targets to increase the pass rates for division I to III from 36% in 2004 to 70% in 2009. In contrast however the report of the Ministry of Education and Vocational Training (URT, 2012) shows that, academic achievement of learners has been collapsing. At national level the trend of pass rate for division I to III was 36% in 2007; 31% in 2008, 17.91% in 2009; 11.59% in 2010, and 10.05% in 2011(URT, 2012). The Education Sector Development Programme (ESDP) 2008-2017 annual sector review recommended for good teaching forces and process, institutionalization good management and governance to improve student performance (URT, 2010)..

The Government of Tanzania has been working hard to improve performance in the secondary school sub sector along those recommendations but poor performance remains to be a problem. One would expect that if the government has put such efforts and good schools have good teachers, well resourced text books, good school infrastructure and general improved teaching and learning environment, the academic achievement would not be like the above five years 2007 to 2011. However, there is a dearth of information on how students' metacognitive abilities should be taken into consideration in enhancing efforts to improve performances. There is limited information on factors that can contribute to improving students metacognitive abilities which has significant contribution to students' performances.

It is upon this background that this study was set to investigate other factors other than those stipulated in various government policies and programmes by investigating factors influencing student metacognition ability for improving their academic achievement in selected Morogoro District council secondary schools.

Morogoro academic performance for secondary school students is without exception. Students still perform poorly despite the effort made. The national form four examination results of 2018 in some of Morogoro district council secondary schools revealed that students still perform poorly.

**Table 1.1. Form four national examination results**

| YEAR | SCHOOL  | DIV I | DIV II | DIV III | DIV IV | FAIL  |
|------|---------|-------|--------|---------|--------|-------|
| 2018 | TAWA    | 0     | 0      | 01      | 09     | 06    |
| 2018 | KISEMU  | 0     | 4      | 09      | 23     | 12    |
| 2018 | MATOMBO | 0     | 4      | 03      | 49     | 04    |
| 2018 | KIBOGWA | 0     | 0      | 0       | 08     | 09    |
|      |         | 0     | 8      | 13      | 89     | 33    |
|      |         | 0%    | 5.8%   | 94%     | 64.9%  | 24.0% |

**Source:** National Examination Council of Tanzania CSEE results (NECTA) 2018

The results in Table 1.1 show that, over 88.9% of form four students' examinations results in 2018 is poor division (four and zero). This is alarming and it suggests that school performance is more than school infrastructure and the like.

## **1.4 Research objectives**

### **1.4.1 General objective**

To investigate factors influencing students Metacognition capabilities with relation to student academic performance.

### **1.4.2 Specific objectives**

- i. To assess awareness of education stakeholders on the concept of metacognitive abilities with students academic performance
- ii. To identify factors contributing to the building of students metacognitive abilities in relation to academic performance.
- iii. To assess the usefulness of the factors considered in building student metacognition capabilities in relation to students' good academic performance.

### **1.5 Research questions**

- i. Are the education stakeholders aware on the concept of metacognition ability that used to build student academic performance?
- ii. What are the factors to be considered in building students metacognitive abilities enhancing students' academic performance?
- iii. What are the usefulness of the factors building student metacognitive capacity with relation to academic performance?

### **1.6 Significance of the study**

The study is important toward academic societies in Tanzania. The role of metacognition as the key learning factor to the students' academic performance is well recognized. These skills are very influential to student academic achievement in all subjects. The study may provide necessary information regarding metacognitive strategies and learner academic achievement. The overall significance of this study may generate a new knowledge resulting in metacognition skill in student academic performance. The finding of the study may help education actors and stakeholders to come up with new ways that may help students to enhance metacognitive ability in order to improve academic performance. It may also help educational planners to come up with special programmes and ways that will help all students in primary school and those who enter in secondary school.

Also the study will help policy makers to understand on the new ways and ideas that are found as influential for their day to day policy making process, whereby the policy can be innovated through the finding of the study. The study also adds some new ideas on the theory that is used in teaching and learning activities.

### **1.7 Scope of the study**

The study was conducted in selected community secondary schools in Morogoro District Council, Morogoro region in Tanzania. The study involved teachers, students themselves, Ward Education Officers (WEO's) as the population for the study data. The study investigated much factors influencing metacognition ability of student with relation to academic performance and not otherwise.

## **1.8 Operational definition of terms**

In this part different definitions provided in important terms used in the study.

### **1.8.1 Teacher**

URT (1978) describes a teacher as an individual who has proper certificate under education act of 1978.

### **1.8.2 Academic performance**

According to Adediwura and Tayo (2007), academic performance is the representation of knowledge achieved or abilities developed in school subject teachers. Regular examination is the way that used to assess student academic performance (Bell, 2014).

### **1.8.3 Poor performance**

Aremu (2003) believed that low marks decided by examinee are a feature for poor performance. The research in Mathematics performance revealed that mathematics teachers were not happy with the performance of their students in Mathematics (Ramirez, 2006). Tali and Dar (2014) suggested that metacognition trainings will enable the low achievers to make progress in mathematics and solve the same number problem on the post-test as normal as the normal achievers solve on the pre-test.

### **1.8.4 Metacognition**

Metacognition can be defined as any knowledge or any cognitive activities that take object as it is, or regulate any feature of any cognitive enterprise or cognition about cognition (Flavell, 1995). According to Flavell (1971) in Densmore et al. (2008) metacognition is an act of building and telling the successfully aspects of how person can monitor, control or thinks person cognition and he farther conceptualized metacognition as thinking about thinking .It is the capacity to plan a way that produce the needed information and being aware on the act of problem solving and evaluate our own thinking productivity (Whimbey &Whimbey, 1976).

According to Kramarski and Mavarech (2003), metacognitive knowledge is known as the ability to manage and regulate problem solving process without specific domain and therefore among domains. It is the way learners monitor and purposefully direct their learning (Chiesa & Robertson, 2010). Kuhn and Dean (2004) explain metacognition enable learner to cope with his/her environment. It is often defined as a form of executive control evolving monitoring and self-regulation, a point echoed by other researchers (Schneider & Lockl, 2002). Metacognition refers to person knowledge of, and ability to control over, his/her cognitive implementation, that is, what the individual knows about his/her cognitive actions for the duration of the performance of some task (Lester, Garofalo, & Kroll, 1989).

#### **1.8.5 Metacognition and academic performance**

According to Paris and Winograd (1990) one among the significance of cognitive monitoring is to improve learning. Butler and Winne (1995) emphasized that many scholars agreed that effective learners are regulating. Boekaerts and Simon (1995) viewed metacognition as self regulatory. Furthermore Schraw (1998) explained that student performance can be improved by metacognition regulation because student use resources and existing techniques in a better way. These findings are in line with Camahalan (2006) suggested that student academic success possible developed if students are given opportunity to manage themselves and openly trained about metacognitive learning approaches. .

#### **1.8.6 Strategy**

Strategy refers to the basic directional decision, that is, to purposes and mission or important actions necessary to realize these direction. Also, strategy defined as how those things are going to be achieved. In other way strategy is not a mission while it is the plan that allows the mission to be accomplished.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter attempts to review literature related to the study by looking at Tanzanian education system especially on factors for poor performance of the students. The chapter includes definitions of the key terms, theory, empirical reviews and conceptual framework. Also the chapter includes the study gap that is depicted from different reviewed materials.

#### **2.2 Theoretical review**

##### **2.2.1 Metacognitive strategies**

It is a metacognitive approach which aimed to control and monitor our thought in a way that it checks accuracy of memorization, technique and guide the selection correct reasoning strategy for the assigned task. Metacognitive strategy refers to the ability of person cognitive strategies to achieve precise objectives, for example when students ask themselves questions about the work and independently find the way to solve them (Flavell, 1981). In addition Boekaerts and Simons (1995) see metacognition strategies as the choices students make in the whole process of learning. There are various metacognitive strategies intended at rising learners' metacognition (Costa, 1984; Blakey & Spence, 1990; Brown, as quoted in Boekaerts & Simons, 1995).

##### **2.2.2 Constituent elements of the metacognition**

According to Lai (2011) there are two components of metacognition which is knowledge and regulation. The first component which is knowledge contains awareness of the students and the aspects that influence performance and give reason about the purpose of using a certain strategies. On the other hand metacognition regulation is the action of monitoring student understanding which contains activities planning, conception awareness, duty performance and evaluation of effectiveness of monitoring process and strategies. This was also observed by Schraw and Moshman (1995) and Schraw et al. (2006).

**Table 2.1: Typology of metacognitive components**

| Metacognitive component | Type                                                                                                                                                                                                                                                                                                                 |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cognitive knowledge     | <ul style="list-style-type: none"><li>-Knowledge about oneself as a learner and factor affecting cognition</li><li>-Awareness and management of cognition including knowledge about strategies</li><li>-Knowledge about why and when to use a given strategy</li></ul>                                               |
| Cognitive regulation    | <ul style="list-style-type: none"><li>-Identification of selecting appropriate strategies and allocation of resources</li><li>-Attending to and being aware of comprehension and task performance.</li><li>-Assessing the product and process of one's learning and revisiting and revising learning goal.</li></ul> |

**Source:** Adopted from Lai (2011)

### **2.2.3 Strategies for enhancing metacognition**

According to Education Endowment Foundation (2011), teachers can use different ways to develop metacognition, independent of ranking level and subject era. These strategies include; plan for prior to any learning. Teacher should point out ways and steps for problem solving, rule to remember, and direction to follow. Time constraints, aims and grounds rules that learners must operate understand and internalize. This helps students to understand the subject taught and to perform well easily.

Generating questions: It is useful for the student to pose study questions for themselves prior and during their reading of textual material. This self regulation for question facilitates comprehension and encourage student to pause frequently and think about main events they know, if they have grasped the concept.

Choosing consciously: Teachers can promote metacognition by helping students to explore the consequences of their choice and decision prior to and during the act of decision. Another strategy is by evaluating with multiple criteria where by teachers can enhance metacognition by causing student to reflect upon and categorize their action according to two or more sets of evaluation criteria.

Taking credit: Teachers may cause student to identify what they have done well and invite them to seek feedback from their peers. Outlawing “I can’t” is another strategy in which teacher can inform students that their excuse, “I can’t”, “I don’t know how to” or “I’m too slow to” are unacceptable behaviors in the classroom.

Labeling student behaviour: When teacher place label on student’s cognitive process, student will become conscious of their own actions. Role playing and simulations also is one among the metacognitive strategy for promoting metacognition because when a student assumes the roles of their person’s, they consciously maintain their attributes and characteristics of that person.

