



Research Article

Testing the Rhetoric: Application of Active Learning Strategies in Logic and Critical Thinking Classrooms– Lessons from University of Gondar, Ethiopia

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Keywords: Active Learning; Logic and critical thinking; Ethiopia's Education Roadmap; Factors; Classroom learning

Abstract

The purpose of this research was to examine the implementation of Active Learning Strategies (ALSs) in logic and critical thinking classrooms by focusing on freshman students of Gondar University. For this purpose, a concurrent triangulation mixed approach and case study design were employed. The data were collected through questionnaires (n=361), interviews and document analysis. Accordingly, the utilization of ALSs in logic and critical thinking classrooms is found to be negligible. Though buzz group discussions and presentations were found to be preferable as compared to other ALSs, they are utilized in a rare manner. Factors related with the directives of the Ministry, motivation of the instructors and students were found to have an influence on the utilization of ALSs. This implies though the Ministry claims that it is committed for the utilization of ALSs, its directives are not found to be complimentary with its rhetoric for the utilization of ALSs.

Introduction

Education is the weapon for all human development schemes and to fill different gaps that are affecting a particular state. Following the 2018 political reform, which brought Abiy Ahmed (current prime minister) to power, Ethiopia introduces a new Education Roadmap, the Ethiopian Education Development Roadmap (The Roadmap, hear after) that replaces the 1994 education policy. The Roadmap identifies the knowledge, skill and attitude-based deficiencies, which were the bases to select

courses to be given for the students of the country (Minister of Science and Higher Education (MoSHE heart after), 2018). As such, it calls for the designing of courses, which aims to facilitate holistic development in all citizens, creation of confident and competent citizens, critical thinkers, entrepreneurs and professionals who satisfy the requirements of the global market; who adheres to ethical and moral values, and who stand for justice, peace, and unity in diversity (MoSHE, 2018). On the basis of this,

selected freshman courses are designed by MoSHE and started to be given for all freshman students of the whole universities (both private and public) as common courses in the country. Some of these freshman courses are critical thinking, geography of Ethiopia and the Horn, psychology, communicative English (I&II), introduction to economics, social anthropology, logic and critical thinking, Entrepreneurship, mathematics, physical fitness, inclusive education, moral and civic education and global trends (MoSHE, 2018). The Roadmap was introduced and opened for discussion in 2018 and it started to be implemented in Higher Education Institutions since 2019.

As it is clearly stated under the new education roadmap, one of the problems that the country needs to address is the problem of reasoning among the youths. Particularly, emotional, irresponsible, and irrational decisions as well as actions undertaken by the youth are found to come up with huge costs. As such, logic and critical thinking is designed to fill such gaps by producing rational and critical citizens in the country (MoSHE, 2018). However, it has to be noted the course logic was given for some selected departments even before this new education roadmap. So the reasons that make it to be different from the former one are: (1) the content of the new logic and critical thinking is too wide as compared to the former one; (2) a critical thinking aspect is added in the new course; and (3) the course is designed to be given for the whole university students (both private and public) while the former one was given for students of some selected departments.

It is clear that having knowledge on specific subject matter is not sufficient to produce competent professionals. Hence, it is essential for educations to have a mission to produce informed, rational, responsible citizens who can weigh evidences rationally before he/ she makes a decision or a conclusion and that is why logic and critical thinking is designed as a course. It enables students “to construct sound arguments of one’s own and to evaluate the arguments of others” based on certain established principles of logical reasoning and critical thinking (Hurley, 2012, p. xiii).

“Logic may be defined as the organized body of knowledge, or science that evaluates arguments” (Hurley, 2012, p.1). Thus, it investigates, develops and systematizes principles and methods that can be used to distinguish between correct and incorrect reasoning. It is used to solve controversial problems, weighing evidence and construct arguments. It is also used for detecting and exposing mistakes in reasoning of others and one’s own (Hurley, 2012).

Critical thinking is also an active, persistent, and careful consideration of a belief or supposed form of knowledge in the light of evidences, which support it (Moon, 2008). It is a process that leads to an impartial investigation of the data and facts that remains not swayed by irrelevant emotions.

