

## The Effectiveness of Instructional Strategies Employed at Large Class Setting of the Four Selected Universities of Ethiopia

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**Abstract.** This study was intended to investigate the effectiveness of instructional strategies employed in Large Class Setting (LCS) of the four selected Universities of Ethiopia (FSUE). It investigates the major instructional strategies currently used in LCS, examines their effectiveness and proposes effective ones that are suitable for the context of LCS at FSUE. The subjects used for this study were 700 university students who were selected using simple random sampling (lottery method) from four selected Ethiopian universities and 12 university teachers who were selected using stratified random sampling. The researcher used descriptive survey research design to conduct this study. The two approaches of data analysis (quantitative and qualitative) were used for the analysis of pertinent data that were collected through questionnaire, face-to-face interview and observation. The result indicated that teachers of FSUE use lecturing as the predominant instructional strategy for running teaching at LCS without giving any credit to students' learning preferences which is considered ineffective. There are different factors responsible for the use of such ineffective instructional strategy: clear gap in teachers' pedagogical skills, clear gap in making professional teachers to teach in LCS and mismatch of students' population and the infrastructure needed for running teaching-learning process in LCS. Based on these findings, therefore, pertinent pedagogical training that promote teaching at LCS and the fulfillment of infrastructure that accommodate students' population in LCS are recommended for concerned management bodies of FSUE.

**Keywords:** Large class size; instructional strategies; higher learning institutions

## 1. Introduction

Large class size is a reality in higher learning institutions of developing countries (Esia-Donkoh and Antwi, 2015). UNESCO (2006) presents many reasons for the question why higher learning institutions of developing countries are characterized by large class size. As they argue, first, it is because of lack of political motivation that gives attention to the provision of adequate number of teachers and classrooms which incorporate a large number of students. Second, higher education and access to it are considered as key elements in national development in those countries. Third, there are less economic resources available to fund higher education institutions adequately. These arguments, directly or indirectly, touches the real scenario of large class size in the four selected universities of Ethiopia.

In a commonly perceived and long-standing conventional wisdom of students, teachers and parents, large class size at higher learning institutions is totally an impairment to the quality of the learning environment (without having any significant advantage to learners or to their teachers). With similar contention, some scholars (Aagard *et al*, 2010; Ehrenberg *et al*, 2001; Adrian, 2010; Cooper and Robinson, 2000 and Mulryan Kyne, 2010) state that large class setting at higher learning institutions highly affects students' performance and achievement. The rationale most of these scholars provide to their argument is that large class setting at higher learning institutions invites teachers to use monotonous traditional lecturing method which hinders personal interactions between students and their teachers (Spiller, 2014), hampers students' engagement in learning (that induces students' passivity), obstructs individualized instruction, reduces the opportunity of providing feedback to each student and decreases monitoring of each student's behavior and learning opportunities; hence they advocate small class size.

However, scholars like Kerr (2011); Exeter (2010); Biggs (1999); and Boulton-Lewis (1998) argue that simply reducing the number of students in a class cannot be a guarantee to improve the quality of learning environment. A lecture presented to twenty students will probably not be much different from a lecture presented to one hundred students. Rather, what makes teaching fruitful at higher learning institutions is the way how it has been presented to the students (i.e. instructional strategies). UNESCO (2006) strengthens the same idea arguing that there is a loosened relationship between class size and students' learning. As to them (Ibid), "students in large classes can learn just as the same as those in small ones". This implies that the matter is not the size of the class, but the effectiveness of the teaching strategies the teacher employs in his/her actual classroom (Davis, 2009; McIver, Fitzsimmons and Flanagan, 2016).

As to many scholars (For example, Wehrli and Nyquist, 2003; Lowman, 1995), there are large number of instructional strategies that have been used by teachers in diverse learning environments. Among them, the appropriateness of a given instructional strategy that a teacher uses, in a certain learning environment, is determined based on class size, maturity level of students, styles

of learning students use, and the nature of a course a teacher covers in a given period of time (Aburahma, 2015, Carpenter, 2006). As to the knowledge of the researcher, the effectiveness of instructional strategies at large class setting is the least researched aspect of higher learning institutions in Ethiopia in general and the four selected Ethiopian universities in particular. Even, the researcher hasn't found any study that has been carried out on the issue at the proposed level of education vis-à-vis teachers' continuous complaint on their students' achievement at large class setting. Thus, the current study was planned to explore the effectiveness of instructional strategies that the teachers of the four selected Ethiopian universities frequently use at large class setting and to propose workable solutions for the identified problems.