Education Endowment Foundation (2011) developed some important recommendations that reviewed from different available international research and consulted experts, teachers and academics to arrive at key principles for effective teaching. These recommendations may help teachers to enhance their student metacognitive ability and perform well. These recommendations include:

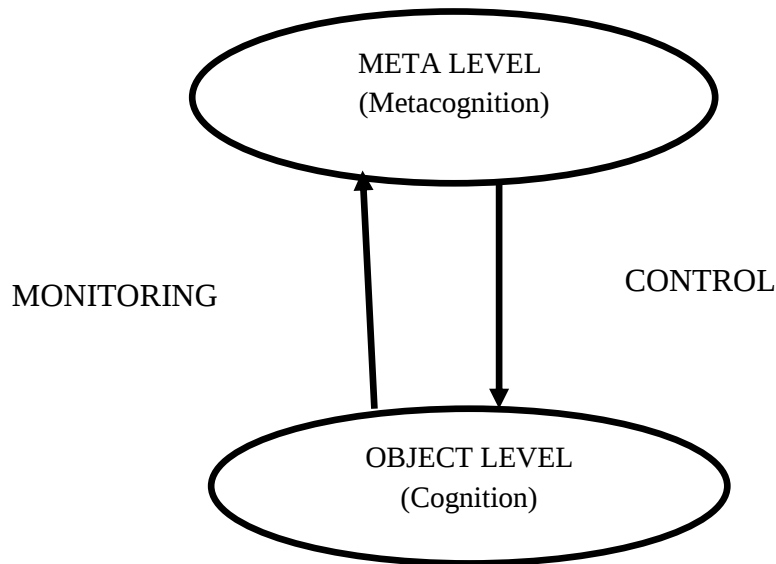
Teachers should acquire the qualified understanding and skill to expand their pupils’ metacognitive knowledge, clearly teach pupils metacognitive strategy including how to plan, monitor and assess their learning. Model your own thinking to help students develop their metacognitive and cognitive skills, set a suitable level of challenges to develop pupils’ self regulation and metacognition, promote and develop metacognitive talk in the classroom, explicitly teach pupils how to organize and effect their learning independently and school should support teachers to develop knowledge of these approaches and be expecting them to be applied appropriately.

These recommendations provided if used effectively by the teachers can be the appropriate way that will help students to raise their metacognitive abilities and perform well their studies especially Mathematics subject.

### **2.3 Theory**

The theory used in this study is called Nelson and Naren’s (1990) model of metacognition. This model helps to understand that if strategy one used to solve a Math’s problem is not working one need to try another approach.

**Figure 2.1: Model of metacognition**



**Source: Nelson and Narens' (1990)**

The theory of metacognition cited in the literature is Nelson and Narens' (1990) model of metacognition. This model consists of two levels of "Meta".

The object level (cognition) is where cognition process or one's thinking occurs. At this level cognitive strategies (decoding) are used to help learners achieve a particular goal (more understanding).

At the Meta level (metacognition) one is thinking about how thinking is taking place. At this higher order level, metacognitive strategies are used to ensure the learners reach the goal they have to reach. To continue with the reading example this would begin with the student thinking about how fine they have understood the lesson taught.

## **2.4 Determinants of academic performance**

The determinants of student's academic achievement are class participation, class works, homework assignments, test, examinations and participation competitions or other events. The pressure of parents and other individuals upon teachers and schools administrators to improve the academic achievement helped schools to come up with better ways including promotion of extra-classes for students, effective

teaching, learning methods, technology, rewarding for good performance act as a motivating factor and when they achieve low grades (Nyagosia, 2011). Teachers who reward those who get good performance motivate the study and improve students' academic performance, then they would be motivated to study and improve their academic performance (Kapur, 2018)

## **2.5 Awareness of metacognition in academic performance**

Self awareness is more significant because it goes with mental health and well-being of a person and includes considerable daily functioning effects. It has great influence to academic performance manifested with mindful encouragement followed by works despite the related performance stress (Feldman, Dunn, Stemke, Bell, & Greeson, 2014). Self-awareness is defined as the persons' extent to be aware and conscious about their innate states and their relationship with others (Trapnell & Campbell, 1999; Trudeau & Reich, 1995).

Awareness occurs when a person is adequately informed about a certain issue for him/her to be aware of its being and its extensive subject matter (Meager et al., 2002). In this sense, awareness of Metacognition concept and its factors led to academic performance implies that the person heard the issue and knows the area in which it relate.

Knowledge needs a theoretical or practical understanding of a subject (Meager et al, 2002). In this sense, knowledge of concept of metacognition with relation to students' academic performance implies that the individual could demonstrate some understanding of the detailed provisions of the legislation. Guidance in recognizing and practice in applicability of metacognitive techniques are very important and help student to deal with problem in his or her life. Monitoring is the most important learning process by activities such as self-management, self-questioning, anticipation, elaboration and verification. It is the learning procedure which is the focus during monitoring. The study conducted by Lucangeli, Galderisi and Cornoldi(1995) revealed that academic performance affected more by individual thinking ability of student..

Students with strong metacognition ability tend to perform well quit different to weak one. Those who have weak metacognition ability can be trained so that they can perform well. Person's differences exist in metacognition and people with poor metacognition found they are not able to perform well as their relative one (Kruger & Dunning, 1999). Metacognition helps pupils to be tactical in their learning by learning new information rather than focusing on studying information already learned (Everson and Tobias, 1998). Brown (1978) suggested two main principles of metacognition which were significant for teaching. First, he suggested knowledge of cognition which aim to identify what we know about our reasoning and the second one is regulation of cognition that is how we regulate ourselves so that to accomplish something. This element contains planning, evaluating and helps people to select, allocate the resources and use it more efficiently (Schraw, 1998). In the study conducted by Coutinho (2007) revealed that there is connection between self effectiveness and metacognition ability in performance. He believed that the ability to think independently is a factor that influence self efficacy while self-efficacy remain as the interpreter of performance.

## **2.6 Factors influencing metacognition and academic performance of the students**

There are different factors that influence the academic achievement of the learner in secondary schools. These include:

### **2.6.1 Availability of teaching resources/materials**

The availability of teaching material involves textbook, teachers guides, reference books, classrooms charts, maps, chemical and laboratories apparatuses, these are key ingredients in learning and teaching thus student' academic achievement (Wiggins, 1998).

Chonjo (1994) identified that inadequate teaching materials and poor teaching methodologies led to poor performance in secondary schools in Tanzania. Teaching and learning materials are major issues that influence student academic achievement (Maina, 2010). The government of Tanzania provides teaching materials according

to the level of education (MoEVT, 2006) and adequate learning materials are necessary for effective instruction (Lezotte, 1991).

### **2.6.2 School teaching and learning environment**

The school learning environments involve surrounding atmosphere and position of the school which should be favourable for students learning (Kaguo, 2011). In order to attain good performance in education, superior education setting should be strongly considered (Ibid). Sayi (1993) argues that physical school facilities are most needed by the school system to attain their goals. Mosha (2000) mentioned four things that are essential to make a school effective which are desirable internal attribute, supportive external atmosphere and good teaching-learning and positive school climate. Teaching and learning environment have six important functions which are collaborate, inform, communicate, produce, scaffold and manage (Basque & Dore). The ‘classroom climate’ metaphor has become increasingly used as a model for generate analyses of the interior and exterior factors that influence students’ performance (Moos & Trickett, 1987; Fraser & Tobin, 1990; Fraser, 1993). The Education and Training Policy of the United Republic of Tanzania want the secondary school owners and managers to make sure that there is attractive teaching environment in their schools that include the availability of school infrastructures, facilities and quality instructional materials that are necessary for effective teaching and learning (URT, 1995).

### **2.6.3 Motivating and encouraging students**

Kapur (2018) states that when the student faces difficulties during the learning period assistance from others should be encouraged so that to solve them. A teacher should repeat what was taught when finds the students did not understand it and should provide them class work as well as home works in order to make them understand more (Srinivas & Venkatkrishnan, 2016). According to Wamocha et al. (2008) one of the roles of head teachers is to promote student’s academic performance, through motivational strategies after achievement of Kenya Certificate for Secondary Education (KCSE) academic achievement. They recommended that head teachers should enhance teachers’ motivation in order to achieve good academic results (Kapur, 2018). According to Ndemba (2014) principals enable

favorable environment for student very often. Teachers have, among other things, been metaphorically referred to as motivators, coaches, scholars, taskmasters, mentors, and managers (Paris, 1988; Costa, 1991)

#### **2.6.4 Teaching-learning methods**

The teaching and learning techniques should be appropriate and encouraging to the students. Teachers in school are the ones that give a very influential learning activity among the students by using effective teaching methods that are beneficial to the learners. (Kapur, 2018). Teaching methods are very important in academic development of students (Matezynski, Rogus, & Lasley, 2000).

Teaching and learning methods are elements of an instructional programme that helps learner to build cognitive and problem solving skills. (Ridnover, 2011). Researches confirmed instructional methodologies that aid in teaching and learning process include student-centered and scaffolding (Kibas, 2018). Mushashu (2000) believed that all the teaching techniques used by the teacher should aim to influence student learning activities. Teaching methods are associated to the students' achievement and therefore, appropriate teaching methods used in schools will guide good academic achievement.

#### **2.6.5 Well trained and qualified teachers**

Qualification of teachers deal with the levels of formal education attained, experiences, specialization and subject mastery (Kaguo, 2011). A valid diploma in education from recognized institution is the lower grade of education for secondary teachers (URT, 1995). The quality of learner learning is in a straight line related to the quality of teaching. Therefore, a very important way to improve learning is to improve teaching (Angelo & Cross, 1998). Professionalism and friendly attitude on the part of the teachers are utmost significance in contributing academic performance of the students in a positive manner (Kapur, 2018). The teaching should be implemented in a calm and pleasant manner. It has also been suggested that teachers should be able to administer cognitive strategy instruction successfully (Petersen & Swing, 1983) and that "when training in metacognition is integral with normal

lessons, it has to be in the hands of the teacher, not an outsider such as a researcher” (White, 1992)

#### **2.6.6 School guidance and counseling**

According to Evodia (2014), guidance and counseling should be introduced in every schools to help student to face their life difficulties and become accountable and royal members of society. Students want guidance in choosing proper carriers in their studies. In other way it helps students to deal with the problems in the society and solve them (Ibid) .The provision of Guidance and counseling skill should demonstrate to develop student’s abilities like cooperation, confidence, respect, communication and decision making. Bashire (2015) in his study titled the evaluation of school guidance and counseling showed that the reason for the student poor performance in examination was because of lack of counseling programmes in schools. For example the study has shown that there was lack of counselors in schools (Ibid).

#### **2.6.7 Role of parents**

Home referred as the influential area that contributes to the student academic achievement (Kudar, 2016). Parents make provision of technology and other learning materials at home to develop the academic performance of their children. Parents play an imperative role in leading to operative growth and progress of their children (Kudari, 2016).

#### **2.6.8 Time management**

These are abilities which are very crucial to academic achievement. It includes action done by the students such as preparing, arranging work, examination preparation and timetable following. It influences higher academic performance as most of teachers thinking that time management accelerate students’ performance in examination (Keith, 1982).

### **2.7 Usefulness/importance of metacognition**

It contributes to provisional knowledge concerning the total situation and general community and traditional rules for the usage of different approaches. For stance a teacher might promote the uses of certain approach for reading. In other way a

student who recognizes the teachers' deliberate choices is able to familiarize the needs of his teachers in classroom (Pantrich & Shrawuben, 1992).

Furthermore, in every culture there is tradition and employment of different approaches of thinking around problems. This implies that understanding these norms help learner to identify the needs of the certain culture in relation to resolving problems (Continho, 2007).