Such a process is a base to arrive at well-reasoned, considered, and justifiable conclusions. Critical thinking, thus, is a process to think clearly, fairly, rationally, objectively, and independently. Thus, the aim of logic and critical thinking education is to produce a person who can ask appropriate questions, gather relevant evidences, efficiently and creatively sort through these evidences, weigh the evidences, reason logically from these information, and come to reliable and trustworthy conclusions about the world that enable one to live and act successfully in it. It is incognizant of such advantages and perceived benefits that MoSHE decides to offer this course for the whole university students as one of the freshman courses.

It is obvious that the success of education is dependent on the mode of delivery. Thus, selecting and implementing appropriate method of learning and assessment is then significant. In lieu of this, choosing the appropriate teaching and assessment strategies that make logic and critical thinking education successful is imperative. Active Learning Strategies (ALSs hereafter) are the celebrated methods of teaching for the success of education in general and logic and critical thinking in particular. They are considered as important instructional strategies to maximize student learning in the college or university classrooms (Walsh, 2013). ALSs are very important to have interactive learning process. They help students to explore a diversity of perspectives; increases students’ awareness of and tolerance for ambiguity; helps students recognize and investigate their assumptions; to improve their communication skill; and to develop skill of synthesis and integration of different ideas raised by the group members (Dallimore *et al.*, 2010). They enable students to: develop skill of explaining ones views and critics; learn the process and habits of debates; and feel that they too are source of knowledge rather than looking the teacher as the ultimate source (Walsh, 2013).

In lieu of such theoretical foundations, MoSHE of Ethiopia calls for the utilization of ALSs through its educational roadmap and different academic meetings and symposiums. Thus, the purpose of this study is to examine the application of ALSs in Gondar University based on the experiences of freshman students in one of the freshman courses: logic and critical thinking.

In relation to this issue, former researches were undertaken on methods used to improve students’ participation in ALS (Sewunet and Kasegn, 2014), Factors that Affect classroom participations (Susak, 2016), and effectiveness of classroom participations (Dallimore *et al.*, 2010). However, the practical utilization of active learning strategies is still controversial and needs further examinations depending on the differences on the *learning environment* such as size, private versus public institutions, geographical location,

educational policy and the like. Moreover, as this research is conducted in the immediate aftermath when the new educational roadmap starts to be implemented in 2019, it is important to examine the complementation of MoSHE's call for the utilization of ALS with its policy orientations that affect the utilization of ALS. Thus, these all serves as motivational factors to conduct this study.

Hence, the research aims to examine the utilizations of active learning strategies in logic and critical thinking classes of the tertiary institutions in Ethiopia with a focus on freshman students of Gondar University. Specifically, the paper aims to:

- ✓ Examine to what extent active learning strategies are used for logic and critical thinking classrooms in the selected university;
- ✓ Identify the most frequently used active learning techniques in logic and critical thinking classrooms; and
- ✓ Identify the main factors that affect students' participation in the active learning strategies.

Research Methodology

Research Approach

In this research, a mixed research approach was employed to collect and analyse the data. This method is chosen since it allows the researcher to use both "qualitative and quantitative data to offset the weaknesses inherent in one method with the strength of the other" (Creswell, 2009, p. 213). Among the different mixed strategies, concurrent triangulation method was employed. Concurrent triangulation mixed research strategy is "a method in which the researcher collects both qualitative and quantitative data concurrently and then compares the two datasets for triangulation and comparison" (Creswell, 2009, p. 213). In this design, the investigator collected both forms of data at the same time during the study and then integrates the information in the interpretation of the overall results. This method is chosen (1) for it is relatively easy as compared to the other mixed strategies; (2) for it needs shorter data collection time as compared to the sequential methods (sequential explanatory and sequential exploratory); and (3) for it allows the researcher to give relatively equal weights for both the qualitative and quantitative data as compared to the other concurrent method-concurrent embedded mixed approach (Creswell, 2009).

Research Design

The aim of this research is to examine the utilization of active learning strategies in logic and critical thinking classrooms with university of Gondar Freshman students as a case study. Hence, a case study research design was employed to provide specific direction. *Case study* is an investigation to answer specific research questions, which

seek a range of *different evidences* from the case settings (Creswell, 2009). Case study is an intense study of a single or multiple cases and it is used to explore the actions, views, and feelings of participants in detail (Gerring, 2007). This research design was chosen due to (1) its potential for providing an in-depth understanding of the event or the situation (Creswell, 2009). Moreover, (2) its pragmatic nature that allow the researcher to use different data collection methods; (3) its suitability to collect data from multiple sources, and (4) its applicability in both qualitative and quantitative research approaches (Gerring, 2007) are the justifications to chose case study research design. Accordingly, the utilization of active learning strategies in logic and critical thinking classrooms was examined based on the experiences at the University of Gondar. University of Gondar is chosen due to the familiarity of the researcher, which is one reason to choose research area/case based on the revelatory capacity (Matthews and Ross, 2010).

