

INSTRUCTORS' BELIEFS AND ACTUAL PRACTICES OF ACTIVE LEARNING
STRATEGIES IN HIGHER EDUCATION INSTITUTIONS: THE CASE OF DESSIE COLLEGE
OF TEACHER EDUCATION

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Abstract

The main purpose of this study was to investigate instructors' beliefs and actual practices of active learning strategies at Dessie College of Teachers Education. To conduct the study, the descriptive survey type with embedded mixed method was utilized. The study was conducted at Dessie College of Teacher Education and the data were collected from 145 student teachers and 60 instructors of the college. Purposive sampling was used in the selection of the college. Comprehensive and simple random sampling techniques were employed for the selection of instructors and student teachers respectively. The main instrument of data collection was questionnaire. It was also substantiated with classroom observation, semi-structured interview, focused group discussion and document analysis. Frequency, percentage, mean, standard deviation and Pearson product moment correlations were used to analyze the close-ended data; whereas, qualitative data analysis was used with the data obtained through open-ended questionnaire, observation, semi-structured interview, focused group discussion and document analysis. The results of the study revealed that although instructors have favorable views about the basic assumptions of active learning approach, their efforts of incorporating and implementing a variety of active learning strategies in their respective courses at the college was inadequate. The major factors as impediments to the implementation of active learning strategies at the college were lack of instructors' commitment to design a variety of active learning strategies in their lesson plans, the tendency of instructors to the traditional lecture method, lack of student teachers' motivation to engage independently and cooperatively in the given activities, the huge amount of contents to be covered, shortage of time and lack of instructional material. Finally, recommendations were forwarded based on the major findings so as to minimize problems encountered and maximize the practice of active learning in the study area.

Key words: Active learning, Beliefs, Higher education

1. Introduction

In the traditional approach to college teaching, most time is spent with the teacher lecturing and students are generally considered as passive learners and recipients of the educational content (Felder and Brent, 1999). In this approach, the students are expected to work different activities individually and the mode of assessments of the student learning are based on their individual work such as quizzes, examinations and tests regardless of group cooperation (Johnson and Johnson, 1990). In this context, there is very little interaction among the students and they rarely have an opportunity to work together as a team or in group and cooperate in their learning process. Thus, such teacher-centered approach makes students rely mainly on the teacher, 'the knowledge expert', for their knowledge and information.

However, the paradigm shift from a teacher-centered to active learning approach has been widely advocated throughout the world. Numerous research studies have shown that active learning methods are more effective than traditional methods in improving student academic performance (Cook and Hazelwood, 2002). Squazzin and Grann (1998) explained active learning as a social process that emphasizes on the process of collaborating and the exchanging of ideas, knowledge, experiences, skills, values and attitudes. Frazee (1995) also states that active learning is not simply the transmission of 'facts' or information but it is making learners how to learn,

how to find information from themselves, in other words it is called learning by doing. In the same vein, Hatfield (1997) as cited in Teacher Education System Overhaul (TESO, 2003) also suggested that active learning is not only a set of activities, but also an attitude on the part of the teacher and the learner that makes learning effective.

In addition, in active learning students not only receive information, from lectures and books, but also they collect information, record it systematically, analyze it, discuss it, compare it, draw conclusions from it and communicate about it Institute of Curriculum Development and Research Studies (ICDR, 1999). Pertaining to the above idea, Leu (2000) also pointed out that in active learning student's previous knowledge and experiences are so crucial and valued since they help to construct new knowledge.

Recently, active learning seems to become a fact of life and is an increasingly used component of student learning in Dessie College of Teachers Education and in other educational institutions. However, the practice of active learning depends upon the knowledge and beliefs of members of the institute (i.e., student teachers, instructors, and other external community at large). In line with this view, Johnson and Johnson (1990) said that many teachers believe that they are implementing active learning when in fact they are missing the essence.

In reviewing the research literature, it is noticed that the relationship between teachers' beliefs and their practices was open to debate. Conflicts between teachers' beliefs and the realities in their classroom practices have been widely reported in the literature. Some researchers have found consistencies between teachers' beliefs and their practices whilst others have found inconsistencies (Trigwell and Prosser, 1996).