On another way, metacognition is very important in a sense that it gives clear classification to learners. For stance in a classroom; a teacher may note incidents when metacognitive information arises, such as in group reading discussion the different approaches learners is to read a segment for a story. In science classroom students metacognition has been developed and this development caused changes in affective outcomes and cognition. Also it has been shown in the study those students are able to control over their education (Paris & Jacob, 1984).

## **2.8 Empirical review**

Jain, Tiwari and Awasthi (2017) conducted a study about the effect of metacognition in academic achievements of students. The study revealed that, scores on declarative knowledge, procedural knowledge, conditional knowledge, planning, information management, monitoring, debugging and overall metacognitive awareness demonstrated positive correlation with the academic achievements overall academic adjustment and academic outcome. The study was conducted in India and about 522 undergraduate and postgraduate students were involved.

Similar study conducted by Abdellah (2015) intended to understand the metacognition awareness and its relation to academic achievement and teaching performance of pre-service female teachers in Ajman University. The study conducted in United Arabs Emirates (UAE) and about 75 pre-service of professional diploma female students in Ajman University in UAE were involved. Through survey the study revealed that metacognition ability support learners academic achievement. The study recommended that teachers should adopt teaching technique and strategies in presenting information to students that encourage use of metacognitive skills that have effective impact on the academic performance.

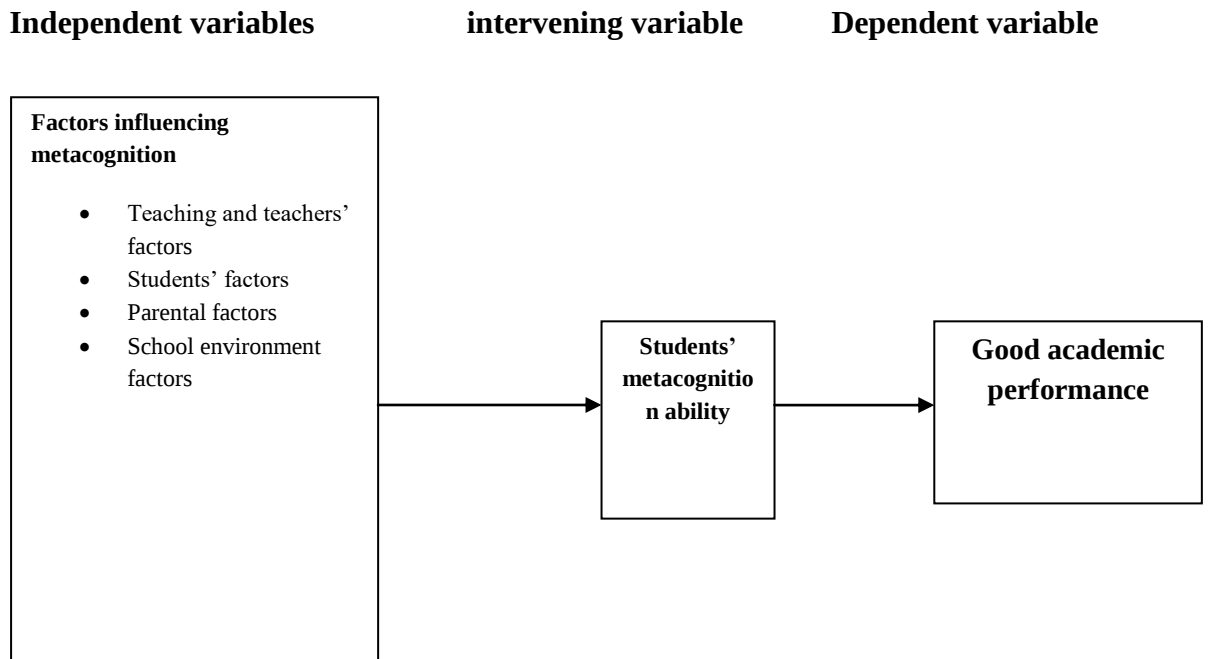
Narag and Saini (2013) in the study called metacognition and academic performance of rural adolescents in India involved a total of 240 rural adolescents. Questionnaires were the tool that was employed in collecting data. The results show that metacognition has great relationship with academic performance.

Also the study of Oyuga, Aloka and Raburu (2016) about relationship between metacognitive learning skills and academic performance among orphanage secondary school students conducted in Kenya. The study comprised about 300 secondary schools and 7 principals. Questionnaires were provided so that to collect data concerning the study. The finding of the study revealed that there was high connection among metacognitive learning abilities and academic success in secondary school orphanage students.

## **2.9 Conceptual framework**

The conceptual framework was developed as a result of the analysis of variables from the specific objectives and then treated in the review of literature. These include awareness of teachers (education stakeholders) on the concept of metacognition ability and academic performance. The independent variables of this study are factors influencing students' metacognition ability with relation to academic performance. The dependent variable is students' academic performance. The study is largely a qualitative and that the variables could be treated as predictive variables (independent variables), metacognition ability as intermediate variable relative to affective variable (dependent variable).

**Figure 2.2: Conceptual framework**



**Source:** Researcher Construct, 2019

### **Interpretation of the conceptual framework shown in figure 2.2**

The existing relationship among the variables was that the independent variable affected the dependent variable both positively and negatively.

The observed condition of academic performance of the students is predicted by the level of metacognition ability of the students in the schools. The level of metacognition ability of the students was to be revealed by the existence of different factors affecting it as a result to general academic performance of the students.

Generally the independent variables played a great role that formulates a framework for the result of good academic performance. The dependent variables preceded by the effect of different factors that determine the level of metacognition ability of students. It should be put into consideration that the study was designed to evaluate the factors affected the metacognition ability of the students with relationship to the academic performance. Scholars report a great relationship between metacognition ability (skills) and academic performance of the students (Oyunga, Aloka and Raburu, 2016).

## **2.10 Research gap**

Academic performances of students have become a global agenda resulting to implementation of various and different education policies in many countries in the world. It has been seen that students' academic achievement is affected by several factors. Even the government of Tanzania has put effort on them as a way of improving performance. This is also cemented by the study conducted by Mlozi (2000) which explained the causes of poor performance in students. The study found several factors including school management, school environment and quality of teachers. The study, however, did not show any connection with metacognition and ability of students. Therefore the study did not relate factors affecting student academic performance with student metacognition ability.

The studies conducted by Narag and Saini (2013) and Oyuga, Aloka and Raburu (2016) in India and Kenya respectively noted a great connection between students' metacognition ability and academic success. These studies however focused much in explaining the relation between academic performance and metacognition ability and not the factors that influence metacognition ability of the students and their academic achievement.

Likewise the studies conducted by Jain, Tiwari and Awatsthi (2017) and Abdellah (2015) revealed the similar findings in that metacognition ability was a predictor of student academic performance. Nevertheless these studies were conducted outside of Tanzania, mainly India and United Arabs Emirates (UAE) respectively and mainly focused much on higher education level students.

Reviews of studies done under this section do not show explanations of the relationship between metacognition ability of student and academic achievement or the factors that influence metacognition ability of the students with relation to academic performance. Therefore this study was set to investigate factors that influence learner metacognition ability with relation to academic achievement in selected secondary schools in Morogoro District Council in Tanzania.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methodologies used in conducting the study. It defines the research approach, design, area of the study, targeted population, sample size and sampling techniques, data collection methods and data analysis, ethical considerations and validity issues.

#### **3.2 Research approach**

The research approach used in this study was qualitative approach. McLeod (2008) defined qualitative approach as a method that uses non-numerical data or data that have not quantified. The researcher in this study used this method because of the usefulness of expression through words. The study adopted the qualitative approach because the nature of the study objectives and the intention to investigate factors that influence students' metacognitive ability with relation to academic performance. This helped the researcher to have deeper and clear information from the respondents' feelings, attitudes, perceptions through both focus group discussion, questionnaires and interviews.

#### **3.3 Research design**

It is a plan that shows how the research was worked out by the researcher. Research designs differ depending on the purpose of the study. Bogdan and Biklen (1992) state that research design is used in research to refer to researcher's plan of how to advance the study. This study used exploratory research design because the researcher wanted to get more and deep information about the problem. Exploratory research design is the research that conducted for a problem that has not studied clearly (Yin, 2011). It has been seen that a case of student academic performance was investigated by many researchers and many studies and government intervention put to address the problem. In addressing the problem many factors were observed and pointed out. In pointing out the factors for good academic performance, it has been seen that learners' ability in influencing academic performance was not much

considered. This is to say student metacognition ability and factors influencing it had not been explained as a predictor of good academic performance. This study therefore set to explore from education stakeholders the factors that influence student metacognition ability with relation to academic performance.

### **3.4 Area of the study**

The study was conducted in Morogoro District Council because the district has been linked with the poor student results in secondary schools. Morogoro District is one among the 8 districts in Morogoro region. Other districts include Morogoro municipal, Gairo, Mvomero, Kilosa, Kilombero, Malinyi and Ulanga. The study was conducted in Morogoro district especially in Matombo division. The form two examination results of 2018 and 2017 showed that Morogoro District was ranked 180 out of 184 districts in 2018 ranks of pass mark and 168 out of 173 districts in 2017 (NECTA, 2018). These ranks or positions of district national wide show that the students are performing poor. Therefore it was desire of this study to investigate the factors influencing metacognition abilities in student academic performance in Morogoro District.

### **3.5 Targeted population**

Kothari (2004) defined targeted population as the group of people from which a researcher is paying attention to gain some necessary information and illustrating conclusion. This study involved the following education stakeholders; Ward Education Officers (WEO's), head of schools, teachers and students. The sample size was selected from 3 different secondary schools that involved almost 1221 people as total population.

### **3.6 Sample size and sampling techniques**

#### **3.6.1 Sample size**

It is the number of items that preferred from the space to compose a sample (Kothari, 2004). This study involved a total of 53 participants. These included Ward Education Officers (WEO's), head of schools, teachers and students. This size was suitable to the researcher because it served time and easy to manage.

### **3.6.2 Sampling techniques**

#### **3.6.2.1 Purposive sampling**

The study employed purposive sampling to respondents who did not have alternatives or substitution like WEO's, head of schools, and teachers who seemed to have full knowledge over the issues of students' thinking ability and academic performance. The sample was used to generate qualitative data because the approach needed few participants in order to get an in-depth experience and obtain detailed information on the subject studied. Hence, it is very significant because it allowed a researcher to the intended information and from the intended respondents (Kothari, 2004).

#### **3.6.2.2 Simple random sampling**

Students were selected randomly in which a researcher allowed the academic masters to select two students of different sex from each class or form (I-IV) who were latter on involved in the focus group discussion. From each form or class one boy and one girl was selected through attendance register.

### **3.7 Data collection methods**

In collecting data, the researcher employed multiple data collection techniques. These are interviews, questionnaires, focus group discussion and documentary reviews.

#### **3.7.1 Interviews**

It is a scheduled set of questions administered through oral communication in a face to face relationship between a researcher and respondent (Kothari, 2010).As a researcher is able to interact with respondent. It permitted suppleness as there is a chance for the researcher to restructure the question. This technique was used to the Ward Education Officers and head of schools and some of teachers. The respondents were given the same questions to maintain uniformity. Similar questions with slight differences were used in questionnaires so as to observe consistence and reliability.