Samples, Sample Size and Sampling Techniques

The primary targets of this research are all freshman students in the academic year of 2019/2020 (since they are the one who took the newly designed logic and critical thinking course) at the University of Gondar. Based on the data from the University's Office of Common Courses' Coordinator, the total number of these students is 3879. The sample size is determined by using the simplified formula given by Yamane as cited in Israel (1992, p.4). Accordingly, it was calculated as: $n = N/1+N (e^2)$

Where N is the total population, total number of freshman students in the university in this case, "n" is the sample size and "e" is the level of precision with an assumption of 95% confidence interval, and 0.05 precision levels. Accordingly, the sample size is calculated as $n = 3879/1+3879 (0.05)^2$ and it is $362.6 \approx 363$. With a 10% addition for non-returnable questionnaires, a total of 398 questionnaires were distributed. Once the sample size is determined by using this formula, each respondent was chosen through systematic sampling method. Accordingly, every 10th list was selected from the frame with the list of 3879 students. Moreover, instructors of the course and education officers were chosen through purposive sampling method and interviews were undertaken with them.

Data Collection Methods and The Participants

Questionnaires: "Questionnaire is a list of questions each with a range of answers; and a format that enables to gather standardized, relatively structured data about each of a (usually) large number of cases" (Matthews and Ross, 2010, p. 201). Since questionnaires are vital to collect standardized set of data about the perception, experience, attitude and opinion of respondents from large sample (Matthews and Ross, 2010) they are used as one method of data collection in this research. The target group for the questionnaires were students and the questionnaires were

distributed to 398 students chosen through systematic random sampling method.

Interviews: The first data collection method employed in this research was interview. Interviews are methods of data collection through which a researcher presents a set of pre-planned core questions orally and the respondent gives the answers through oral-verbal means (Kothari, 2004). Accordingly, a face-to-face semi-structured interview was undertaken with the informants. Semi-structured interview is important because of its ability to obtain detailed information about a particular event, its capability to bring focused and constructive data, and its capability to enable the researcher to elicit information from few participants (Kothari, 2004). Moreover, it is essential to collect consistent data by using guides and detail data without limiting the opportunity of respondents to articulate various ideas (Mathews and Ross, 2010). Accordingly, the researcher has undertaken eight interviews.

The interview participants were chosen through intensity sampling method. Intensity sampling procedure is one of the varieties of purposive sampling techniques that select samples based on their capacity of generating intense and deep information (Mathews and Ross, 2010). Hence, by using this intensity sampling method, the research participants were selected from instructors of the course (4), officials of the university (4).

Documents: The third method utilized for data collection was document analysis. "Documents are written records about people and things that are generated through the process of living" (Mathews and Ross, 2010, p.277). Documents are crucial in providing a fixed record of something that happened at a particular time. Despite documents are defined as 'written' records, visual (video) and audio materials are also categorized as documents (Mathews and Ross, 2010). Hence, in this research different documents were utilized to elicit some pertinent data about the issue being examined. Accordingly, educational policies and former researches were consulted in this regard.

Method of Data Analysis

In this study, both qualitative and quantitative data analysis techniques were employed. The data collected through

questioner were analyzed quantitatively by using descriptive statistics. Accordingly, descriptive statistics consist of methods for organizing, describing and summarizing information through the construction of graphs, charts, and tables, and the calculation of various descriptive measures such as averages, measures of variation, and percentiles (Kothari, 2004). Thus, the data collected through the questioners are described by using percentiles and charts. The data collected through interviews, focus group discussions and document analysis are also analyzed by using thematic analysis.

Result and Discussion

Demographic Characteristics of Respondents

The questionnaires were distributed for 398 respondents. From these 398 questionnaires, 365 were returned. From the 365 returned questionnaires, four were not filled correctly and only 361 were used for analysis. Demographically, the respondents have different social backgrounds. In terms of gender, the majority of respondents (55.3%) were males while females cover 44.7% of the respondents. In relation to religion, the respondents were Orthodox Christians (47.4%), Muslims (37.3%), Protestants (12.5%) and others (2.8%).

