



## CRITICAL THINKING SKILLS IN NORTHERN ETHIOPIA: THE VIEWS OF PROSPECTIVE TEACHERS

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### ABSTRACT

*In current curriculum one of the fundamental focuses is on the development of thinking skill in general and critical thinking skill in special. Critical thinking skill is one of the 21st century skills, and it is directly related with creativity and innovation. The central theme of this study is critical thinking and it aims to find out the views of prospective teachers on critical thinking skills, at the Dessei Teacher Training College in Ethiopia. It has been selected out of 32 governmentally accredited teacher-training colleges in the country because it is easily accessible and it is consumed that the participants here can represent the prospective teachers in the country. The required data for this qualitative study is obtained through focus group discussion with eight prospective teachers and face-to-face interview with three heads of departments at the college. The data has been transcribed, analyzed, and categorized to form the subtitles. As a result, the data is regarded as analyzing, logical argumentation, evidence based rational judgment, examining and open mindedness for ideas by prospective teachers but not practical due to environmental and personal factors.*

**Keywords:** *Thinking, types of thinking, critical thinking skills, prospective teachers*

### INTRODUCTION

In the era of globalization, education turned out to be the right of human beings instead of their choice and it aims in paying attention on, transforming from memorization to conceptual comprehension as in to the advance of thinking in learning community around the world. In literature, thinking is the property of mind alone as scholars like Rene Descartes early claimed. For Descartes (1951), mind was a metaphysical unit that acts mutually with the material body and that thinking is a property of the mind, not of the body.

Holmes (2002) defined thinking as ability to solve a problem or reasoning, rationalizing and computing persistently to work something out. It is also to attend to, pay attention to, have regard to, and have the notion of, to bear in mind. It is to consider, meditate, and ponder over, to reflect. In addition, to picture in the mind, conceive, create, imagine, conjuring up. Even though Holmes does not explicitly define thinking as a process, carrying out all these activities, it requires certain steps that pass-through process. Similarly, James (2011) defined thinking as a process of creating a logical series of connective features between ideas or bits and pieces of information. In this way, thinking enables us to connect and integrate new experiences into our existing comprehension and perception of how certain phenomenon are.

For Holyoak (2005), thinking is an organized alteration of mental representations of knowledge, to characterize definite or promising states of the world, often in tune-up of goals. This implies thinking as manipulations should be systematic transformations directed by definite restriction and thinking is a mental activity directed toward certain goal that motivates the thinker. Thinking is not a new concept in academic endeavour of social science. According to Holyoak (2005), the foundation for modern thinking and all subsequent works on the origins of causal knowledge, conceivably the most core problem was study of thinking, that laid by Immanuel Kant and David Hume, in the eighteenth-century. Generally, the concepts of thinking from definition to classification and application have received much more attention, defined in different language in different disciplines such as philosophy and psychology. However, all the definitions of thinking accept that thinking is a process that takes place in mind and thinking has different types.

### Types of thinking

The classification of thinking has been noted from different perspectives in different ways; for example, cognitive psychology categorizes thinking into three; problem solving, imagination and judgment and decision-making process. Also thinking can



be categorized as, convergent or analytical thinking; divergent thinking; critical thinking; creative thinking and metacognition (James, 2011). Further, reasoning and imaginative are the most dominant types of thinking (Darwin, 2006). In addition to this, He (2017) reported categories of thinking in terms of, abstraction of contents, concrete imagery thinking and abstract logical thinking; intelligence of thought, reproductive thinking and creative thinking; thinking process in terms of thinking direction, divergent thinking (i.e., divergent thinking, reverse thinking and multi-dimensional thinking) and convergent thinking (i.e., focused thinking, convergent thinking and positive thinking); thinking depth, conscious thinking and subconscious thinking and so forth. There are also various skills that make the concept of thinking clearer, mental activities by nature in which one can use to process information, to type connection between ideas, make decision, create new ideas, make sense of one's own experience and so on. According to James, focusing, remembering, gathering, organizing analyzing, connecting, integrating, compiling, evaluating and generating are core-thinking skills of the rest.