### **3.7.2 Questionnaires**

Data was collected mainly by using open ended questionnaires. Structured questionnaires were used so as to control the answers. This technique was used to academic masters and other teachers. The questionnaires were distributed to gather information relating to the problem.

### **3.7.3 Focus group discussion**

Is a way of gathering data with a group of people about 5-6, small enough that everyone can take part in the discussion but large enough to provide diversity in perspective (Ary, Jacobs, Sorensen & Razavieh, 2010). The focus group discussion was held with some of group of students. Group had 5-8 students respectively. This provided a chance to all participants in discussion to produce a vast amount of information due to differences in opinions and experiences. Every member in a group was given equal opportunity to air his or her views.

### **3.7.4 Documentary review or analysis**

This consisted of identifying the content of documentary resources such as books, newspapers and the content of all verbal materials which can be either spoken or printed (Kothari, 2004). In this study the analysis was done in curriculum, syllabus and other educational reports.

## **3.8 Data analysis**

Wilkinson and Bhandarkar (2002) defined data analysis as an action of concerning a number of direct operations that are done with the same objective of shortening the gathered data and make them in a such way a researcher get answers. The data collected were analyzed using the content analysis method. Data collected from interview, focus group discussion were analyzed by formulating theme emerging from the transcripts. This is a process of transcribing interviews and FGD's, skimming resources and, writing up field notes, arranging and sorts data in various types according to the source.

The other stage is to be familiar or understand the data by re-reading all the data collected in order to have general views of participants' responses. After that, the process of coding started by creating categories out of data in form of texts. Finally the coding process resulted to explanations of situation or people as themes for the analysis. Also there was a constant process of interpreting the data and giving inner understanding of phenomenon under the study, based on experience, history and culture. The data from questionnaires were analyzed in the same way as in interviews and FGD's but the computer software called Statistical Package for Social Science (SPSS) was used in describing demographic data which are presented in simple tables and graphs. The respondents were given artificial names to make it easy to pattern the findings: For instance T stands for teachers from Tawa Secondary, M for teachers from Matombo Secondary and K for teachers from Kisemu Secondary. This was also done to students like, TS for students from Tawa Secondary, KS for students from Kisemu secondary and MS for students from Matombo secondary.

### **3.9 Validity**

Validity is referred to as how good and impressing an idea or opinion about reality with actual reality. The study wanted to assure trustworthy and authenticity in collecting and reporting study information. Reliability is believed on the similar ideas or themes when repeated under the environment that seems have unique features (Newman, 2003). The validity of this study was assured by using more than one methods of collecting data, (triangulation). The interviews, FGD and questionnaires were used so that to cross-check data resemblance.

### **3.10 Ethical consideration**

It is very important to have necessary approval from an institution authority in order to get potential respondents and collect data peacefully in the study (Rubin and Rubin, 2005). It is very important to avoid study risks and distortion from the respondents (King & Harrock, 2010). Therefore the researcher ensured that respondents were protected from any kind of danger or risks. That means, the study observed all research ethics, especially the following;

### **3.10.1 Access to respondents**

The research permit and approval letter was obtained from Directorate of Research and Postgraduate Studies (DRPS) of Mzumbe University that approved the area where the study was conducted. The letter was submitted to District Executive Director (DED) who wrote a letter of introductory to Ward Education Officers (WEO's) and the heads of schools and asked their consent to participate as well as give support for what researcher was seeking for to accomplish in the study.

### **3.10.2 Informed consent**

A researcher firstly explained the respondents what was the research about and asked them their willingness to participate before the interviews, focus group and questionnaires was conducted. Also the researcher asked permission for the discussion to be audio recorded and by fortunate all the participants accepted. The respondents were assured that they were free even to terminate participation in the study and there was no any payment for the respondents.

### **3.10.3 Confidentiality**

All the actions that guard the privacy of the participants were considered. The respondent privacy was guaranteed by not exposing their personal particulars. The participants were told that all the given information used for the academic aims and not otherwise. Also respondents were not subjected to pressure but encouraged to participate well in the discussion.

## **CHAPTER FOUR**

### **PRESENTATION OF FINDINGS**

#### **4.1 Introduction**

This chapter presents the findings that were obtained from the analysis of field data. The chapter is composed of sections of demographic characteristics of the respondents and other three sections for specific objectives.

The main objective of the study was to investigate the factors that influence students' metacognitive ability with the relation of academic performance. The results of the study are analyzed based on the research specific objectives:

- (i) To assess education stakeholders awareness on concept of metacognition ability with relation to student academic performance,
- (ii) To identify factors building student metacognition ability with relation to academic performance,
- (iii) To assess the usefulness of the factors that used to build student metacognition ability with relation to academic performance.

#### **4.2 Social demographic characteristics**

The study involved respondents of different demographic profile with a view that such characteristics might influence perspectives of the respondents regarding the problem under study. These characteristics include sex, age, job experience, and education level. Every aspect is elaborated separately.

##### **4.2.1.1 Sex distribution**

The total number of the respondents involved in the study was 53. The table below presents the distribution of the respondents by sex.

**Table 4.1: Sex of the respondents**

|       |              | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|-------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | Male         | 31               | 58.5           | 58.5                 | 58.5                      |
|       | Female       | 22               | 41.5           | 41.5                 | 100.0                     |
|       | <b>Total</b> | <b>53</b>        | <b>100.0</b>   | <b>100.0</b>         |                           |

**Source:** Field data (2019)

Table 4.1 shows that, male respondents were the one who participated in the study. This may be because the study was conducted in the rural areas where men are the workers and therefore are preferred much.

#### **4.2.1.2 Age distribution of the respondents.**

It is said that the maturity of the respondents is measured by their age level. That is why the study intended to search for the age of the respondents involved. Respondents' age differences imply a difference in understanding capabilities in issues particularly in education sector.

**Table 4.2: Age of the respondents**

|       |              | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|-------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | below 20     | 25               | 47.2           | 47.2                 | 47.2                      |
|       | 21-30        | 7                | 13.2           | 13.2                 | 60.4                      |
|       | 31-40        | 20               | 37.7           | 37.7                 | 98.1                      |
|       | 41-50        | 1                | 1.9            | 1.9                  | 100.0                     |
|       | <b>Total</b> | <b>53</b>        | <b>100.0</b>   | <b>100.0</b>         |                           |

**Source:** Field data (2019)

Table 4.2 shows that, the age with majority of participants was below 20 years (47.2%). These are students followed by 21-40 years (37.7%) who are teachers. This means most of the workers who are employed as teachers were young.

#### **4.2.1.3 Respondent's education status**

The study was interested to find out the highest education level attained by the respondents involved in the study. The researcher believed that knowledge or level of education is an important factor in building metacognition ability of the students. The respondents were categorized into four (4) education levels namely; secondary

education, diploma education level, and degree education and master's education levels.

**Table 4.3: Level of education of respondents**

|       |              | Frequency | Percent      | Valid Percent | Cumulative Percent |
|-------|--------------|-----------|--------------|---------------|--------------------|
| Valid | secondary    | 25        | 47.2         | 47.2          | 47.2               |
|       | Diploma      | 4         | 7.5          | 7.5           | 54.7               |
|       | Degree       | 21        | 39.6         | 39.6          | 94.3               |
|       | Masters      | 3         | 5.7          | 5.7           | 100.0              |
|       | <b>Total</b> | <b>53</b> | <b>100.0</b> | <b>100.0</b>  |                    |

**Source:** Field data (2019)

Table 4.3 shows that most of the respondents have secondary level of education that is 47.2% who were students. The 39.6% are teachers who hold degrees. This implied that teachers are qualified and have reasonable level of education as catalyst for academic development of student.

#### 4.2.1.4 Job experiences of teachers

This study intended to find out the time where teachers/respondents existed in the employment. The number of years in the job or employment or profession implied the extent of experience of the person or respondent. The researcher believed that the extent of the person experience of the person in the work or job implies a great understanding in factors that enhance student's metacognition abilities and academic performance.

**Table 4.4: Job experience**

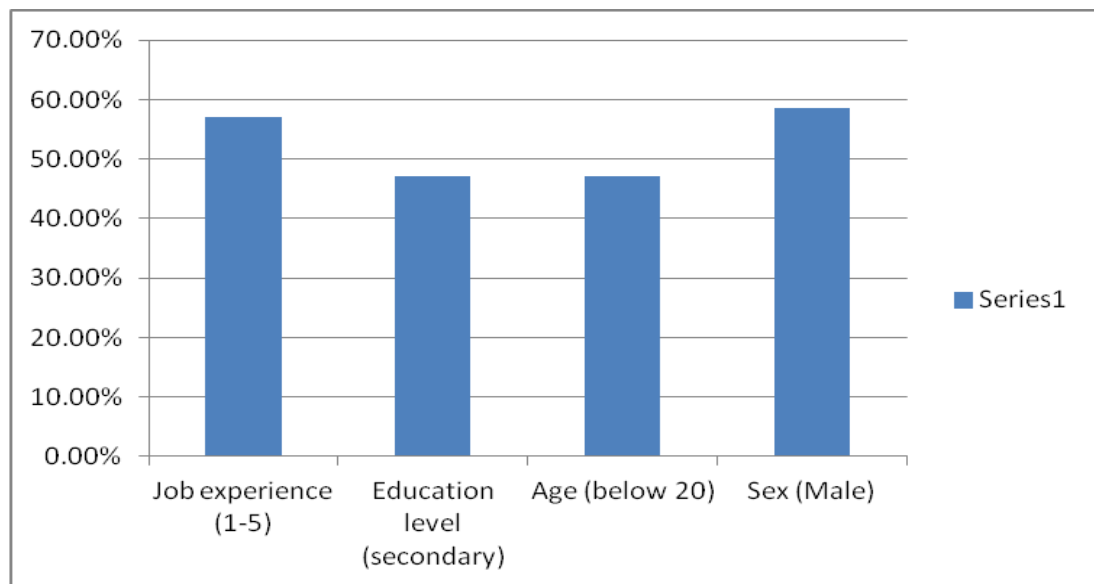
|              |              | Frequency | Percent      | Valid Percent | Cumulative Percent |
|--------------|--------------|-----------|--------------|---------------|--------------------|
| Valid        | 1-5          | 16        | 30.2         | 57.1          | 57.1               |
|              | 6-10         | 8         | 15.1         | 28.6          | 85.7               |
|              | 11-15        | 4         | 7.5          | 14.3          | 100.0              |
|              | <b>Total</b> | <b>28</b> | <b>52.8</b>  | <b>100.0</b>  |                    |
| Missing      | System       | 25        | 47.2         |               |                    |
| <b>Total</b> |              | <b>53</b> | <b>100.0</b> |               |                    |

**Source:** Field data (2019)

Table 4.4 shows that the highest job experience was 1-5 years equals to 57.1%. The findings mean that most of the workers found in the school are recently employed thus they are young men and women. With this experience they are capable to enhance and influence metacognition ability of students and improve their academic performance.

#### 4.2.1.5 Summary of demographic features of respondents

**Figure 4.1: Summary of demographic information of respondents**



**Source:** Field data (2019)

Figure 4.1 shows the summary of demographic information of respondents involved in the study. The figure shows that the highest percentage of respondents in job experience was from year 1-5; the level of education for majority of respondents was secondary level. The age of the respondents who are the majority in the study is below 20 years and male respondents were involved much in the study.