Various literatures also proved that there are some constraints which can impede the proper implementation of active-learning approaches in college teaching. Some of the factors are connected with the pressure of the curriculum, improper classroom organization and management, lack of trained teachers, lack of support from top officials, perceptions of active learning and the problem with the students (Plass, 1988; Leu, 2000). Hence, unless carefully managed, active learning's disadvantages outweigh its advantages and it may turn to be as boring as the traditional lecture mode.

As indicated by Leu (2000), to make practical the new Ethiopian Education and Training Policy Document, extensive changes have been made to reform the curriculum in different ladders of education, including teacher training institutes and colleges. The shift in the new teacher education curriculum emphasizes a change from a rote, passive learning to a more active, learner-focused education and the development of higher-order thinking skills as the basis of the teaching and learning process

(MOE, 2003). However, as public discourses and indigenous research findings revealed, the teaching-learning process of our education system at all levels in general and in Teacher Education Colleges in particular has been dominated with the traditional approach (Derebbsa, 2006; Fikirte, 2013; and Reda, 2001).

Dessie College of Teacher Education(DCTE) is one of the Teacher Education Institutes found in the Amhara Region that has been trying to involve active learning methods in the 10+3 training programs to produce effective teachers. However, student teachers were complaining their instructors' instructional approach in formal and informal meetings. Besides, from the researcher's exposure, as an instructor and a researcher, in the TEIs there are missing elements in the application of a variety of active learning methods. Thus, the main purpose of this study was to assess instructors' beliefs and their actual practices of active learning strategies in Dessie CTE. Based on this general objective, the following specific objectives were set.

- To investigate instructors' beliefs about the basic assumptions of active learning approach,
- To assess the extent to which instructors apply different active learning strategies,
- To examine the relationship between instructors' beliefs and their actual practices of active learning approach, and
- To identify the major factors hindering the implementation of active learning in Dessie CTE.

2. Methodology

2.1 Design of the Study

As it has already mentioned in the introduction part, the main purpose of this study was to assess instructors' beliefs and their actual practices of active learning strategies in Dessie CTE. To this end, a mixed method approach was used. Particularly, an embedded mixed method design that employs primarily a quantitative method and substantiated by qualitative method (Creswell, 2012) was used.

2.2 Study Area and Targeted Population of the Study

In the Amhara Regional State, there are ten governmental Colleges of Teacher Education. Among these, Dessie CTE was considered as the target area. All departments (Amharic, English, Mathematics, Social Science, Natural Science and Aesthetics and Physical Education) were used in the study to collect reliable information. Instructors and student teachers of Dessie CTE were included as the targeted population of the study so as to get more reliable information.

2.3. Samples and Sampling Techniques

Among the ten Teacher Education Institutions found in Amhara Region, Dessie College of Teacher Education was purposely selected. The total number of instructors who were teaching at the college was 84. Among 84 instructors, 24 instructors did not properly fill and return the questionnaire. Therefore, the questionnaire data was purely obtained from 60 instructors.

Among 1216 student teachers (693 second year and 523 third year), 145 student teachers (83 from second year and 62 from third year) were selected using simple random sampling. Because, the two groups of student teachers have stayed an average of three semesters and have taken the course "General Methods of Teaching" so that they could have relatively good experience about the problem under consideration than first year student-teachers.

2.4 Data Collection Instruments

Questionnaire was used for instructors and student teachers as a primary data gathering tool. Accordingly, questionnaires of 41 closed-ended items were employed. The questionnaire was grouped into three major categories. They were instructors' beliefs on the basic assumptions of active learning approach, the practice of active learning strategies, and factors inhibiting the implementation of active learning methods.

The first part of instructors' beliefs on active learning approach consists of twelve items. The second part of instructors' practice of active learning strategies has eighteen items. The last part (factors inhibiting the implementation of active learning methods) has eleven items. Besides, two open-ended questions were given. The closed-ended questions were developed in the form of 5-Point Likert-scale.