### **Critical thinking**

Critical thinking as one of the thinking categories has yielded enormous number of definitions in spite of no single and universal definition. For James critical thinking is analysis and evaluation of information, beliefs, or knowledge. Similarly, critical thinking is the analytical thinking which underlies all rational discourse and enquiry process; analyzing arguments; judging the relevance and significance of information; evaluating claims, inferences; arguments and explanations; constructing clear and coherent arguments and forming well-reasoned judgments and decisions, (Cambridge assessment, 2018). Critical thinking is the careful application of reason in the determination of whether a claim is true (Moore, Parker & Rosenst 2011). Some scholars also substitute critical thinking as reflective thinking, such as, Reflective thinking is active, constant, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends (Dewey 1910). Likely Critical thinking is reasonable, reflective thinking, which is focused on deciding what to believe and do, (Norris & Ennis). In addition, critical thinking is the skill or susceptibility to engage in an activity with reflective scepticism (McPeck 1994). To sum up, all these definitions are related to certain theoretical perspectives directly or indirectly, which were sources of thinking in general, critical thinking in particular. Surprisingly, the evolution of critical thinking begun 2500 years ago in which Socrates applied the intellectual pedigree of critical thinking into teaching practice and discovered inquisitive questioning. On the other hand, cognitive psychological and education perspective joined the debate over thinking. Critical thinking possesses certain skills, despite the fact that some authors assume it as a skill.

### **Critical thinking skills**

Critical thinking skills are similar among scholars to some extent. They identified critical thinking abilities as; recognizing problems and finding feasible means to solve them; gathering and arranging the pertinent information; recognizing unstated values; comprehending and use of language accuracy; clarity and discrimination; interpreting data; recognizing the existing logical connections between ideas; appraising evidence and evaluating statements; drawing warranted conclusion and generalization; putting to test the generalizations and conclusions arrived on; reconstructing ones beliefs based on new experiences; rendering accurate judgments about things and qualities of daily life (Lau 2011). According to Paul (1984), ability necessitates a process of thought, object of thought and an intellectual standard i.e. to which the thinking must adhere. The skills include, gathering relevant information; making logical inferences; generating justifiable assumptions; following out implications logically; and checking information for accuracy. Paul classified the details of these skills under three main dimensions as affective, cognitive macro skills and cognitive micro skills. Likely, Facione (2006) identified self-regulation, interpretation, analysis, evaluation, inference and explanation as core critical thinking skills. These skills are imperative almost in all aspects of our daily life, especially in education activities as it becomes right of all individuals that resulted in rapid technological advancement. Since the evolution of schooling, key identified actors are students, teachers, parents...etc. students' information demand on certain subject is increasing from time to time across the globe, for example, Yost, Sentner & Forlenza-Bailey (2000) asserted that through access and use of technology, students will learn on demand and access hundreds of pieces of information on any subject of interest. Since teachers are frontline elites that must guide the curious young people, they have to be critical thinkers. However, researches done on this area shows revert result. For example, Chee and Pou (2012) reported from Malaysian colleges, teachers fail to practice reflective thinking as they were measured by questionnaire of teachers' reflective thinking based on Likert scale and noted that the participants lack reflective thinking skills. In addition to this, prospective teachers' area has been beyond from researches, conducted on critical thinking and the current study is to find out the ways prospective teachers regard to critical thinking skills, factors hindering it and efforts taken to resolve the problem.

**The aim of the study**

To explore the views of prospective teachers on critical thinking skills the following aims were stated out; to identify the way prospective teachers concede critical thinking skills. To describe the factors that hold back critical thinking skills of prospective teachers. Finally, analyse the efforts so far taken to enhance critical thinking skills of prospective teachers. Based on the achievement of the aims, this study can help the teacher-training program by showing views of the graduates on critical thinking skills, so they can evaluate the program and fill the gap as much as possible. Further, it contributes for teacher trainers as it spots out the hindering factors of critical thinking skills of candidate teachers. To this end, the result of this study can be reference for research on the prospective teachers and critical thinking. Thus, an effort has been made to answer the following questions;

- How do prospective teachers regard to critical thinking skills in Dessei college of Teacher education?
- What are the factors that hinder critical thinking skills of prospective teachers?
- What are the efforts so far taken to enhance prospective teachers' critical thinking skills?