#### 4.2.2 Description of visited schools

The study was conducted in three different secondary schools. These secondary schools are found in different wards in the area of study. This part describes the visited schools in short.

#### **4.2.2.1 Tawa secondary school**

Tawa secondary school is found in Tawa ward. It is located almost 1 kilometer from Tawa centre which is the wards headquarter. In the southern side the school surrounded by small rock mountains, in the western side is bordered by river Mmanga and in the north and east side bordered by people's settlements. The school is also surrounded by trees, teacher's houses and small rocks that beautify the school. It is actually situated in a very calm and cool environment that supports effective teaching and learning activities.

The school was registered in 2006 with registration number S.2168. It is a day school and mixed one. It takes form I-IV. The school has 14 teachers including 8 males and 6 females. It has 239 students including 106 boys and 133 girls. The school has 12 classrooms which are enough for the present students.

#### **4.2.2.2 Kisemu secondary school**

Kisemu secondary school is located in Kisemu ward in Mtamba village near Mtamba center which is the head quarter of the ward. It is located nearby Mtamba primary school and the main road to Mvuha which is the district head quarter. The school is surrounded by small green and beautiful garden and trees.

The school was registered in 2006 with registration number S.2171. It is a day and mixed school. It comprises form I-IV students. The school has 24 teachers where by 13 males and 11 females. The number of students is about 403 in which 176 boys and 227 girls. The schools have enough classrooms for the students.

#### **4.2.2.3 Matombo secondary school**

Matombo secondary school is found in Konde ward in Matombo village. It is a very old school found in Morogoro district council. It started in 1988. It is located nearby Matombo Roman Catholic Church which is very big and old church. In the other side is bordered by Matombo primary school. On the other side of the school is bordered by river Msunvizi. The school is surrounded by small ground of garden.

It is registered by number S.304. It is mixed school but day school for ordinary level students and boarding for advanced level who are only girls. The school has about 30 teachers with 19 males and 11 females. The number of students is about 508 where as 162 boys and 346 girls. It has enough buildings that act as classroom. Also there are teacher's houses around the school compound.

#### **4.3 Awareness of teachers towards students metacognitive ability**

The study intended to understand the awareness of education stakeholders especially teachers and students on the concept of metacognition ability. The researcher believed that person awareness toward a certain matter has a greater position on either to apply it or not. To get this information the researcher interviewed the respondents who is a teacher and gave the following comments; *Is the level of student him/herself to understand what is taught by the teacher and use it in studying independently (M1)*

The results revealed that teachers are aware about metacognition ability. The same information was obtained when one of the teachers were interviewed in the other school and the response was as the same as the earlier teacher. The comments were;

*Is an act of students to be able to understand things which are good and perform in academic issues or an ability of a student to think independently without being supervised by teachers? In academic context student should be creative by using books, answer questions correctly and high understanding ability (T1)*

The same question concerning the awareness on the concept of metacognition was asked to the respondents in open ended questionnaires and the responses revealed as teachers commented below;

*Is the state of student to be aware and having self efforts without being supervised by the teacher? Act of student to think beyond and manage him/her. Students have personal efforts (K1)*

Through Focus Group Discussion (FGD), the researcher asked students the same question in order to understand if they were aware about metacognition and response was like; *Is the ability to manage his or her school activities especially academic issues on his or her own. Is the individual ability of self management (MS).*

The responses show that teachers and students have knowledge and are aware about metacognition ability.

The researcher tried to pose follow up questions to teachers about the situation of metacognition ability of the students they teach. The questions intended to find out if the teachers were satisfied with the situation of metacognition ability of their students. Also the researcher asked same questions about reasons for satisfaction or not. The following are the responses of the teachers when they were interviewed;

*I am not satisfied at all because many students are lazy and not active. Teaching environment affect the student's thinking ability. Distance from the school also is the factor (M3)*

The finding revealed that many teachers are not satisfied by the level of their student metacognition ability. Most of them explained that student's self thinking ability, ability to manage themselves, and self effort towards academic matters is so poor. Most teachers claimed that students were not able to stand on their own as they rely too much from teachers instead

In addition, another teacher said;

*Most of the students' thinking ability is too low that is why they get very poor performance in their studies. Even in normal examination they get poor performance (K5)*

The respondent view shows that students got poor performance because they lack skills to manage and think properly on their own. Another interviewee had the same information about the ability of students in thinking on their own and commented that;

*I am not satisfied with the state of student's metacognition ability because there are few students who are able to depend on their own or manage themselves. Most of them are supervised by their teachers for more extent...they have no person effort (K1)*

*I am not satisfying because there are several challenges facing them including parent do not understand the importance of education, they allow their children to come to school but they do not make follow up to them. Also there is the problem of distance from school to home. Most of students come from long distance for example some students come from 6-7 kilometer..... (M3)*

Respondents' views showed that they are not well satisfied with the level of students' metacognition ability because it seems students faced different challenges that made their metacognition ability to below.

#### **4.3.1 Attitudes on metacognition ability to students' academic performance**

This section intended to study the attitudes of respondents on metacognition ability towards academic performance of student. It aimed to find out whether the independent thinking ability as well as self management of student enhances student's academic performance. Through interview the following comments were provided by the respondents to explain it in details; *"Yes, metacognition ability help student to do well in their studies. It is almost 70% helpful. It makes students aware and think on their own and perform in their studies"* (K2)

The results revealed that most of the respondents have positive attitudes on metacognition ability towards student's academic performance. The respondents believed that the metacognition ability is one among the factor that enhances academic performance. They said that metacognition ability help to make student more active, increases the ability of student to judge issues, understand and explain them in details. It make student to be aware, manage time and more carefully during the lesson. Some of respondent comment showed that they have positive attitudes on it but add other things that enhance students' academic performance

Another respondent commented that;

*Yes it contributes much to the positive academic development of student. When the student has self-understanding he/she can be able to judge and understand things. His/her understanding and self-awareness will make him/her to understand why he/she is in school. This make student to study on their own, ask questions and get more explanations about academic issues..... (M4)*

Another respondent from another school commented that; “It make student to be busier. For example in mathematics students have to be busy and pass through different questions. By doing that mind become more active and make well in examination.....” (KS)

The above responses show that respondents believed that metacognition ability is very significant for the development of learner academic achievement and this showed that they have positive attitude towards metacognition ability.

#### **4.3.2 Attitudes of teachers towards factors enhancing metacognition ability of students**

The researcher asked teachers to explain their views about the factors enhancing MA of students. The researcher intended to understand the attitudes of teachers on factors influencing student’s metacognition ability. The following responses were expressed by the teacher;

*Yes there is the importance of using those strategies that enhancing student’s self thinking ability because they make students to be ready for everything and more active. Students may stand on their own. (M3)*

The results of the respondents from interview and open ended questionnaires revealed that most of teachers have positive attitudes on factors that enhance student’s metacognition ability. They said these factors are very potential because they reduce the workload of a teacher and make lesson very simple. It make student more aware, make student’s thinking ability more active, make student independent and solve some problems personally.

Another respondent commented that;

*As teacher's strategies that enhance student's metacognition ability have great importance. In the lesson will simplify the process of teaching and understanding, influence good performance of students in academic, make student more aware and independent, able to advice and solve different challenges in school and society in general (T1)*

These responses show that metacognition ability of the students have great role in creating thinking capacity of the student and respondents believed that some factors and strategies are potentials to make students more active and more independent.

#### **4.3.3 Teachers capacity in enhancing students' metacognitive abilities**

Capacity building training is very important for the teacher's profession development. Teachers should be trained usually so that he/she can update his/her mind. New knowledge should be imparted to the teachers so that to make them more knowledgeable and able to feed materials their students effectively. Relaying on this the researcher asked question in order to understand whether teachers are trained especially in understanding strategies enhancing MA of students. This can be verified by the comment provided by the teachers in interview and open ended questionnaires as following;

*I preceded with higher learning myself to update my career. There are no enough teachers' trainings aimed to update teachers' ability. It is only private institution called CAMFED that facilitate teachers and train them so as to make them understand and use different strategies that make students aware and manage themselves....(K4)*

The finding revealed that training was there but not specific for building teachers understanding on strategies enhancing MA of students. There are general training and seminars that provided to the teachers. These trainings involved general issues in profession, including teaching and learning process. Some respondent answered that, they attended the training but it was very long time. Others trained themselves from experienced teachers. Other respondents said there was no training basing on enhancing MA of student but general training with a little bit of the idea of the MA that provided by the private institution

Apart from the CAMFED there are other trainings provided but specialized to few teachers who were mathematics and biology teachers as one among the respondent replied in the interview; *In 2013 there were some teachers teach mathematics and biology went for training but up to this time there is no any teacher who went for building capacity or seminars..(K3)*

Many teachers who were asked to state if they attended any training concerning strategies building MA of the students said that they had not, as the following teachers commented on the question. *“No, more than private reading different articles about how to build student metacognition ability in the class there is no other training”. (T4)*

*“As a teacher the training that I get from college is the only training that I use to build student’s metacognition ability. No other training” (T2)*

In addition another teacher commented and cited as follows; *“As a teacher the training that I get from college is the only training that I use to build student’s metacognition ability. No other training”. (T5)*

Another respondent during interview insisted that there is importance of training teachers. He said;

*Yes, it is important. It is started by the teachers because usually they learn in their profession. Teachers should be trained every day. Through in-service training or teachers capacity building training and continuous profession development programmes make teachers to be competent as a result students become independent .....(T1)*

The respondents’ responses implied that teachers training programmes are very influential for the development of teacher’s profession as well as metacognitive and academic development in general. Therefore trainings should be insisted.

#### **4.3.4 Willingness of using strategies for enhancing metacognitive ability**

Having studied the reaction of the respondents in enhancing MA of student, the study sought to know the intended disposition of the respondent regarding their willingness on using strategies enhancing MA of the student in order to make them perform in their examination. As they said; *“It is very important. It reduces teacher’s workload.*

*Also make student more active. He/she can prepare on his/her own and motivate student to learn more” (M3)*

The result from interview revealed that teachers are ready to use those strategies that enhance student MA because they make teachers to be aware, easy to make lesson to be understood, help teacher to assess themselves, make students to be more cooperative, make the lesson to be more motivate and reduce the workload of the teacher, it is very helpful. Teachers believed that through the strategies enhancing MA of student contribute much the academic performance of student.

Other respondents said that they use that and they dedicated in using strategies because they believed that is the only way to make students more independent and depend on their own; *“Many teachers are devoted to build children self-awareness capability....” (M3)*

Some responses showed that teachers have great effort in building their student MA so that they can be independent and perform well in their studies. When they asked if teachers effort contribute to student academic performance most of them agreed. This justified by the respondent when they asked in interview; *“Yes, teacher’s ability contributes much student’s metacognition ability. Teachers’ effort is invaluable in the development of student” (M1)*

Not only had that but also another teacher from another school had the following view; *“Yes teachers’ effort make student to do well in their examination. Students are motivated to do well when teachers are devoted to them” (K2)*

This implies that for the students to have metacognition ability and well academic performance depends much on the teachers’ ability and efforts.