## **2. Research Methodology**

### **2.1 The Study Design**

The researcher used descriptive survey research design for the current study. The assumption is that it is suitable to assess and disclose the effectiveness of instructional strategies that university teachers employ at their actual large classroom setting in four selected universities of Ethiopia. Pertinent data were collected from the sample of students and teachers using three tools of data collection: observation, questionnaire and interview. Then the researcher used mixed method of data analysis (both qualitative and quantitative) for analysis and interpretation of the data collected.

### **2.2 The Research Setting**

The study was conducted in four selected Ethiopian universities: Wolaita Sodo, Arba Minch, Hawassa and Dilla. These universities train students in different disciplinary areas having more than 35 departments each. All (four) of the universities are situated in Southern Nation, Nationalities and Peoples' Regional Government of Ethiopia.

### **2.3 Subject of the Study**

The study used students and their teachers of the four selected Ethiopian universities as its population. More specifically, the population of this study is the teachers and their students who are running their teaching-learning process under large class setting of the four selected Ethiopian universities.

### **2.4 Sampling Technique**

Stratified random sampling technique was used to draw sample of teachers from different academic backgrounds, sex, experience and area of specialization to respond interview. Sample of students were drawn by using simple random sampling technique (lottery method) to fill the questionnaire and purposive sampling method was used to select sections with large class setting for observation. The researcher used the aforementioned sampling techniques to collect pertinent data from students and teachers. Questionnaire data was

collected from 700 students, observation data was collected from 42 sessions and interview data was collected from 12 teachers.

## 2.5 Tools of Data Collection

The researcher used three tools of data collection for the current study: observation, questionnaire and interview. Using these tools, pertinent data were collected from the sample of population.

## 2.6 Data Analysis

Mixed (both quantitative and qualitative) approach of data analysis was used for the current study. The researcher quantitatively analyzed the data collected through close-ended parts of the questionnaire. He used descriptive statistics (frequency counting and percentage) for interpretation of the quantitative data. The data via the open-ended parts of the questionnaire, interview and classroom observation were analyzed in a qualitative approach. Then, the discussion was made by integrating both quantitative and qualitative data.

## 3. Results and Discussion

### 3.1 Instructional Strategies Currently Practiced at Large Class Setting of the Four Selected Universities of Ethiopia

Table 1. Questionnaire responses of the students on the instructional strategies currently practiced at large class setting of the four selected universities of Ethiopia

No	Items	<50 f %	>50 f %	Yes f %	No f %	L f %	D f %	QA f %	GW f %	PW f %	B f %	RP f %	PS f %
1	In average, how many students are learning with you in your class?	0 0	700 100										
2	Do you believe that such the class size you are learning is large?			650 92.9	50 7.1								
3	In average, which one of the following instructional strategies do your instructors most commonly use for teaching you in such large class setting?					560 80	30 4.3	33 4.7	26 3.7	28 4	6 0.9	12 1.7	5 0.7

\* In the table, L=lecturing D=demonstration QA=questioning and answering GW=group work PW=pair work B=brainstorming RP=role play PS=problem solving

Students were asked to show how many students were learning in their specific classroom. 700(100%) of them reported that it was more than 50 which is the upper maximum of most of Ethiopian higher learning institutions. Out of these 700 (100%), 650 (92.9%) indicated their belief that their classroom is large. Underlining similar idea, one of the interviewed teachers reported that he teaches four sections each having more than 60 students. As he revealed, each of the classes he teaches is large in size. "It is not the mere count of students in each of my teaching classrooms that worries me; rather the mismatch between the resources that we have and such great number of students assigned to each classroom. I can say it is losing rather than gaining," the teacher argued. Another interviewed teacher also indicated similar argument but he reported that he teaches more than 80 students in each of his Communicative English classrooms. The classroom observation also indicated the same reality almost in all of its sessions.