**METHOD**

Since the main objective is to find out the views of prospective teachers on critical skills qualitative approach has employed, selection of research design depends on purpose of certain study. According to Cohen, Manion and Morrison (2005), research design can be determined by the notion of 'fitness for purpose' and purposes of the research determine the methodology and design of the research.

**Participants**

There are 32 accredited states having Teacher Training Colleges in Ethiopia. Among these colleges, Dessei Teacher Training College was selected due to its accessibility to the researchers.

Table 1. background information of participants

Focus group discussants					
Participants	Sex	Study year	Economic status	Department	
HZ	Female	3 <sup>rd</sup>	Low	Civic and ethical education	
WG	Male	3 <sup>rd</sup>	Low	Special needs education	
MO	Male	3 <sup>rd</sup>	Middle	English language	
AM	Female	3 <sup>rd</sup>	Low	History	
BI	Male	3 <sup>rd</sup>	Low	Geography	
ZE	Male	3 <sup>rd</sup>	Middle	English language	
RO	Female	3 <sup>rd</sup>	Low	History	
KM	Male	3 <sup>rd</sup>	Low	Geography	
Interviewees					
Participants	sex	Year experience	Economic status	Department	Position
Dep1	Male	4	Middle	History	Head
Dep2	Male	7	Low	Geography	Head
Dep3	Male	6	Low	Civics and ethical education	Head
V/DC	Male	8	Middle	Not registered	V/DC

As it can be seen in the above table one, the participants are homogeneous in terms of grade level and year of study, but from diverse profession from the same area. Almost all participants are from low socio-economic class. All-purpose, all the participants are from the same area at the two level, culturally and socioeconomic status. The interviewees are 2<sup>nd</sup> degree and above i.e. Masters and PhD fellows. Participants in this type of research are selected on the criteria that they would have somewhat to say on the topic, are within the age-range, have similar socio-characteristics and would be comfortable talking to the interviewer and each other (Richardson & Rabiee 2001).

**Data collection**

The data collection instruments were face to face focus group discussion and interview. Prior to interview and focus group discussion, one of the researchers went to the college and got introduced with the staff and students before starting data collection. To answer the first question and second focus group discussion was held with eight prospective teachers from



social science departments such as history, geography, civic and ethical education, special needs education and English language department due the familiarity of the professions to the study topic. The reason behind Focus-group interviews were, it enables to exploring what prospective consider as critical thinking and why they act in the manner they do. According to Lederman (Thomas et al. 1995), 'a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive, though not necessarily representative, this group is being 'focused' on a given topic. The interview session planned with the dean of the college was failed, and the vice dean was taken as substitution assuming that the vice dean can afford the information that could be provided by the dean of college.

Face-to-face interview with three heads of departments from departments (see table 1), conducted and it includes Vice Dean of the college. The interview was intended to get insights and reality on the ground on the factors hindering critical thinking of their students as well as the efforts they made to enhance critical thinking of their students. In line with this, Face-to-face interviewing may be appropriate when the research is primarily focused in gaining insight and understanding (Gillham 2000:11; Ritchie & Lewis 2003:138). Interview is a "fact-producing interaction" (Gomm 2004). These two forms of interview took place in silent and relatively comfortable places for the participants and the statements of the participants were tape-recorded for accuracy with the permission of interviewees. Notes were taken during interview to check the questions and answers recorded for consequent dictation. The initial two letters of the name of participant was used to remark their ideas. All The participants of this study were collaborative, willing and active respondent in their contribution. Thus, the participants in focus group were HZ, WG, MO, AM, BI, ZE, RO, and KM whereas face to face interview participants were Dep1, Dep2, Dep3 and V/DC.