#### **4.4 Factors building student metacognitive ability in relation to academic performance**

The study proposed to find out the different strategies/factors that build students MA and hence good academic performance. The respondents believed that the factors enhance metacognition ability of student and perform well in his/her examinations are;

#### **4.4.1. Guidance and counseling**

The researchers' aim was to understand the respondents understand the role of guidance and counseling in building student metacognition ability and academic performance. Replied in the open ended questionnaire that;

*Always students face some challenges and problem that affect their thinking abilities. For example there was a form one student who wants to leave school because of family difficulties. I used my time to counsel him and now is in form two and doing better in his studies..... (K6)*

The finding revealed that most of the respondents believed when the students guided and counseled well promote their individual thinking ability and deal well with challenges they face. Respondents attempted to guide and counsel their students when they face some challenges. Through that students can easily handle problem they face and ensure his/her academic performance and among the respondents

When the same question was asked to a teacher in another school the reply was; *"We do guide and counsel our students so that to make them continue with the studies reach their dreams...."* (M4)

The same idea and information was found when reviewing Tanzania Education Policy (1995). Teachers should guide and counsel their student so that to make them aware and ready to deal with their challenges.

#### **4.4.2 Motivation and encouragement**

The study found that many teachers believed that motivation and encouragement enhance student's metacognition ability. Teachers help student to become more independently and critical thinkers so that they can find solution when they face challenges especially academic challenges. On the other hand other respondents believe students' metacognition ability started from home where by parents and other family members encourage and motivate their children so that they can perform well academically. The forward arguments were that advice, motivation and encouragement are more employed by teachers in school but the problem of nature of

the society surrounding the children as one among the comments of the respondent given in the interview;

*As a teacher, I motivate and encourage my students so that to make them aware and perform well in their studies. Sometimes I give them some presents so that to motivate them.....Doing so student become more creative and think critically on how they can perform well so that to get presents.(T6)*

#### **4.4.3 Teaching and learning methods**

The study intended to find out on how teaching and learning techniques influenced metacognition of student and make him/her perform well academically. Teachers were asked to mention those methodologies used as they said;

*I use different strategies like group discussion whereby I prepare group of students. Also I use presentation method that makes them confident when they are presenting. I highlight something related to what I want to teach. Modeling is also used to motivate them (K3)*

Most of respondents preferred to use participatory methods and centered methods. They believed that these methods make student to be more active and think independently

Other respondents associated library works as a way that makes student to be more independent and think properly. The assign library works to their students that make them go and search materials from different books in the library and come up with answers though there is few books in the library as one among the respondent commented; “.....for example assigning library works and present in the class. But this faces the challenge of scarcity of books. Group discussion also used to enhance metacognition ability...”. (M4)

Some respondents associated strategies of enhancing students MA and those techniques insisted in competence based curriculum that intended student to be a source of teaching and learning activities. These methods are known as the student centered methods of teaching. The methods intend to make students more independent and think critically. One of the respondents when asked in interview said that;

*...in building student MA a lot of challenges occurs to students whereby when you want to fulfill the CBC objective. It is difficult to fulfill the CBC objective that intended to make student be more independent because they are lazy... (T5)*

When some documents reviewed the same information was found. Participatory methods of teaching and learner centered methods were more encouraged so that to students more creative and innovative in school (URT, 2010). From these responses and reviewed information show that teaching and learning strategies and methods influence much student metacognition ability and academic in general.

#### **4.4.4 Teaching and learning environment**

The researcher intended to know the influence of teaching and learning environment in metacognition capabilities of students with relation to their academic performance. This can be verified by the responses from the respondents asked as commented; *“It is true that teaching and learning environment affect the thinking ability of the learners. Environment make student think properly as the result he/she can perform well in his/her examination and all academic issues....” (W1)*

The question on environmental effect on metacognition ability was asked and many respondents believed that teaching and learning environment have great role on building student metacognition ability and his/her academic performance in general.

When teachers asked the same question in interview mentioned that environment have great role on student metacognition ability and academic performance as one among the teacher replied;

*Yes, school environment can affect student metacognition ability. If school have good environment including physical infrastructures like classrooms and laboratory students may perform well. This is because through this student thinking ability influenced and allows students to perform well (T3).*

#### 4.4.5 Sports and games

Respondents that insisted over the use of game and sports as the strategy that makes students to be more active and think properly as one among the respondent said;

*..In fulfilling metacognition ability of students and good performance of our students let us embrace games and sports in education. This means make lesson to be more practical, live and contextualize it.*  
(T1)

From the interview the respondents indicated that when he use games and sport the lesson become more clear and understandable. Also sports make student's mind more active. They said, game makes students mind to relax and think properly. This provides an opportunity for them to well even in academic performance.

Some respondents insisted much on the use of technological devices to enhance the metacognition of students in school and make them perform well in their studies. They argued that metacognition devices like computers and projectors are more potential in making student more understanding and perform easy in the studies. Also the use of these devices simplifies the teaching and learning activities. The participant had this to express their views when asked in the interview; *"Technological devices have great role in teaching and learning process. First make student easy understanding in the lesson and second reduce the workload of the teacher"* (M5)

Other view from other teacher said that; *"We as teachers should insist on the uses of technological devices so that to make our student understand more and perform well their studies. Computers and projectors are very potential"* (M1)

This means that there are some metacognition tools that enhance student thinking and understanding capacity. These tools include computers and projectors. Through these respondents, it was observed that it is easier to make student understand and think on their own.

#### 4.5 Strategies to enhance students' metacognitive ability

MA is one of the factors to enhance academic achievement of students. There are different strategies that are used by the teachers in enhancing MA of students. The researcher asked a question to the respondents so as to understand if those strategies enhancing MA are important. As commented by teachers that; *“It is very important.....it make students to do well in his/her studies. Make student to be more motivated in lesson...”* (K6)

*“There is important of it. This is because increase the level of performance students. Also make student aware and be able to deal with different challenges in the respective subject”* (M5)

Teachers replied that, strategies are important and they should be used in the class. The question asked by the researcher in open ended questionnaires to different teacher including mathematics teachers. Some of them commented as following;

*It is very important to have those strategies. In order for student to understand he/she should have independent thinking ability..... he/she can judge what have been taught and understand easily* (T2).

*“It is very important in academic development of student because it make student understand and not forget what he/she learn”* (M1).

The responses revealed that it is very important to use strategies that can enhance student MA and make them perform well in their examination.

In focus group discussion the question asked to the students so that to understand their views on the importance's of strategies that used by their teacher so that to make them think independently, increase their curiosity level as well as effectively with problem they face in school independently. Students explained in details that;

*It is very important because it make student to be busy. For example in mathematics subject student have to be busy and pass through different questions. By doing so his/her mind becomes more active and makes well in his/her examination* (KS)

Many students in the discussion said that, strategies are very important for their academic and social development in general.

Another students stated that the use strategies influencing their metacognition ability make them to be more understanding especially in mathematics as replied when asked through FGD; *“It make student to be more active He/she can do a lot of question in mathematics...”* (TS)

Another student replied that when he was asked; *“It help student to be more creative. Student can understand different ways of studying so that he/she can perform well”*. (MS)

In general, students accepted the use of strategies that enhancing their think capability. This shows that metacognition make them to be independent and creative.

#### **4.5.1 Student's effort in building their metacognitive ability**

Student as the main victims in school use different ways so that they can perform well in their studies. Ability to think individually is one among the factor that can lead students to pass their examination insisted more. Students are insisted to think on their own and solve challenges they face independently. Being that strategies should be employed so that they can make their MA good. In FGD students were asked what strategies and ways that they use to influence their examination. As they were commented in the discussion made with researcher that; *“We use different ways like studying at knight, asking question to the teachers and other students so that to understand more”* (MS)

The finding revealed that students use different ways so that to make themselves think properly and perform in their studies including making revision on what they already learn, asking questions, discussion, asking materials from other students and studying at night. This showed that student take their own effort to make themselves understand what have been taught by teacher.

As the above comment of the student a similar question was employed to the students from Tawa secondary school during FGD and one of them said; *“We use group discussion. We discuss different question in the group. We make revision of question and ask questions to the teachers”* (TS)

Some students perceived that, in order for the student to have high MA and perform well in his/her examination he/she should pray to the God because He is everything. Student believed that prayers are the way that can make student's MA well and perform in his studies. She commented that; *"It is through God's belief. We believe in God that is why is easy for the student to have good MA. There is statement saying "Do the best and God will do the rest" (MS)*

This was a very exceptional response from the students in the FGD because the student thought that prayers to God are the key factor that can influence individual thinking ability and academic performance.

#### **4.5.2 Government efforts in improving teacher towards metacognitive ability.**

Respondents were asked to give their views on the way that government dealt with the issue of student MA. The question asked them in interview, which way that government involved in building student MA especially in providing training to the teacher concerning improving and enhancing MA of students. Some respondent commented that; *"In the level of secondary training are not much as insisted in primary level whereby teachers trained usually. Government did not provide training in satisfactory way". (T3)*

Some trainings are provided but not every time and not specific for building teacher on understanding ways of enhancing MA of students. The response show that teachers who got in-service training mostly were primary teachers and in the level of secondary there was not enough capacity building programmes. Apart from that another teacher commented that; *"Government assistance is very low. There are few seminars that provided by the government" (M4)*

Some respondent comments revealed that, there are private institutions that are involved in providing training to the teachers. The institution should provide training and seminars to the teacher so that to make them aware on what ways should be used to make students aware and more independent. Programmes that led by this institution also focused in training and preparing students being independent and think properly. Some respondent's comments said; *"CAMFED as a private*

*institution help to facilitate teacher to understand and use strategies that enhancing student's" MA (M1)*

*There is training provided by CAMFED that help to facilitate students understand themselves. There are teacher mentors who supervise and advise students on how they can manage themselves. Also through program called Dunia Yetu Bora students helped to be aware on different and deal with them. (K4)*

From the above quoted teacher's views, it shows that apart from programmes that initiated by CAMFED which is private institution there is no other programmes. Therefore CAMFED is seen as the important stakeholder in providing trainings of teachers in Morogoro District Council.

#### **4.5.3 Community and parent's involvement in building student's metacognitive ability**

Parents and community as one among the education actors have great responsibility in the growth of student academic performance as well as education in general. The researcher intended to know on how parents cooperate in building student's MA as well as academic performance. The question asked to the respondent whether parents are participating in building their children MA or not. As their comment said when they were asked; *"The parent as well as society does not cooperate with school. We try to call for meeting so that to educate them"* (K7)

The findings revealed that parents have poor cooperation in all education matters. By being that is difficult to build and enhance their children ability. Respondents said parents remain in providing material to their children like uniform, books and money for meal and others. They do not make follow up of their children in school and even making their children think critically and independently

The teachers' response from interview showed that societies as well as parents have nothing to do with education development and academic performance of their children. The same information was obtained by the researcher when the question asked to another teacher from other school and replied; *"Parent cooperation is too low. They are not ready to discuss their children education issues. Some parents*

*come to school and provoke or blame teachers. Sometimes we use force to make them cooperate” (M6)*

*“Parent do not cooperate well.....most of them do not understand the importance of education. They do not understand the real learning environment. By being that affect directly student” (T6)*

The same question asked in the FGD and the respondents who were students. They said in their comments that;

*Parents do not cooperate with their children. Sometimes parent do not cooperate well because they do not see the positive results. They tend to say there are a lot of people with their certificate in the street but they have bad life why should they cooperate while they don't see the achievement (KS)*

*Parents cooperate in small extent. They do not cooperate well. They help us in very low (TS)*

Responses revealed that, some parents cooperate and some of them did not cooperate well. The number of parents who cooperated and helped their children in academic manner is however very low.