One of the interviewed teachers indicated his argument that a large class size is considered as an advantage when we run it using effective instructional strategies. "It is the clear setting through which students learn a lot from each other and share their diversified background," said the teacher. As confirmation to this idea, another interviewed teacher presented an argument that "A large class size is not a gain or a loss in a mere sense of saying; rather it is judged based on the instructional strategies that we use for running it". However, it was observed in the classroom observation sessions that majority of teachers failed to contextualize their instructional strategies to their class size. For example, most of the teachers in the observation sessions frequently lecture their days' lessons rather than setting students into different types of groups and helping them to learn through engagement.

When asked the reason why most of the teachers do not contextualize their instructional strategies to their class size, one of the interviewed teachers stated that teachers consider lecturing as the predominant instructional strategy that fits the teaching of large class size (which is also reported by 560(80%) of students in their questionnaire). However, according Fosnot (1998), lecturing is not the predominant instructional strategy for the teaching of large class size. Even scholars like Carpenter (2006) magnify the disadvantages of using lecturing as an instructional strategy in large class setting.

On the other hand, Kerr (2011) argues that instructional strategies like demonstration, questioning and answering, group work, pair work, brainstorming, role play and problem solving are effective instructional strategies to be used in large class setting. However, students' questionnaire result indicated that these strategies are very rarely used in their classrooms (as 4.3% of students responded demonstration, 4.7% questioning and answering, 3.7% group work, 4% pair work, 0.9% brainstorming, 1.7% role play and 0.7% problem solving respectively). Similar was observed in almost all observation sessions. Teachers' interview also confirmed that they use lecturing as 'the most suitable instructional strategy of teaching' in their large class setting.

Teachers present different reasons for why they rely on lecturing for teaching at large class setting. One of the interviewed teachers presents his reason saying, "Lecturing, as I believe is the predominant instructional strategy for managing teaching in large class setting. I always use lecturing with the assumption that other instructional strategies do not work well in large class setting because large population of students in class and their diversified learning to be addressed". Many of the interviewed teachers have similar belief that they consistently use lecturing as a salient instructional strategy for teaching in large class setting. One of the interviewed teachers remarked that he knows the disadvantages of relying on lecturing for running teaching in large class setting. However, he uses it because of mismatch of students' population in large class and the resources available for using other instructional strategies.

From the above discussion, one can generalize a conclusion that lecturing is the predominant instructional strategy that has been practiced in large class setting of four selected universities of Ethiopia. Almost in all of these four selected Ethiopian Universities, teachers ignore effective instructional strategies of teaching in large class setting: demonstration, questioning and answering, group work, pair work, brainstorming, role play and problem solving with their assumption that they can't handle them in large class setting due to mismatch between students' population and the resources available for using other strategies.

### 3.2 The Effectiveness of Instructional Strategies Currently Practiced at Large Class Setting of the Four Selected Universities of Ethiopia

Table 2. Questionnaire responses of the students on the effectiveness of instructional strategies currently practiced at large class setting of the four selected universities of Ethiopia

No	Items	Yes f %	No f %	L f %	D f %	QA f %	GW f %	PW f %	B f %	RP f %	PS f %
1	From different types of instructional strategies to be used in large class setting, which one do you think is the most effective for your learning needs in your class setting?			112 16	398 56.9	423 60.4	568 81.1	538 76.9	340 48.6	320 45.7	357 51
2	In average, do most of your instructors; participate you frequently in different academic tasks during instructional process?	80 11.4	620 88.6								
3	In average, do your instructors give you chance for asking them questions during their instructional process?	52 7.4	648 92.6								

4	In average, do your instructors frequently ask you questions during their instructional process?	76 10.9	624 89.1								
5	In average, do your instructors frequently answer each of your questions during their instructional process?	39 5.6	641 94.4								
6	Do you believe that the instructional strategies your instructors most commonly use at your large class setting satisfy your learning needs?	46 6.6	654 93.4								

\* In the table L=lecturing D=demonstration QA=question and answering  
 GW=group work PW=pair work B=brainstorming RP=role play PS=problem solving

As clearly indicated in the above table (Table 2, item 1), 81.1% of the students responded that group work is the most effective instructional strategy for their learning needs in large class setting. Next to group work, 76.9% of students responded that pair work is another effective instructional strategy for their learning needs in large class setting. Sequentially, 60.4%, 56.9%, 51%, 48.6% and 45.7% of students responded that questioning and answering, demonstration, problem solving, brainstorming and role play as effective instructional strategies for their learning needs in their large class setting respectively. Even though teachers of those four selected universities of Ethiopia use lecturing as a predominant strategy of teaching in large class setting (as indicated above), only 16% of students responded that it is an effective instructional strategy that satisfies their learning needs. Thus there is a clear gap between students' choice of instructional strategies for their learning needs and teachers' actual use in large class settings of those selected four Ethiopian universities.