Extent of Utilizing ALS in Logic and Critical Thinking Classrooms

In this section, the paper seeks to examine to what extent the ALS are utilized in the logic and critical thinking classrooms. For this end, the researcher tries to identify the common forms of active learning strategies by consulting different literatures. Then the respondents were asked to reply to what extent these active learning strategies have been used in their logic and critical thinking classrooms and the summarised survey data is presented in Table 1. As it is shown from Table 1, the utilization of ALSs is found to be negligible in many of the ALSs. Almost 98.3% of the respondents replied that hot seating is never utilized, 98.6% replied that decision line was never utilized, 98.9% replied that Balloon game was never utilized, and 98.1% replied that crossover group was never utilized (Table 1).

Table 1: Extent of Utilizing ALS

ALSs	Extent of utilization											
	Always		Frequently		Averagely		Somehow		Rarely		Never	
	F	%	F	%	F	%	F	%	F	%	F	%
Buzz Group	2	0.6	3	0.8	8	2.1	65	18.0	253	70.1	30	8.3
Microteaching/ presentation	3	0.8	2	0.6	7	1.9	65	18.0	245	67.9	39	10.8
Hot Seating	0	0	0	0	0	0	2	0.6	4	1.1	355	98.3
Decision Line	0	0	0	0	0	0	3	0.8	2	0.6	356	98.6
Case Study	3	0.8	4	1.1	5	1.4	35	9.7	55	15.2	259	71.7
Balloon Game	0	0	0	0	0	0	0	0	4	1.1	357	98.9
Crossover Group	0		0	0	0	0	0	0	7	1.9	354	98.1

Source: Researcher's survey, 2020 (n=361): This data shows to what extent each ALS were employed in logic and critical thinking classrooms

Among the different ALS, buzz group and presentation are found to have a relative degree of implementation as compared to other learning strategies.

However, they are also utilized rarely, which means once or twice within the 32 total sessions¹ (Table 1). That means, the whole hours in each session is covered by the instructor; and students' involvement in the sessions is found to be minimal. Hence, it is the lecture method, which is dominated by the instructors, is continued to be the preferred method despite the rhetoric of MoSHE in different academic meetings, symposiums and also in its newly designed educational roadmap to utilize ALS. When a session is covered by the lecture alone, it is obvious that the students' capability in capturing what the lecturer says or presents will gradually decrease in the session. In this regard, a study conducted by Juan *et al.* cited in Susak (2016, p.45) shows that "students retain about 70 percent of what they hear in the first ten minutes of class, and just 20 percent during the last ten minutes".

If this is the case, the expected question is why it is difficult to utilize ALSs in the logic and critical thinking sessions. According to the informants, the first factor, in this regard, is the imbalance between the volume of the course and the time allotted to the course. This makes the instructors to cover the course contents by themselves since they thought that ALS may consume their time. In this regard, interviewee 07 has stated that:

Though I know that the utilization of ALSs is important for the success of quality education and it is also prescribed as a preferred learning strategy by the new Education Roadmap of the country, it is very difficult to utilize it. In this course we are expected to cover a teaching material with more than 250 pages within 48 hours. From these hours, almost nine hours are spent in mid and final exam weeks. Hence our effective teaching hours are 39 and within these hours it is very difficult to cover the whole content (while it is mandatory) if we spent time for the employment of ALSs. Hence, I prefer to use the lecture method.

Interviewee 03 also raised the influence of the repeated riots and class boycotts as the other factors in limiting the time which in turn affects the instructors to use ALSs. As it is clear from the data, one of the problems that hinder the instructors to employ ALSs in the logic class room is the incompatibility between the volume of the course and the time allotted for it. This is, however, in a time when the

MoSHE is showing a repeated concern for the application of ALS in the new Educational Roadmap.

The second problem that hampers the utilization of ALSs is the size of students. Based on the data collected from the freshman coordinators at UoG and respective instructors, the number of students assigned in each classroom is between 80 and 100. This size of students is also mentioned as the other factor that affects the utilization of ALS. In relation to this interviewee 05 shared his experience as follow:

I teach at about 80 students per classrooms. How it is possible to manage, for instance, a buzz group discussion for this much students? Would it be possible to allow the participants in the groups to reflect their views and ideas? Is it possible to give a feedback by taking the reflections in each group? No! It is very difficult.