Some students said parents cooperate well because they pay us hostel fees. They advise us about the importance of education and buy us important facilities like uniform, shoes and books as one among the student replied; *“On other way our parent provide us some important services like hostel fees and buy us uniform, shoes and other necessary service”(MS).*

Students' views show that they were not satisfied with the level of cooperation provided by their parents in academic issues and school in general although some of them do cooperate.

#### **4.6 Summary of the findings**

Chapter four has presented the finding based on the data collected and analyzed from the field by the researcher. The findings are analyzed based on the three specific objective of the study.

This first objective sought to find out teachers' awareness on strategies to build student metacognition ability. The study revealed that stakeholders (teacher respondents) are knowledgeable about the concept of metacognition ability. Also the result showed that, they understand strategies that enhance metacognition ability of students. They conceived it as the ability of the student to think, understand and manage him/herself. They believed that metacognition ability of a student is one among the important factors that can lead to good academic performance of student in schools. According to teachers, MA is linked with the teachers, parents and government efforts to create a foundation of thinking ability of our students/children. Respondents had negative attitudes towards the thinking capabilities of many students in their school. The improvement of MA of students was of very potential for children as well as students academic development in school and in societal matters in general. However, the MA of student has not put into consideration as one among the potential reason that can enhance students to do well in their studies. Although the teachers have some awareness on it, but still no deliberate efforts have been put by education stockholders to make students children independent and think critically.

The second objective was an attempt to find out strategies used by teachers to enhance MA of students. It was ascertained that there are strategies that enhance MA of students used by many teachers of the 3 secondary schools visited in the field. It was found that many teachers preferred to use the teaching methodologies or techniques that tend to enhance or make students to be more independent. The study revealed that teachers from those schools visited used methods or strategies like assigning homework's, discussions, questions and answers technique, assigning library works, modeling, using songs, sports and games. Other strategies include example from real environments and debates. Students also confirmed about strategies used by their teachers agreed. They believed that, teachers employed a lot of strategies to make their mind strong and led to good academic performance. They acknowledged the techniques like questions from their teachers, self studies at night, discussion in the groups and reviewing difference.

The third objective sought to assess the usefulness and importance of those strategies used by teachers with relation to academic performance. The study found that strategies that enhance student MA are significant to the development of student academic achievement. Most of the respondents in the areas visited believed and accepted that in order for the student to perform well in his/her studies, teachers and other education stakeholders should ensure some efforts to develop student metacognition ability.. Parents did not participate significantly because the government had not provided training that can enrich teachers in understanding new strategies to make student perform well in their studies. Some private institution like CAMFED were found to provide teachers with enrichment programs that update teachers and make them aware about the ways to develop students' MA.

## **CHAPTER FIVE**

### **DISCUSSION OF THE FINDINGS**

#### **5.1 Introduction**

The chapter discusses the findings obtained in chapter four. The discussion focuses on the specific objectives. There are three sections in which every section carries one specific objective. The discussion is interconnected with other findings from reviewed documentaries and the theory of the study.

#### **5.2 Awareness of respondents about metacognition ability of students**

Respondents especially teachers and students perceived student's metacognition ability as an ability of the student to think, understand and manage him/herself. Students are capable to find different alternative ways that will help them solve some challenges individually or independently. The study found that stakeholders were knowledgeable enough about metacognition ability of the students. Respondents viewed metacognition ability as the key factor and very potential for student academic performance. Jain et al. (2017) stated that metacognition and its related processes have been shown to affect the human performance functions and behavior of the individuals in an array of situation including performance in educational setting. Respondents stated that they understood the concept of metacognition and believed that there is great relationship between metacognition ability of the student and academic performance. The study aligns with Jacobs and Paris (1987), who asserted that, student learning results are influenced much by metacognition. Awareness occurs when a person is fully informed about a subject for him/her to be conscious of its existence and its broad subject matter (Meager et al., 2002). In this sense awareness of the concept of metacognition implies that individuals had heard of it and have some ideas on how it relates to the education context.

##### **5.2.1 Positive attitudes on metacognition ability to student academic performance**

With the study observed a high possession of theoretical understanding of metacognition ability of student with factors that influence it and academic performance. The attitude of the respondents towards metacognition and academic

performance was found that to be more positive, though most of the respondents were not satisfied with the state of the metacognition ability of their students. The dissatisfaction was a demonstration of the disappointment regarding the quality of the metacognition ability of the students. The issue of metacognition has not featured well in the education system of Tanzania as one among the aspect that leads to the academic achievement of the learners. Despite the reactions portrayed in the attitudes, respondents revealed that they were willing to assist their students so that they can perform well in their studies.

The findings indicated that, the government, parents and community frequently mentioned to have a role to play either for good or bad. In education service delivery, respondents believed that government as well as parents and community in general have great role in ensuring the thinking capability of the students and their academic performance. Some respondents responses revealed that when metacognition insisted in education system even their academic performance as justified by Schraw and Moshman (1995) stated that metacognition directive can be considered as definite activities in which we engage in order to help learning and recall. In the contrary the study findings found that the imbalance of the effort between government, parents and community, hence low metacognition ability of the students.

#### **5.2.2 Poor teacher's capacity building training towards metacognition ability**

The study found that there was limited capacity building training. The respondents indicated that training is very important thing for them so that to update their profession. Although some of them attended the training but it had taken longer for a next one. Other teachers since they were trained in the colleges they did not attend any program of training so that to make them aware with cross-cutting issues happen in education sector. Despite of the few program of training provided to the teacher, still the trainings not focused on the issues of metacognition. The training concerning the issue of improving student's metacognition ability and improving things that may enhance thinking capability of student not insisted. Government as the key factor who can insure all the environment of building students metacognition ability

### **5.2.3 Student's willingness in building metacognition ability and academic performance**

The findings showed that, students were willing and were struggling to enhance their thinking capacity and academic performance. The finding showed that students were using different techniques and efforts so that to ensure their academic performance. It has been seen that student's perception on the way of enhancing their thinking capacity is more positive because of the effort they made. Furringett & Pechonem (2002) argued that the way learners perceive on the subject, a learning component or subject is important in shaping the attitudes towards the lesson. Most of the students perceived that efforts are the key factor that can enhance their MA and ensure academic performance.

## **5.3 Factors influencing metacognition and academic performance**

### **5.3.1 Provision of guidance and counseling service**

The study revealed that guidance and counseling is used severally in schools to enhance student's thinking capacity and build well their studies. Teachers guided and counseled their children different challenges they faced. The findings revealed the importance of helping students to have steady and autonomous mindful that him/her to solve their challenges/problems especially academic problem and hence perform well. Guidance and counseling skill delivered should help students to increase capacity such conciliation, assertiveness, decision making, self-esteem, patience and role-modeling (Evodia, 2014). This is to say the finding showed that teachers guided and counseled their student so that to make them well and perform well their studies.

### **5.3.2 High application of good teaching and learning methods**

It is understood that teaching and learning techniques have got great influence in MA academic performance. The findings revealed that teachers applied different teaching and learning methods or strategies that enhanced students MA and academic performance. It showed that most of teachers used participatory methods and those centered methods of teaching. From their opinions, teachers believed that through these students/learner centered methods of teaching is easy to stimulate student's capacity and allow them to manage themselves towards studies. This commented that by Mushashu (2000) any technique of teaching and technique that teacher use in

particular topic, the aim should be to promote student's learning activities and academic performance. This is to say the implication of teaching and learning methodologies in school by teachers was in advance and helped them to stimulate student MA and do well in their students.

### **5.3.3 Motivation and encouragement available for improving academic performance**

There were motivational and encouragement approaches made by teachers to make their students active and think critically. Teachers believed that the strategy is more helpful because it made students MA more active. By being more active, then it was easy for them to perform well in their studies. There were different sessions that intended to motivate and encourage students and make them more conscious. The study conducted by Wamocha et al. (2008) commented that the role of head teachers is to promote student academic performance through motivation strategies after achievement of Kenya Certificate of Secondary Education academic achievement. Teachers were told to motivate and encourage their student so that to have good performance. Kapur (2018) commented that when the problem experienced by the students, they need to get support from others.

### **5.3.4 Poor parents and community cooperation**

Among the factors that enhance student MA and academic achievement is the responsibility of parents and community in general. Parents play a vital role to develop their children (Kudari, 2016). Despite this truth, it showed that parent cooperation in issues of education is so limited. This might hinder the children ability to think properly and perform well in his/her studies. Parents seemed do not cooperate in education matters as a result affect student academic achievement. The issues of academic achievement for the student have been left for the teachers only.

### **5.3.5 The effect of time management**

The study found that time managing skills to most of respondents especially students was limited. This resulted to poor academic performance. It seemed the problem of MA of student led to poor time management skills. Teachers were struggled to ensure that student have good time management skill so that they can manage their

thing especially studies. Students were not able even to plan and prioritizing their activities in school.

#### **5.3.6 Good teaching and learning environment**

The school environments involve surrounding, environment and location of the school which should be favorable for learners. The study found the schools visited have got good and learning and teaching environments. They have got infrastructures including good and enough classrooms and teachers offices. Student managed to stay in the class because classes are enough for them. This also has been observed by URT (1995) wants school managers and owners of secondary schools to guarantee standard infrastructure, facilities, equipment and instructional materials essential for effective and most favorable teaching and learning. Instructional materials were there but not for that extent needed.

There were recreation areas like grounds for sports and games that make students more active. Actually the environment of the areas visited seemed to be amotive in academic context as explained or revealed by researchers in the field. In order to achieve good achievement in education there should be conducive environment (Kaguo, 2011).

#### **5.3.7 Lack of capacity building programmes to teachers**

The respondents revealed that there were few programmes intended to update teachers and make them capable in dealing with student's challenges especially challenges focused on metacognition ability. There was only one private institution that provided training concerning the issues of managing and building student to be more independent critical thinker. The institution called CAMFED. Apart from that there have not been any other training on metacognition provided to the teachers. This showed the training was not insisted not important differently commented by Petersen & Swing (1983) that it has also been suggested that teachers should be able to administer cognitive strategy instruction successfully and that teaching in metacognition is essential with normal subjects.

#### **5.4 Potentials of using strategies influencing metacognitive ability**

The study found that strategies that enhance metacognition of student and academic performance are more important as explained or revealed by most of the respondents in the field. It was noted that those strategies are key and important to the thinking capacity of the students and academic in general. Teachers were using those strategies in order to make their student more understanding and perform well in their studies. The strategies motivate lesson, help students to understand the challenges and deal with it also make students to be more active.

## **CHAPTER SIX**

### **SUMMARY, CONCLUSION, RECOMMENDATIONS AND POLICY IMPLICATIONS**

#### **6.1 Introduction**

The chapter presents summary of the study, conclusion, policy implications, recommendations and proposed areas for further study.