In terms of the most and least valuable instructional strategies that satisfy the learning needs of students, students' questionnaire result indicated that group work is the most effective and lecturing is the least effective. In line with this, 93.4% of students (see table 2, item 6) replied that the instructional strategies that their instructors most commonly use (lecturing) doesn't satisfy their learning needs. As the students revealed in the qualitative items of the questionnaire, such the instructional strategy (lecturing) doesn't give students any opportunity to fully engage in learning activities of their education. As one of the students remarked in the open-ended parts of the questionnaire, each of their teachers tells them what he/she has prepared for the class via lecturing and leaves the class; without giving any credit to their learning preferences.

As proof to lack of students' engagement in overall academic activities in large class setting, 88.6% of students responded that their teachers do not make them participate in different academic tasks during instructional process. Again, 92.6% of the students responded that their instructors do not give them chance for asking them questions during their instructional process. Furthermore, 89.1% of the students replied that their teachers do not ask them questions during the

teaching-learning process and 94.4% of the students responded they do not get answers from their teachers for their questions. The continuous classroom observation sessions proved similar reality responded by the students even though there is a paradoxical element in the responses of teachers' interview. Thus teachers' interview results indicated that teachers fully engage students in the overall learning process during their instructional processes. However, the actual classroom observation proved the true scenario of what is happening in the classroom.

From the above discussion, we can infer a conclusion that there is a clear gap between students' choice of instructional strategies for their learning needs and teachers' actual use in large class settings of the four selected universities of Ethiopia. Thus teachers in those universities use lecturing as the prominent instructional strategy of teaching at large class setting without giving any credit to students' learning preferences. As the result, the instructional strategies currently practiced at large class settings of the four selected universities of Ethiopia are considered ineffective.

### 3.3 Factors Impeding the Use of Effective Instructional Strategies at Large Class Setting of the Four Selected Universities of Ethiopia

Table 3. Questionnaire responses of the students on the factors impeding the use of effective instructional strategies at large class setting of the four selected universities of Ethiopia

No	Possible factors impeding the use of effective instructional strategies at large class setting of the four selected universities of Ethiopia	Yes f %	No f %
1	Gaps in teachers' pedagogical skills for handling the instruction of such large class setting.	678 96.9	22 3.1
2	Immobility of chairs in classrooms to group students for cooperative learning.	438 62.6	262 37.4
3	Lack of machines to duplicate handouts for each of students.	467 66.7	233 33.3
4	Shortage of ready-made textbooks to handle instructional process easier.	688 98.3	12 1.7
5	Students' negative attitude towards learning at large class setting.	54 7.7	646 92.3
6	Gaps in teacher-training for handling instructional strategies of large class setting.	553 79	147 21

As indicated in the above table (Table 3), there are different factors that impede the use of effective instructional strategies at large class setting of the four selected universities of Ethiopia. One of these factors is gaps in teacher's pedagogical skills for handling the instruction of such large class setting (as responded by 96.9% of students, see item 1 in the above table). With the observation sessions, the teachers frequently observed having difficulties to use different instructional strategies in their large class setting. Almost in all observed sessions, teachers were dependent on lecturing. As a confirmation of

this, one of the interviewed teachers stated “I always use lecturing as I believe it is a prominent strategy of teaching in large class setting”. Another interviewed teacher presented similar idea as argument for his frequent use of lecturing as a suitable method of teaching and ignores other methods (demonstration, questioning and answering, group work, pair work...) saying, “they are incompatible for running teaching process in large class setting”.