### **Data analysis**

To analyse data, Miles-Huberman Model for qualitative data analysis process was followed. It was sequenced as coding, data reduction and data presentation. Hence, data in the form of audio and notes taken during the group session was transcribed into texts by looking on similarities between and frequency of ideas and rechecked in line with notes and audios taken during the collection process. When the transcription, coding and checking of the data were completed, unnecessary details were removed or reduced by summarising the data precisely. Then, the data was presented back to the participants to check its representativeness and confirmation was received, comments included. Then, the data was grouped deductively into more precise and general categories based on the research questions and available literature. Under the categories sub themes were moulded i.e. under view; forming reasonable argument, ability to organize and monitor one's action and possession of rational argument, under factors and factors; personal and environmental. Main idea was discussed either under main categories or themes. Then, the data stated under themes and categories was sent to different professionals via mail for validity and reliability and it was observed that their comments were almost similar to original work. Finally, the data was presented, discussed and concluded.

## **FINDINGS AND DISCUSSION**

The ways prospective teachers regard critical thinking skills in the study area shows difference in their categories though it is not much far away from each other and the ways are categorized as follows.

### **Forming reasonable argument**

Prospective teachers consider critical thinking skills as ability to make arguments and support it by reason, which needs free thinking to occur: HZ says: "Critical thinking skill is being able to argue with ideas and persuading by reasonable one. Yet, one may need to think freely to develop Critical Thinking skills". Participants also view critical thinking skill developed because of the argument with teachers in the classroom on the subject matters: HZ states: "my teacher does not lend us to fall out on subject matters in the classroom". Thus, Cambridge assessment explained the concept of critical thinking as analyzing argument. Moreover, Lai (2011) reported in the research report that critical thinking skill includes analyzing arguments and reasoning out. Therefore, critical thinking skills are forming reasonable argument for prospective teachers.

Another discussant added that critical thinking skill is being opened to arguments from students in the classroom. MO said: "for me critical thinking skill is making students to express their ideas openly by giving them chance to argue on the topic. Hence, one can consider the idea and identify right from wrong, based on evidence". Moreover, critical thinking is the ability to analyze the ideas with open mind: WG stated: "critical thinking skill is the way of understanding one's own mistakes and openly seeing one's environment" while RO said: "As a teacher I lookup critical thinking skill as ability to understand and put up the individual students' needs" which is the important quality of certain teacher. In addition to this, ZE introduced the topic as: "I see Critical thinking skill as enabling the child to identify between ideas and its evidence by providing plenty of



information. However, teacher alone cannot make it develop and the environment in which the child develops contributes more." Therefore, we have to consider family and school environment in the debate of critical thinking

### **Ability to organize and monitor one's action**

One participant also regarded critical thinking skills as a skill to sort out and examine one's activities that start from family and continuous through school. AM said: "To be aware of one's own feeling and action, it starts from family upbringing of the child and the child develops to know how to control one's own feeling and check actions". Thus, family should let the child to develop own thinking. In line with this, background information is a compulsory but not a sufficient circumstance for enabling critical deliberation inside a certain subject, (Lai 2011).

### **Possession of rational judgment**

KM also described critical thinking skill as ability to take sounding judgment that could be acquired through learning. KM said: "critical thinking skill is one's special ability that exists because of learning i.e. presenting ideas clearly, it is ability to reject ideas by an idea". BI added: "look at and recognizing of ideas of best evidence and explaining one's own ideas in different ways instead of following others ideas".

In general, critical thinking skill is regarded as analyzing, logical argumentation, evidence based rational judgment, examining and open mindedness for ideas by prospective teachers. Even though critical thinking skill of the participants' is not visible on the ground and different points raised as affecting factors for the development critical thinking skills in the study area are as follows:

### **Factors affecting critical thinking skills of prospective teachers**

Factors affecting critical thinking skills of prospective teachers is that all discussants claimed, to develop critical thinking skills one first needs to have the opportunity to think freely and make arguments against certain ideas, HZ, WG, MO, AM, BI, ZE, RO, KM said: "our teachers anticipate us from arguing with them in the classroom on issues. Our community does not motivate the child to communicate openly with elders and continue it at schools. As a result, we accept what our elders wherever told us as a truth".