#### **6.2 Summary of the study**

The study explored factors influencing student's metacognition ability and academic performance in Morogoro District Council. The study had three objectives which are;

- i. To find out teachers awareness on the concept of metacognition ability with student academic performance;
- ii. To find out factors that are building student's metacognition ability with relation to academic performance,
- iii. To assess the usefulness/importance of those factors building students' metacognition capability with relation to good academic performance.

The study objectives were guided by the relevant questions, which are; Are the teachers aware about the concept of metacognition ability that used to enhance student's academic performance? What is the usefulness of the factors building student metacognition ability with relation to academic performance?

In the first objective of the study found that respondents were very knowledgeable and aware about the concept of MA. They also understood its influence on students' academic performance. MA was understood as a state of an individual to manage and understand his/her thinking capabilities. It is thinking about thinking. On the side of students, MA was explained as the way that students manage his/her thinking capabilities so that he/she can be able to solve challenges she/he have properly. The attitudes of the respondents towards the MA of the students were found negative. Practically respondent were not impressed with the situation of student's MA in their schools. Similarly, respondents were of view that MA was very potential for the

development of the children outside the school and inside the school .Intact respondents believed that MA was catalyst for the student's academic development in school.

Despite the poor/low MA of students, teachers found that they had not given up because they noted efforts to enhance the MA of their students so that they can perform well academically and societies in general. Schools were found to have conducive environment for teaching and learning process. These are enough classes, enough open spaces that allow extracurricular activities. All teachers were qualified from verified education institutions. The environment was so supportive for the teacher to build their children MA.

The second objective assessed the factors that influence students' academic performance. It was found that respondents from all schools visited were aware and understood the factors that can influence students' academic performance. Respondents revealed that there are positive relationship between the factors that influence student's MA and academic performance. They indicated those factors as good teaching and learning environment, enough teaching and learning materials, good teaching and learning methodologies, importance of guidance and counseling, motivational and encouragement, parent's cooperation, well and qualified teachers and time management. Generally, all the factors mentioned were underlined and insisted by the respondents in the study as the catalyst that can enhance the MA of student and academic performance in general. Failure of these led to low MA of the student's hence poor academic performance.

Furthermore, the study found that government had low political will to improve MA. There were no concrete policy programmes devoted for MA. It just the Competence Based Curriculum (CBC) that intended to make students to be the center of teaching and learning process, though its implementation is very difficult to them. Special programmes that intended to prepare teachers to understand the way that they can improve the thinking capabilities of their student, special Programme for the students so that to be able to manage their thinking capabilities were not there.

Parents as well as community in general have been seen to be not cooperative in building their children MA. They do not have a good understanding of the meaning of education; and this resulted to problem of preparing children metacognition abilities.

### **6.3 Conclusion**

Based on the results presented and discussion, the study draws the following conclusions;

The education stakeholders conceived metacognition ability as a very influential aspect for the student academic performance development but they were not impressed with the condition of the MA of the students they had in the classes. There were low metacognition ability of the learners received in public secondary schools especially ward schools.

The factors that influence metacognition ability of students were known but the way such factors are used as an opportunity for enhancing MA of the student is the problem. There were no exact programmes which intended to prepare students to think on his or her own and manage their thinks respectively. There were no enough teachers' capacity building in terms of trainings that were intended to prepare the MA of students and understand the way those factors could act as stimulator for student's MA and thus good academic performance.

The study noted a poor political will for the government to improve the issue of self-regulation and monitoring for the students. The absence of policy programme for that intended to show how students can plan, monitor and make self decisions actually the policy programme that make student to be more independent in aspect of academic and societal in general was not there. Also there were not clear strategy used to involve parents and community in building MA of students and children.

### **6.4 Policy implications**

The perceived poor level of metacognition ability of the students calls for the policy attention. It was revealed that MA of the students is very important issues in enhancing academic performance. The more the policy creates the environment that

influence metacognition of the learners the good the academic achievement. The education and training policy was found to be silent on the issue of building MA of student and be self dependent. The lack of strong political will and absence of programmes for MA improvement create many challenges which risk the quality of the thinking capability of the learners and academic achievement in general. All the findings reported in the finding and discussion chapter should be considered by the policy action under all education stakeholders including the partners of the government, community and private sectors.

### **6.5 Recommendations**

- i. The study recommends that the government should establish a concrete programmes to rescue the quality of and level of MA of the students in school as well as the problem of poor performance. The programmes urge the government to allocate the budget, preparing trainings that enhance MA and providing the clear environment of easy improvement ways of MA.
- ii. The government should have plausible policy engagement approach to involve education stakeholders like teachers, parent and community at large to create interest on improving the condition of MA of students and academic performance in school. There is the need to make MA as the important issue that prepare student to be independent in school and even after finishing school. The system relay on the way of making children to be more self dependent(self relayed).Education stakeholders in grassroots like parents ,teachers, community and private partners should collaborate with the government to ensure and maintain the quality of MA of the children.

### **6.6 Limitations**

(a) Some of the respondents were not keen to give information without knowing how the study will benefit them. They believed that they had participated in many studies but never realized any effect to them. They came to show cooperation after the researcher had clarified well the objectives of the study.

(b) The other restriction during the data gathering was the difficulties in reaching some of the respondents, especially because of the topographical nature of the study area. Some areas also had no reliable transport which consumed long time and energy. To deal with this problem the researcher had to take motorcycles to get to the selected schools.

### **6.7 Area for further study**

The completion of this study is not an end in itself; there are other aspects that other studies can focus on. The study suggests further researches to be conducted on the teachers strategies used to enhance MA of students, and the poor political will of the government in improving the MA of students. Another study can be done to investigate the influence of metacognition and student self development.

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## **APPENDICES**

### **APPENDIX I: FOCUS GROUP DISCUSSION GUIDELINE FOR TEACHERS**

This study is basically focusing on investigating factors that influencing students' metacognition ability with relation to academic performance. Metacognition can be referred as the ability of a person to think independently (self-thinking capability /thinking about thinking).This mean the focus is to understand factors that influence student independent thinking. Please I would like to owe your participation in this discussion and all answers will remain confidential and purposefully for this study.

School Name.....

1. What do you understand about student metacognition ability?
2. Do you think student metacognition ability influence student academic performance? How?
3. How do teachers help you in building your metacognition ability?
4. Do you think student metacognition contributed by different factors?
5. What are those factors that contribute to student metacognition ability?
6. As a student what ways do you use to build your own metacognition ability and perform your studies?
7. To what extent do parent help you to build your metacognition ability?
8. How do they help you so that to influence your metacognition ability?
9. What should be done so that to help you to have good metacognition ability and hence good performance in your studies?

***Thank you***

## **APPENDIX II: INTERVIEW GUIDELINE FOR WARD EDUCATION OFFICER (WEO)**

This study is basically focusing on investigating factors that influencing students' metacognition ability with relation to academic performance. Metacognition can be referred as the ability of a person to think independently (self-thinking capability/ thinking about thinking). This mean the focus is to understand factors that influence student independent thinking. Please I would like to owe your participation in this interview and all answers will remain confidential and purposefully for this study.

Name school.....

Education level.....

Job experience.....

Sex.....

1. How do you understand about student metacognition ability?
2. What do you say about state of student metacognition ability in your ward?
3. What do you understand about the factors that influence student metacognition ability?
4. Do you think student metacognition ability is the catalyst for his or her academic performance in school? Why?
5. What are the factors that influence student metacognition ability with relation to academic performance?
6. Is there any training provided to teachers so that to make them aware on the way that influence student metacognition ability? Please explain them
7. How do you see the state of teachers in building student metacognition ability so that perform well in his/her studies?
8. What do you say about parents and community participation in building student metacognition ability and academic performance in general?

Thank you for your participation. Please if there is any addition, suggestion or any question concerning our interview session.

***Thank you***

### APPENDIX III: QUESTIONNAIRES GUIDELINE FOR TEACHERS

This study is basically focusing on investigating factors that influencing students' metacognition ability with relation to academic performance. Metacognition can be referred as the ability of a person to think independently (self-thinking capability/ thinking about thinking). This mean the focus is to understand factors that influence student independent thinking. Please I would like to owe your participation in this questionnaire sheet and all answers will remain confidential and purposefully for this study.

School Name.....

Instructions: Put tick ( ) in respective area

Sex: Male ( )      Female ( )

Age: below 20 ( )

21-30 ( )

31-40 ( )

41-50 ( )

50 and above ( )

Education level:

Diploma ( )

Degree ( )

Masters ( )

Others ( )

Job Experience:

1-5 ( )

6-10 ( )

11-20 ( )

21 and above ( )

1. How do you understand about student metacognition ability?

.....

.....

.....

2. Do you satisfying the level of metacognition ability of student in your school?

Yes (    ), No (    ).

Why?.....  
.....  
.....

3. Do you think metacognition ability have an influence to student academic performance?

Why?.....  
.....  
.....

4. What do you understand about the factors that influence student metacognition ability?.....

.....  
.....

5. What are the factors that influence student metacognition ability with relation to academic performance? Mention

- (i).....
- (ii).....
- (iii).....
- (iv).....

6.If not (5)what are the strategies you use to build/enhance metacognition ability of your

students?.....  
.....

7. Do you think that there is the important of creating environment that enhance student metacognition ability so that to perform well his/her studies?

Why?.....

8. Is there any building capacity programmes (in-service training) that provided to teachers about students metacognition ability?.....

9. What do you say about community and parents cooperation in school matters and building student metacognition ability?

.....

.....

.....

***Thank you***

#### **APPENDIX IV: INTERVIEW GUIDELINE FOR TEACHERS**

This study is basically focusing on investigating factors that influencing students' metacognition ability with relation to academic performance. Metacognition can be referred as the ability of a person to think independently (self-thinking capability/thinking about thinking). This mean the focus is to understand factors that influence student independent thinking. Please I would like to owe your participation in this interview and all answers will remain confidential and purposefully for this study.

School Name.....

Instructions: Put tick ( ) in respective area

Sex: Male ( )      Female ( )

Age: below 20 ( )

21-30 ( )

31-40 ( )

41-50 ( )

50 and above ( )

Education level:

Diploma ( )

Degree ( )

Masters ( )

Others ( )

Job Experience:

1-5 ( )

6-10 ( )

11-20 ( )

21 and above ( )

1. What do you say about your school?
2. What do you understand about student metacognition ability?

3. Do you satisfy with the level of student metacognition ability in you school?  
Why?
4. Do you think student metacognition ability can be the catalyst for the student academic performance? Why?
5. Do you think that student metacognition ability is important for the student academic performance? Why?
6. What are the factors that influence student metacognition ability?
7. Is there any in-service training provided to the teachers about the ways that influence/build student metacognition ability?
8. How do you see the state of teachers in building student metacognition ability? Why?
9. Is there any support from the government about building student metacognition ability?
10. Apart from other factors do you think that student metacognition ability contributed his/her teacher? Why?
11. How do parent and community participate in building metacognition ability of their children?
12. What should be done so that to enhance and improve student metacognition ability and good academic performance?

**You welcome for any addition, opinion and question concerning our  
conversation**

***Thank you***