Hence, the largeness of the size of students in each classroom is also identified to be the other factor that affects the application of ALSs. However, this (80-100 students per class) much class size is identified as a tolerable range by the MoSHE and it is with in such class sizes that the ministry is calling for the utilization of ALSs.

The third problem that affects the utilization of ALSs is associated with interest of students. According to the survey data, the majority of respondents (64.5%) replied that they are less interested to undertake participation in classroom activities. This low interest of students is also mentioned by the instructors as a factor that influences them in utilizing ALS in the logic and critical thinking classrooms. In relation to this, interviewee 08 has stated that:

Though I attempt to utilize some of the ALSs such as questioning students in the mid of the lecture and giving group discussions, the participation of students in such activities is not appreciable. Hence, I prefer to use the common lecturing method.

As it is understood from the idea of the instructors, the students' interest and motivation to undertake effective participations in the ALSs is found to be the other problem that hamper them from utilizing the ALSs in the Logic and critical thinking class rooms. As it will be discussed by the next section, there are different factors that affect the participation of students in the different ALSs. Whatever the reasons are, however, the interest of students to undertake effective participations in the given ALSs is also found to be the other factor that influences the utilization of ALSs. The other problem that affects the utilization of ALSs

¹The total sessions assigned for the course are 32 sessions (with two hours for the 16 sessions and one hour for the other 16 sessions). For the purpose of precision in distributing the questionnaires, the utilization of the stated ALSs for each of the 32 sessions is ranked as Always; for 24-31 sessions is ranked as frequently; for 12-23 sessions is ranked averagely; for 6-11

sessions is ranked as somehow; for 1 or 5 sessions is ranked as rarely and none from the 32 sessions is ranked as never.

is associated with the motivation of the instructors. Based on the interview with experts from MoSHE, the motivation of the instructors to utilize ALSs is found to be the other factors that influence the utilization of ALSs though instructors externalize the problem to the interest of students and directives of MoSHE.

Generally, in this section, the paper shows that the utilization of ALSs in the logic and critical thinking classrooms is found to be negligible. Based on the data collected from the concerned participants, different factors such as incompatibility between the volume of the content and the allotted time, the large number of students in one class (80-100), motivation of the instructors to utilize ALSs, and interest of students to undertake active participation in the ALSs are identified as the causes that affect the utilization of ALSs in logic and critical thinking course. Essentially, though the Minister claimed that it is committed for the utilization of ALSs for the successful quality education, the actual learning environment is not found to be convenient for the utilization of ALSs. This implies the fact that there exist incompatibilities between the policy for the utilization of ALSs and the actual learning environment that determines the utilization of ALSs.

Factors That Affect Students’ Participation in The ALSs

In the preceding section, the research shows that one of the factors for the low utilization of ALSs was claimed to be the interest of students. Moreover, the majority of respondents (64.5%) also replied that they are less interested to undertake participations in the classroom activities. As a result, it crucial to examine the factors that influence

students’ participation in the ALSs employed in the logic and critical thinking classrooms (though these methods are found to be minimal). Based on the exploration of different former literatures and researches, the researcher develops a list of factors that are supposed to influence students’ participation in active learning strategies. Accordingly, a questioner with list of these factors was developed and students were asked to reply how much these factors influence their participation in the ALSs.

As it is presented in Table 2, the majority of respondents reply that their participation in classroom activities is influenced mainly by two factors: perceived benefit in terms of grading and time. The first factor is the perceived benefit of participation, which is measured in terms of grading. In this regard, the majority of respondents (46.3%) agreed that their participation is low since it doesn’t have any value on their grade while 26.3% also noted that they strongly agree with this statement (Table 2). This implies that the vast majority of respondents (72.6%) have lower level of interest to participate in classroom student-based activities because their participation is not rewarded with points that might be considered in their grade (Table 2). In relation to this, interviewee 05 stated his experience as:

The absence of reinforcement for students’ participation is thought to be one of the factors for low interest of students. Had there been a room for the consideration of student’s active engagement in the grading system, you could motivate their participation by using it.