In addition, a discussant added the influence of culture and child upbringing, AM said: "we were dictated what to do and not to do by our families, we resemble to relay on the information we received from elders from home to school. We follow the ways and techniques dictated us by our elders". Another discussant also stressed on the lack of platforms to explain and share ideas publicly, BI said: "There is no platform for discussing ideas explicitly".

These claims were also supported by the interview results from department heads: DEP1 said: "We are far away from the concept in practice. There is no platform for such thinking and I think we pay little attention for the issue. Our program is very crowded, much courses offered within short period, which lead to stress and challenge to think". This shows that critical thinking skill develops through time in the learning process. Dep2 said: "the problem may be the academic background and livelihood of the students". Economically in efficient and lower level, achieving students are behind from critical thinking skills and not interested in practicing self-learning. Moreover, Dep3 stated: "Students are not ready to be involved in self-learning that can increase their critical thinking due to different factors, such as livelihood (especially economic), lack of events such as extracurricular activities that can advance their thinking, e.g. open debate...etc". The last interviewee added the school environment and students' academic background as another challenge for the development of critical thinking among prospective students, V/DC said: "The problems are students' poor academic background i.e. they have low score on grade 10 national exams and the livelihood of students and the surrounding environment of the college i.e. bars, nightclubs...etc".

In summary, in critical thinking, skills of prospective teachers are affected by environmental and personal factors (community, teachers and families' attitude, educational level, emotionality rather than rationality, absence of professionalism and the countries democracy level). As the focus of the teaching profession in this era is teaching how to possess higher order thinking skills and taking the learner away from root memorization of information to critically thinking, and contributing in innovation and creativity of the profession these factors need to alleviate early. Nevertheless, the efforts taken to enhance the critical thinking skills of these pupils are not appreciable.

### **Efforts taken to enhance critical thinking skills of prospective teachers**

In this regard, they are trying their best but being anticipated by their teachers and families. In addition, the heads of departments believe that they are working to enhance the critical thinking skills of their students focusing on extracurricular activities such as life skill club, delivering a life skill course. Dep1 and Dep2 said: "We established a life skill club to develop free expression of ideas as a culture but not much effective", and, "To reduce the problem we offer life skill course that



contain critical thinking as a chapter" respectively. However, the last interviewee articulated that they are implementing cooperative learning and their performance is sufficient to develop the topic on the table. V/DC stated: "We did not take any special action to strengthen students' critical thinking but we have enough performance for their academic level both human resource and teaching learning materials. We are practicing cooperative learning to support the development of critical thinking skills but it failed due different attitudinal challenges. Our modules have enough activities for self-learning and require students to think critically but the practice remains zero. Hence, I think the challenges are more than our hard works and their gap in practice". Indeed, self-learning and cooperative learning are strategies that assist to promote the development of critical thinking skills but only on paper at the study area.

## CONCLUSION AND SUGGESTIONS

In conclusion, prospective teachers in the study area view critical thinking skills as ability to form reasonable argument, organize and monitor one's action; possession of rational judgment which could be promoted by the chain from home to school through discussion and debate in the classroom, free and open mindedness. Prospective teachers are aware of what it meant by critical thinking skill at theoretical level but not practical. Hence, the pupil should give more attention to practical strategies that can enhance the applicability of critical thinking skills.

However, there is great work and efforts needed on the instructional methods, freedom of thought and economic situations of the students. Of course, thinking is natural endowment of humans; it is difficult to talk about critical thinking without having basic needs on the table. Also, further researcher can be conducted on the interplay between poverty and development of critical thinking skills, impact of child upbringing styles on critical thinking skills.

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