Six instructors, one from each stream, were interviewed using semi-structured interview questions. To obtain more information, semi structured observation in the actual classroom teaching and learning process was used as a data gathering instrument. Focus group discussion was made with 15 randomly selected student teachers, 3 from each department. The content of the FGD focused on instructors' actual practice of active learning methods. Moreover, to gather more information about the involvement of a variety of active learning strategies, six instructors' daily lesson plans (one from each department) were reviewed.

2.5 Data Collection Procedures

In the process of testing the instrument and collecting data for the final study the following procedures were followed. Before the final study was made, a pilot study was conducted to test the reliability of the instrument (questionnaire). The pilot study was conducted on six instructors of each stream.

The result indicated that the questionnaire had the reliability of 0.72. Besides, its face validity was checked by my colleagues and important corrections were made. Then, the questionnaire was administered by the researcher. Finally, the observation, interview, focus group discussion (FGD) and document analysis were conducted.

2.6 Data Analysis

This survey study employed both quantitative and qualitative data analysis. Thus, the data obtained through closed-ended questionnaire were quantified using descriptive statistics; mainly frequency count, percentage, mean, standard deviation and Pearson product moment correlations were used as appropriate tools to analyze the data. In addition, the data gathered through open-ended questionnaire, interviews, observations, focus group discussions and document analysis were analyzed using qualitative method such as narrations and direct quotations. Based on the data analysis, interpretations were made to reach at certain findings. Finally, conclusions and possible solutions were recommended.

3. Results and Discussions

In this part of the study the major findings of the study were discussed using related literature. The issues under discussion were categorized into themes and discussed as follows

3.1 Instructors' beliefs on the basic assumptions of active learning

Table-1 *Instructors' beliefs on the basic assumptions of active learning*

No	Items	Instructors' responses						Mean
		A		DA		U		
		f	%	F	%	f	%	
1	Active learning is appropriate for my subject (s)	60	100	-	-	-	-	4.46
2	Active learning decreases instructors' task load and saves time.	14	23.33	44	73.33	2	3.33	2.46
3	I believe that student teachers' current knowledge depends on their previous understanding.	42	70	8	13.33	10	16.66	4.06
4	Active learning helps student teachers obtain a deeper understanding of the material.	49	81.67	11	18.33	-	-	4.15
5	I believe that active learning enhances active participation of student teachers in their learning.	58	96.67	2	3.33	-	-	4.76
6	Using ALMs promotes friendships among student teachers.	52	86.67	8	13.33	-	-	3.91
7	I believe student teachers learn more effectively if they work individually than in groups.	4	6.67	56	93.33	-	-	2.00
8	Active learning helps to prepare student teachers for their own learning.	51	85	7	11.67	2	3.33	4.33
9	I lack personal commitment to use a variety of active learning methods in the college.	28	46.67	32	53.33	-	-	2.96
10	I prefer classes in which student teachers are quiet to receive the content to be presented.	5	8.33	55	91.67	-	-	1.48
11	In active learning my responsibility is to facilitate student teachers' learning	60	100	-	-	-	-	4.91
12	Active learning offers opportunities to enhance student teachers' progress.	54	90	2	3.33	4	6.67	4.65

Key: A= Agree, DA= Disagree, U=Undecided

As can be seen from table-1, twelve questions regarding instructors' beliefs about the basic assumptions of active learning were raised.

Accordingly, it appeared that in almost all of the items, the majority of instructors have favorable beliefs about the basic assumptions of active

learning. However, in specific item (item-9) the respondents seem to disclose negative views. About 53.3% of instructors felt as they lack personal commitment to use a variety of active learning methods. This shows that though many instructors have positive views about the basic assumptions of active learning, their effort of employing a variety of active learning strategies was found to be low.

During the interview and FGD, many instructors and student teachers also reported that although active learning is one of the most important aspects in the teaching learning process, it is not effectively and properly implemented in Dessie CTE. For example, many of the interviewed instructors reflected the following views:

Although theoretically we believe that active learning is very useful for student teachers' learning and for their learning progress, we could not usually involve a variety of active learning methods due to various factors such as student teachers' lack of interest, the huge amount of content to be covered, shortage of time and lack of instructional material.