Students relate the pedagogical skills’ gap of their teachers for handling the instruction of large class setting with teachers training (as reported by 79% of the students, see Table 3, item 7). Similarly, almost in all of the observation sessions, teachers were observed struggling to use effective instructional strategies (demonstration, questioning and answering, group work, pair work, brainstorming, role play and problem solving) for running their teaching process in large class setting; but they were not successful. This clearly indicates that teachers have pedagogical skills’ gap for handling instruction at large class setting. Confirming this idea, one of the interviewed teachers, states, “I am not confident that I have the adequate pedagogical skills to run instruction in large class setting. I believe that this problem streams from gaps in teacher-training for handling instructional strategies of large class setting”.

Teachers’ interview result also indicated that there are some materials-related factors that impede the use of effective instructional strategies in large class setting at the four selected universities of Ethiopia. For instance, one of the interviewed teachers indicated that her large class suffers a lot with material constraints. As to her, the university she teaches is typically characterized by a large class size vis-à-vis severe constraint of materials: lack of machines to duplicate handouts for students, shortage and immobility of chairs, shortage of textbooks and references. Another interviewed teacher also worries a lot for the provision of poor infrastructure by his university for effectively running of instruction at large class setting. Students questionnaire result (see Table 3, items 2-5) and the researcher’s observation sessions proved that the classrooms of those selected universities of Ethiopia are largely populated but poor in infrastructure.

Regardless of teachers’ pedagogical skills’ gap and shortage of materials for running instruction at large class setting, students at the four selected universities of Ethiopia have no negative attitude towards learning at large class setting (see Table 3, item 6). As observed in majority of the observation sessions, students were eager to ask questions, role play the activities, run classroom activities in group and like to have their learning difficulties solved by their teachers. However, the reverse was observed in almost all of the observation sessions; i.e. teachers simply run instructions using lecturing as a sole method of teaching at large class setting. When asked the reason why he does not engage each student in different academic activities of the classroom, one of the interviewed teachers responded “It is too challenging to me to engage each student in this highly populated classroom to do every academic activity. I just lecture the lessons that I believe important and order my students to read it by themselves. I have no choice rather than lecturing as you see this large number of students in my classroom which is very difficult to manage”.

Based on the above discussion, we can draw a conclusion that there are different factors that impede the use of effective instructional strategies at large class setting of the four selected universities of Ethiopia. The first one is Ethiopian university teachers have clear gap in pedagogical skills for handling instruction at large class setting. The second is lack of teachers' training for using effective instructional strategies for handling teaching at large class setting. Thirdly, there is mismatch between students' population in the classroom and infrastructure needed for running teaching-learning process in those classrooms.

## **4. Conclusions and Recommendations**

### **4.1 Conclusions**

- Teachers of selected four universities of Ethiopia use lecturing as the predominant instructional strategy for running teaching at large class setting. They ignore other effective instructional strategies of teaching in large class setting (demonstration, questioning and answering, group work, pair work, brainstorming, role play and problem solving) with their assumption that they can't handle them in large class setting due to mismatch between students' population and the resources available for using other strategies.
- There is a clear gap between students' choice of instructional strategies for their learning needs and teachers' actual use in large class settings of the selected four universities of Ethiopia. Thus teachers in these four selected Ethiopian universities use lecturing as the only instructional strategy of teaching at large class setting without giving any credit to students' learning preferences. As the result, the instructional strategies currently practiced at large class settings of those four selected universities of Ethiopia are considered ineffective.
- There are different factors that impede the use of effective instructional strategies at large class setting of the selected four universities of Ethiopia. The first one is the teachers of these selected four universities have clear gap in pedagogical skills for handling instruction at large class setting. The second is lack of teachers' training for using effective instructional strategies for handling teaching at large class setting. Thirdly, there is mismatch between students' population in the classroom and infrastructure needed for running teaching-learning process in those classrooms.

### **4.2 Recommendations**

The researcher forwards the following remedies as recommendations to the current situations of instructional strategies of large class setting at four selected universities of Ethiopia.

- Pertinent pedagogical training that promotes teaching at LCS should be given to teachers who are teaching in those four selected universities of Ethiopia.

- The concerned management bodies of the four selected universities of Ethiopia and Federal Ministry of Education (MoE) should fulfill infrastructure to avoid the mismatch between students' population in those classrooms and infrastructure needed for running teaching-learning process effectively.

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