Table 2: Factors that Affect Students’ Participation in ALSs

Possible Causes	Response Rates											
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq.	%
My participation in ALS is low because:												
Lack of knowledge on the issues of discussion	39	10.9	41	11.3	6	1.7	210	57.1	65	18.1	361	100
I don’t have good communication skill	43	11.9	46	12.7	11	3.1	185	51.2	76	21.1	361	100
I am shy to speak	54	15.0	85	23.5	25	6.9	135	37.4	62	17.2	361	100
My participation does not add a value to my grade	95	26.3	167	46.3	15	4.2	46	12.7	38	10.5	361	100
I feel that there are students who have the ability to do it	45	12.5	56	15.5	44	12.0	124	34.0	94	26.0	361	100
The issues do not invite for discussion	12	3.3	23	6.4	35	9.7	184	51.0	107	29.6	361	100
There is shortage of time	91	25.2	160	44.3	29	8.0	52	14.5	29	8.0	361	100

Source: Researcher’s Survey, 2020 (n=361)

Earlier researchers such as Susak (2016) also noted that if participation has a positive impact on a student's grade, they are more likely to participate in classroom discussion. Similarly, Dallimore *et al.* (2010) argued that students, who perceive that their participation may influence their grade, will have a high probability of participation. In spite of this fact, the new assessment methods for freshman courses outlaw the former assessment methods, where the participation of students in-class and out-class activities were reinforced. The new assessment directive sent by the MoSHE for the respective universities forced the universities to implement fixed assessment strategies as test 1=10%; mid-exam =30%; test two=10%, and final exam=50% though inconsistencies were shown in the implementation. In such assessment methods, there are not techniques to value the participation of students in classroom activities such as debates, discussion, case study, microteaching, presentation of fieldworks and the like.

If such participations were valued, (1), the instructors would likely to give such activities for students and (2) students would undertake active participations not to miss the points allotted for such activities. Nevertheless, the assessment directive of the MoSHE is not in line with its rhetoric for the utilization of ALS. ALSs require continuous assessments that allow students to work and demonstrate what they learn rather than mere recalling of facts in tests. Hence, the assessment method designed by MoSHE is also found to be uncomplimentary with the proposed idea of utilizing ALSs. Assessments through a summative 'tests of factual recall' are criticized not only since they lower the participation of students in ALSs, but also since they are not authentic assessments to measure knowledge in logic and critical thinking.

In addition to the perceived benefit of participation for grading, the time constraints are also identified as the other factor for low level of students' participation in the ALSs. As it is shown from the table, 25.2% and 44.3% of the respondents reply that they strongly agree and agree (respectively) with the statement that their participation is low due to time constraint. This is also in concomitant with the idea of the interviews. As stated by the instructors, they give limited time for students' discussion in the classroom since the time allotted for the course is limited while the contents are wide.

Conclusion

Logic and critical thinking course is designed to produce a person who gather relevant evidences, weigh the evidences, reason logically from these evidences, and constructs a well justified, reliable and trustworthy conclusions about the world that enable one to live and act successfully in it. Though courses may have sound objectives and its contents, the success of education is also dependent on the mode of delivery. Thus, selecting and implementing appropriate

method of learning and assessment is indispensable for education to meet its objectives. The role of Active Learning Strategies for the success of education in general and logic and critical thinking in particular is proved by many researches. In cognizant of this, the 2018 educational roadmap of Ethiopia calls for a diligent utilization of ALSs in all educational levels. As such, the aim of this research was to examine the implementation of ALSs in the logic and critical thinking classrooms.

Based on the data, the utilization of ALSs in the logic and critical thinking classrooms is found to be negligible. Among the different ALS, buzz group discussion and presentations were found to be the preferred methods as compared to other learning strategies. However, they are also utilized rarely. Hence, the lecture method, which is dominated by the instructors, is continued to be the dominant method of teaching despite the rhetoric of MoSHE for the utilization of ALSs as alternative teaching-learning strategy.

Different factors such as incompatibility between the volume of the content and the allotted time, the large number of students in one class (80-100), motivation of the instructors to utilize ALSs, and interest of students to undertake active participation in the ALSs are identified as the causes that affect the utilization of ALSs in logic and critical thinking course. Moreover, the assessment methods, which is based on fixed summative assessments is also found to have an influence on the students' participation in the ALSs. Essentially, though the Minister claims that it is committed for the utilization of ALSs for the successful quality education, the actual learning environment is not found to be convenient for the utilization of ALSs. This implies the incompatibility between the Ministry's claim for the utilization of ALSs and some of its directives that affect the utilization of ALSs.

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