One of the interviewed instructors has also the following to say:

"Though I know that active learning benefits the students' learning, I rarely employ it due to many reasons. For instance, it is difficult to

ensure the active participation of each student in group activities, especially when students are involved outside the classroom. As the result of this, every member of the group is assessed as one regardless of his/her input in the groups".

Many student teachers seem to share the view expressed above in different words. For example, in the FGD they frequently explain that *as the result of instructors' unfair assessment during the utilization of group work, they wanted to work their group assignments individually.*

In general, based on the information given by respondents, it is possible to say that a majority of instructors showed favorable beliefs about the basic assumptions of active learning.

3.2 The Practice of Active Learning Methods /Strategies

In order to assess the extent to which active learning methods have been practiced in Dessie CTE, both instructors and student teachers were requested to provide information.

Table 2: The extent to which active learning methods have been practiced in Dessie CTE

No	Instructional methods	Instructors' responses (N=60)			Students' responses (N=145)		
		Mean	SD	Ranking	Mean	SD	Ranking
1	Gapped lecture	3.82	0.66	2	3.94	0.71	2
2	Demonstration	2.71	0.75	8	2.64	0.83	10
3	Question and answer	4.04	0.78	1	3.80	1.06	4
4	Brain Storming	3.54	0.87	5	2.72	0.93	9
5	Think-pair-share	3.19	0.86	6	3.39	0.94	5
6	Small group discussion	3.79	0.67	3	3.80	0.99	3
7	Pyramiding	2.61	0.82	9	2.90	1.14	6
8	Jigsaw	2.07	0.75	13	2.84	0.95	8
9	Cross over group discussion	1.93	1.13	14	1.89	0.81	14
10	Role playing	2.39	0.77	10	1.94	0.96	11
11	Debates	2.32	0.93	11	1.89	0.81	13
12	Panel discussion	1.79	0.94	16	1.79	0.92	15
13	Field trip	1.43	0.62	17	1.50	0.76	18
14	Games	1.93	1.13	15	1.54	0.70	16
15	Group project	3.68	0.66	4	4.12	0.75	1
16	Seminars	1.43	0.62	18	1.50	0.76	17
17	Problem solving	2.32	0.93	12	1.94	0.96	12
18	Peer teaching	3.19	0.86	7	2.90	1.14	7
Grand Total		2.67	0.81		2.61	0.89	

As shown from the above table the grand mean scores of instructors (2.67) and student teachers (2.61) are far below the expected mean (3.0). This implies that the extent of involving and practicing a variety of active learning

methods in the college was not adequate as much as expected.

In one of the observed classes in the college, the teacher was lecturing the daily lesson and occasionally asked oral questions related to

the lesson. When five minutes or less remain for the period to end, opportunities was given to student teachers to ask any questions. Later in the interview, one of the instructors disclosed that *"I don't feel I am teaching if I am not dispensing information to student teachers using teacher-centered methods like lecture and question and answer methods"*.

In relation to this, Leu (2000) states that despite the Ethiopian New Education and Training Policy strongly criticizes the conventional teacher based approach in education, the teaching learning process in most teacher education colleges in Ethiopia has persisted to be teacher dominated. Most classes are characterized by a situation where students are made to listen to their instructors and copy notes from the blackboard. She further indicated that learning by doing, problem solving and cooperative learning are limited.

Palmer, Peter and Streetman (2003) in their research showed that instructors who are unfamiliar with active learning methods may not initially accept this style of learning because they may feel they will lose of their classroom, or they may be unsure of the methods or techniques used or possibly even think that some active learning methods are too time consuming. Instructors and student teachers in the interviews and in the FGD also admitted that group projects, small group discussion, think-pair-share and brainstorming were the most widely used active learning methods in the

college. Commenting on the implementation of these methods, one of the interviewed teacher educators said that:

Theoretically, I know various active learning methods; however, I have frequently employed very limited methods like small group discussion, project work and brainstorming. I also occasionally used think pair-share method. Because of time constraint to cover the content of the course, and additional responsibility in the college, I could not employ other active learning methods.

The FGD reports of student teachers also posited that:

Many instructors frequently gave different group projects in different courses. The main purpose of these group projects was for assigning marks. They further stated that their instructors did not even return their project works back rather they told the total score of group project works. Besides to group project work, student teacher also reported that small group discussion was also one of active learning methods frequently used by their teachers though one or two of group members completed the group task while the other member desired their names to be listed on the assignment paper as if they were actively participated on the discussion.

In this regard, Johnson, Johnson and Smith (1991) noted that cooperation in active learning is not assigning a report to a group of students

where one or two students do all the work and the others put their names on the product. Thus, cooperation is much more than being physically near students, discussing materials with them, helping them or sharing materials among students although each is important in active learning.

In general, based on the position of instructors and student teachers and the interview, FGD and classroom observation made by the researcher it is possible to deduce that the degree of practicing

various active learning methods in Dessie CTE was found to be low.

3.3 Relationship between instructors' beliefs and actual practice of active learning methods

To examine the relationship between Instructors' beliefs (independent variable) and actual practices of active learning methods (dependent variable), Pearson product moment correlations was computed.

Table 3: Relationship between Instructors' belief and their actual practice of active learning methods

Variables	Instructors' belief	Actual Practice
Instructors' belief	1.00	*-0.42
Actual Practice of ALMs	* -0.42	1.00

*P < 0.05

The result in the above table shows that instructors' beliefs on the basic assumptions of active learning approach was significantly correlated with their actual practice of active learning methods ($r = -0.42$) with $P < 0.05$. Supporting this finding, Pajares (1992) summarized the results of research on teachers' beliefs by indicating that there is a strong relationship between pedagogical beliefs of teachers, their planning for teaching, teaching decisions and classroom practices. Ernest (1998) also says that teachers' beliefs have a strong effect on the teaching practices by converting

those beliefs into a practical reality. On the contrary, some studies (Van Zoest, 1994; Nespar 1987) have shown that the teachers' classroom practices were inconsistent with their beliefs.

3.4 Factors Inhibiting the Implementation of Active Learning Methods

The following figure shows factors perceived by the two groups of respondents as impediments of the implementation of active learning methods in Dessie CTE.

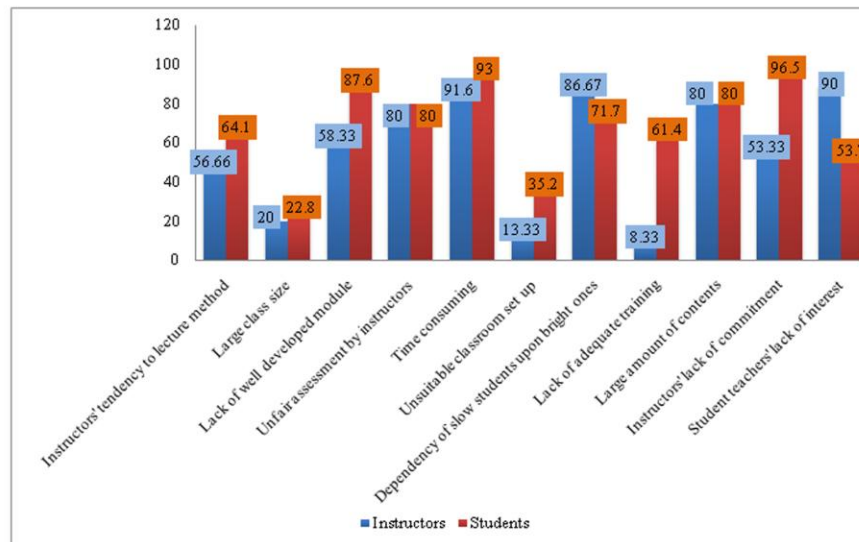


Figure-1: Factors inhibiting instructors in the implementation of active learning methods

Note: All numbers indicate percentage

As shown in the above figure, eleven factors assumed to be affecting the implementation of active learning strategies in the college were given to the respondents. In this regard, the two groups of respondents revealed that the tendency of instructors to the traditional lecture method, lack of well-developed training modules, problem of evaluating the progress of each trainee, time constraint, dependency of slow students on bright students, huge amount of contents to be covered and lack of commitments were found to be the most hindering factors

in the implementation of active learning in the college.

Regarding the inclination of instructors to traditional approach, Gregory and Thorley (1994) stated that when a teacher lectures she/he gets the feeling that the content is being covered, because it has been presented to the students in an orderly fashion.

As clearly shown in the graph above, lack of well-developed training modules in different courses was one of the major problems that that made using active learning, Floden, Porter,

Schmidt & Schwille, 1985) noted that the use of active learning methods in the college difficult. In relation to this, some scholars (for instance, Irwin, Freeman, Alford methods requires teachers to build a set of handouts, which create interdependence among students and provide a basis and reason for their working together.

The other factor that hindered the implementation of active learning methods was providing unfair marks. During FGD, many student teachers also complained that their instructors gave unfair grades that were not commensurate with each individual's effort, contribution and quality of work. Commenting this problem, Reece and walker (2003) stated that getting assessment right is critical in active learning methods. They suggested that the problem, which arises as a result of assessing students' activities, could be resolved by developing criteria for doing assessment tasks and the criteria of marking as explicit as possible.

Regarding shortage of time many interviewed instructors admitted that mostly they gave individual and group assignments to students that can be done outside the classroom; subsequently students were frequently complaining about the lack of adequate time to accomplish their assignments. For Gregory and Thorley (1994), students need time to work together to reach a consensus and give opportunity for minority to be actively involved in the class.

The results of this study also indicated that due to students' lack of motivation and commitment, many students wanted their group assignments to be carried out by one or a few of competent and responsible students. In connection to this, Cooper et al. (1990) indicated that in order to minimize and if possible avoid such problems, the best advice is to explain the rationale, design well-structured meaningful tasks, give students clear directions, set expectations for how group members are to contribute and interact, and invite students to try it.

Regarding the amount of contents as inhibiting factor, Gregory and Thorley (1994) reflected that teachers fear a loss in content when they use active learning methods because students' interactions often take longer than simple lectures. Students need time to accumulate enough information in order to be able to use it within their groups. They need time to work together to reach a consensus. They further commented that since the major function of active or cooperative learning involves teaching students how to work together effectively, teachers need not to focus on how much they teach rather how much students are actively involved in the material.

4. Conclusions and Recommendations

4.1 Conclusions

Although instructors have positive beliefs about the basic assumptions of active learning, their actual efforts of employing a variety of active learning strategies were found to be inadequate. Hence, the result of this study revealed that there is a negative correlation between instructors' beliefs and their actual practice of active learning.

The major factors as impediments to the implementation of active learning strategies in the college were lack of instructors' commitment to design a variety of active learning strategies in their lesson plans, the tendency of instructors to the traditional lecture method, lack of student teachers' motivation to engage independently and cooperatively in the given activities, the huge amount of contents to be covered, shortage of time and lack of instructional material.

4.2 Recommendations

It is advisable that the college has to re-arrange continuous professional development opportunities or activities in the form of training, professional dialogue, peer observation or experience sharing to enhance instructors' knowledge, skills and commitment to implement active learning approach. Well organized follow-up and supportive mechanisms should be designed both at the department and college level on a regular basis in order to assess the effectiveness of active

learning approach, to identify problems that hinder the practice of active learning methods and to take actions accordingly. Instructors should conduct regular reflection in action and reflection on action by asking their student teachers to rate and evaluate their teaching practices in general and their applications of active learning methods in particular. The college should play its part for the accessibility and improvement of the necessary resources such as training modules, library reference books, laboratory equipments, and if possible computers and network connections for each instructor. Contents of the courses and time allotted for them do not much each other. Hence, training modules should be re-written in a way they involve activities to be authentic, set in a meaningful context, and to promote student teachers' individual efforts and cooperation.

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